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Project Document template for projects financed by the various GEF Trust Funds

Project title: Enhancing jaguar corridors and strongholds through improved management and threat reduction		
Country(ies): Belize	Implementing Partner (GEF Executing Entity): Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development	Execution Modality: National Implementation Modality (NIM)
Contributing Outcome UN MSDF: Priority Area 4: Outcome 8: Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources. CPD: Outcome 2: Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources.		
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Project duration in months: 36	
Planned start date: May 2021	Planned end date: May 2024
Expected date of Mid-Term Review: December 2022	Expected date of Terminal evaluation: March 2024
<p>Brief project description:</p> <p>Belize boasts a fully connected forest system. The intact trophic species structure of its wilderness environment is evidenced by a relatively high density of top predators, notably including jaguars. The country maintains three functional, but threatened, biodiversity corridors, each with significant populations of jaguars, tapirs and ungulates. Within these corridors, rural communities and farms are surrounded by wilderness, with jaguars living at the edges of farms and communities.</p> <p>Jaguars are a national landscape species, requiring connectivity for genetic exchange. This creates a driving force / need for currently fragmented management and monitoring activities to be integrated at national level. The objective of the project is to secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation. Its components are focused on conserving wildlife and habitats (component 1), promoting a more wildlife-friendly economy (component 2), combating wildlife crime and unsustainable hunting and coordinating and enhancing knowledge (component 4).</p> <p>The project closely reflects the Global Wildlife Program (GWP) Theory of Change (ToC). In turn, these activities will contribute to the outcomes established for the GWP, such as landscapes with improved biodiversity management practices, increased incentives to protect wildlife and capacity to co-exist with wildlife, and strengthened institutional capacity to combat IWR, among others. The project, together with other possible projects emerging following development of the Jaguar 2030 High-level Statement and Roadmap, will make full use of GWP coordination processes and structures for stimulating action across the jaguar range.</p> <p>GEF funding will focus on support to incremental costs associated with conserving jaguars and their habitats. These include mainstreaming biodiversity conservation across economic sectors and addressing direct drivers to protect habitats and species. GEF incremental support will have an important impact on the long-term viability of jaguars and associated prey species in particular, as well as on other globally significant species and ecosystems.</p>	
FINANCING PLAN	
GEF Trust Fund grant	USD 1,234,404
UNDP TRAC resources	USD 30,000
(1) Total Budget administered by UNDP	1,264,404

CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)		
CO- FINANCING		
Ministry of Fisheries, Forestry, the Environment and Sustainable Development	USD 4,150,000	
Panthera	USD 880,000	
Wildtracks	USD 234,000	
Ya'axche Conservation Trust	USD 180,000	
Belize Audubon Society	USD 340,000	
Corozal Sustainable Future Initiative	USD 2,950,000	
Protected Areas Conservation Trust	USD 940,000	
University of Belize Environmental Research Institute (ERI)	USD 300,000	
UNDP	USD 110,000	
(2) Total confirmed co-financing	USD 10,084,000	
(3) Grand-Total Project Financing (1)+(2)	USD 11,348,404	
SIGNATURES:		
Signature: <i>print name below</i>	Agreed by Government Development Coordination Authority	Date/Month/Year: <i>within 25 days of GEF CEO endorsement</i>
Signature: <i>print name below</i>	Agreed by Implementing Partner	Date/Month/Year: <i>within 25 days of GEF CEO endorsement</i>
Signature: <i>print name below</i>	Agreed by UNDP	Date/Month/Year: <i>within 25 days of GEF CEO endorsement</i>
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		

<p>Inception workshop date: within 60 days of GEF CEO endorsement</p> <p>Operational closure: within 3 months of posting of TE to UNDP ERC</p> <p>Financial closure: within 6 months of operational closure</p>
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ACRONYMS AND ABBREVIATIONS

AD	Agriculture Department
BAS	Belize Audubon Society
BLPA	Belize Livestock Producers Association
BTIA	Belize Tourism Industry Association
CBC	Central Biological Corridor
CBD	Convention on Biological Diversity
CSFI	Corozal Sustainable Future Initiative
ERI	Environmental Research Institute
FCD	Friends for Conservation and Development
FD	Forest Department
FOLUR	Food Systems, Land Use and Restoration Impact Program
FPIC	Free, Prior and Informed Consent
GEF	Global Environment Facility
GEF7	Global Environment Facility 7
GEFSEC	Global Environment Facility Secretariat
GOB	Government of Belize
GWP	Global Wildlife Program
ha	Hectares
HACT	Harmonized Approach to Cash Transfers
IMWG	Indian Creek Maya Arts Women's Group
IWT	International Wildlife Trade
JCU	Central Belize Jaguar Conservation Unit
MFFESD	Ministry of Fisheries, Forestry, the Environment and Sustainable Development
MSP	Medium Sized Project
NBC	Northern Biological Corridor
NPA	National Protected Area
NPAS	National Protected Area System
PACT	Protected Areas Conservation Trust
PC1	Project Component 1
PC2	Project Component 2
PC3	Project Component 3
PC4	Project Component 4
PfB	Programme for Belize
PIF	Project Identification Form
PIR	Project Implementation Report
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
SACD	Sarteneja Alliance for Conservation and Development
SBAA	Standard Basic Assistance Agreement
SBC	Southern Biological Corridor
SES	Social and Environmental Standards
STAP	Scientific Technical Advisory Panel (GEF)
TE	Terminal Evaluation
UBERI	University of Belize - Environmental Research Institute
UNDP	United Nations Development Programme
VSBB	Veterinary Surgeons Board of Belize
WCS	Wildlife Conservation Society
WPA	Wildlife Protection Act
YCT	Ya'axche Conservation Trust

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II. DEVELOPMENT CHALLENGE

Belize has long been recognised for the beauty of its natural resources. As part of the Mesoamerican biodiversity “hotspot”—the land bridge between the North and South American continents—Belize has species representation from both continents, supporting 4,784 species of flora and fauna including over 118 globally threatened species, 10 critically endangered, 30 endangered and 77 vulnerable, and an additional 62 species near threatened or of least concern (IUCN, 2016).¹ Unlike many of its larger Central American neighbours, the natural landscapes of Belize still support viable populations of large mammalian species, such as jaguars, tapirs, and white-lipped peccaries.

The country’s 22,965 km² of landmass is comprised of 14 broad ecosystem types where 61.6% remains natural and intact forest cover. The country’s primary conservation intervention, under the Convention on Biological Diversity (CBD), is through the establishment and management of protected areas. Forty per cent (40%) of the country’s forested stands are found within the country’s 103 protected area units.²



FIGURE 1: JAGUAR CORRIDORS AND CONSERVATION UNITS

Outside of these protected areas, Belize still has ~60% forest cover, assuring an impressive amount of natural habitat for jaguars. This landscape includes three major forest blocks, the first of which is the Belizean portion of the northern forest of the Northern Biological Corridor, the second concerns the Selva Maya in the North, consisting of the Rio Bravo Management Area, Spanish Creek and Labouring Creek Jaguar Corridor Wildlife Sanctuaries, and the third concerns the Maya Mountain Massive. Here several national parks, nature reserves and Wildlife Sanctuaries, including Cockscomb Basin, are surrounded by forest reserves, which allow logging concessions without any human habitation.

Camera trap monitoring efforts have shown that some of these forests can be considered as nearly optimal jaguar habitat, within the species range, with the highest recorded densities, certainly within Central America but also ranking high compared with the South American habitats. This means that the small country of Belize can be considered as a critical part of the

Northern jaguar population and as an important node for connectivity for populations in Mexico, Guatemala and Honduras.

¹ Belize 5th National Report to CBD

² See Annex 12 for additional details regarding Belize’s wildlife and other biodiversity and its protected areas.

Despite the high forest cover and relatively intact nature of the Belize natural environment, the primary challenge for Belize is the reduction of fragmentation and the associated loss of species. Belize is reaching a tipping point as development-driven land use change is rapidly removing/depleting unprotected forest areas, reducing the natural environmental buffers, compromising ecosystem functions and connectivity.

The two large forest blocks approach each other in close proximity through the Central Belize Jaguar Conservation Unit (JCU), Manatee Forest Reserve and some smaller reserves. Although of impressive size, the Maya Mountain Massive and the still connected Central Belize JCU are likely not large enough for the long-term survival of jaguars in isolation. For this reason, connectivity to the northern Selva Maya is vital. Here a section of unprotected, privately-owned forest, currently called the Central Belize Corridor, represents a vital component of forest connectivity.

A large section of unique drier forest with salt water lagoon systems in the northern part of the country, the Northern Biological Corridor, is equally threatened with isolation. Here a tenuous patchwork of privately-owned forest can still provide connection with the Selva Maya in the north. Equally in the South some undesignated forest patches still connect the most southern national park of Sarstoon Temash with the Maya Mountains. The main threats to these corridors and adjacent unprotected forests are outlined below.

Logging

Belize was formerly a British colony that provided tropical hardwood for export. As a result, its forests were heavily logged. All forests are therefore in various states of recovery, while also being subject to frequent hurricanes. Belize has a 40-year logging cycle for mahogany as the most priced hardwood species. Some very rare wood species, like rosewood, are harvested illegally in the South at unsustainable rates. Emergency measures have been put in place to control this trade. In general, the annual logging quantities are decreasing, and Belize requires a rethink of its forestry policy including adopting variable logging cycles for different species. Around 93% of deforestation takes place outside of protected areas and mainly on private land, with a limited amount occurring on unprotected crownland (undesignated government land). As logging has traditionally been the main income source for the country from its inception, considerable thought is going into how to maintain and benefit from sustainable forestry practices, mainly through regeneration of local species rather than through the creation of monoculture forests through intensive replanting management.

Agriculture and fragmentation

In Northern and middle Belize, the farming practices have been most affected by intensification. Although some citrus and banana companies operate in the southern part, most intensive agriculture is in the North and middle, with extensive cattle farming in the core Cayo district and the North. Mennonites monopolise this market and their core population areas are in the North and middle of the country. Intensification of agriculture is driven mainly by foreign consortium money, who mainly have a 5-10 year profit system in mind and have no incentive for long-term investment in the country. This at a minimum the difference with Mennonite farmers who are invested in living in Belize and have a stake in its functioning and general health of water security and pollution. Farming consortiums simply do not have this.

The citrus industry and northern sugarcane industry are local orientated with a citrus and sugarcane processing facilities in-country. Recently a large-scale sugarcane facility was built in Central Belize with the assumption of large scale planting within the region, including the central corridor. Distance from the plant is an issue in terms of profitability. If too far, the diesel needed to transport will marginalise the profit to such an extent that general profit margins are too low. However, the Spanish-Guatemalan company has been running into financial trouble after the considerable investment of the plant, which is still the largest human structure in the country of Belize. Here again the King et al. 1993 report shows that the general area is not suitable for such crops as being too low and inundated.

In the North the sugarcane cooperative is slightly unravelling with farmers wanting to sell their farms and leaving the industry. Mennonite activity is increasing with cooperatives wanting to purchase any available land. It is difficult to predict to what extent agricultural produce will increase or decrease in demand. Diversification is likely

the best strategy, while current Mennonite practices and the sugarcane industry seem to currently bet on a limited set of crops.

Belize is one of the countries which have demonstrated that naturally rewilded abandoned agricultural land can have high conservation value. There are a number of cases of removal of farms and these rewild very quickly due to the high presence of natural forest all around. In Toledo district, for example, milpa is carried out on a large scale, distributed widely across the landscape. If done at small scale, it is not harmful, but the sheer widespread human pressure is now responsible for considerable deforestation. However, in some cases, the milpa system has been a threat to some protected areas, with illegal clearance of areas in especially the edges of the less managed forest reserves. De-reservations have happened within Vaca, Freshwater Creek and Maya Mountain forest reserves on the basis of long-term settlement and farming, which could not be reversed. The initial milpa incursions were illegal and not acted upon quickly, becoming permanent. Incursions into some of the forest reserves at the boundaries of Guatemala with Chiquibul have been common.

Game meat hunting and potential for illegal wildlife trade

Game meat consumption among the Maya community is also traditional, and some communities have a high reliance on game meat. Milpa farms attract game and thus hunting is done on farms. Here again, this can be sustainable if enough refuges and larger forest patches are distributed across the landscape, but these are disappearing creating doubt regarding the sustainability of these practices. Unfortunately, there is no data at all on population levels, in relation to offtake. Throughout Belize, small scale farming can be considered the traditional farming means with supplementary game hunting associated with it. Belizeans traditionally enjoy and frequently eat game, with nationally 7% of their meat diet consisting of game meat, which can go as high as 20% in Toledo. These numbers are changing and getting replaced by farmed species. Fortunately, Belize is a gun hunting country; snares and traps are hardly ever used. The culture of hunting is very deep and, for example, popular among law enforcement officers, with many police officers hunting in free time.

The most commonly hunted species in Belize are: white lipped peccary, collared peccary, armadillo, paca, red brocket deer, and white-tailed deer. These species also form around 70-80% of jaguar diets in Belize. Thus, 'competition' with humans is significant. The trade in game species falls mostly outside of the realm of certified, licensed and/or government endorsed, as traditionally it remains within families and small communities. There is a trend towards more organised trade in game species, including the possibility of a game species trade with Guatemala, a country significantly depleted of game species. Hunting of jaguars in Belize—which is clearly illegal in all cases—is not yet extensive; there are anecdotal reports, but the problem is neither organised or targeted nor extensive.

The high amounts of intact wilderness and potential for high-value natural wildlife products, creates the real potential for a flourishing illegal wildlife trade. Indeed, the significance and extent in the jaguar range in general has been sufficient to attract the concern of the international community, as highlighted at CITES COP 71, which agreed to initiate a study on the threat.³ Anecdotal evidence suggests that some trade is happening but it is in its infancy. The Belize government needs to stay on top of this to assure they are ahead of the curve and can stop high level organization before it emerges.

Conflict

The livestock industry is growing and almost all farms are at the edge of wilderness areas, creating high possibility of jaguar-livestock conflict. The high amount of edge equally creates the high possibility of game hunting with the country having a long tradition of game meat consumption. The high level of national attention on jaguars has led to the first government led jaguar conflict response team. However, this requires further expansion and resources to assure success.

As the only English-speaking country in the region, Belize attracts considerable attention in terms of tropical education studies from English speaking universities. This has been integrated income generation for many protected areas, providing the basis for an extensive network of camera trap monitoring effort, some consistent

³ See COP 71 decision on jaguars at <https://cites.org/eng/dec/valid17/82250>.

and some more haphazard. These efforts provide an important baseline for building a national monitoring system, through government regulation and delegation. Belize's relatively small size creates the possibility of truly knowing, with enough precision and accuracy, the distribution and abundance of jaguars throughout the country, allowing detailed management of its population. This requires building capacity within the government to manage and bring together these data within a national system and communicate and liaise with all relevant stakeholders providing data. Some of the protected area units have high management capacity, with limited capacity for some of the forest reserve, meaning limited knowledge of wildlife distribution or management. Holes within the monitoring and management system need to be filled through an integrated system of a data warehouse management system under the currently developed Forest Information System of the Belize Forest Department. With the widespread implementation of SMART systems in the country, the combination of wildlife monitoring system and increased enforcement efforts can lead to an efficient system of wildlife management within the National Protected Area System (NPAS). Wildlife moving outside of this for wildlife management system can be regulated by the conflict resolution team per district. The Belize Forest Department has started such a system by having one forest ranger dedicated per district, but the system is in its infancy. The current program will strengthen this with further NGO involvement and financial and expert assistance within the current network.

III. STRATEGY

The project's theory of change stems from the identification of key baseline characteristics underlying any effort to conserve biodiversity conservation in the country (not shown in diagram for reasons of space). These are:

- Belize is likely the only Central American country which can still boast a fully connected forest system. The intact trophic species structure of its wilderness environment is evidenced by a relatively high density of top predators, notably including jaguars.
- Jaguars are a national landscape species (impressive recorded 'dispersal distance'), which require connectivity for genetic exchange. This creates a driving force / need for currently fragmented management and monitoring activities (see below) to be integrated at national level.
- Belize maintains three functional, but threatened (see below), biodiversity corridors, each with significant populations of jaguars, tapirs and ungulates. Within these corridors, rural communities and farms are surrounded by wilderness, with jaguars living at the edges of farms and communities.
- Belize's history demonstrates that abandoned agricultural land can be naturally rewilded and return to a high level of wildlife conservation value.
- The country's small size and relatively high density of camera trapping effort to date creates an opportunity to manage still viable wildlife populations at the level of connected landscapes. To do so, data, information and modeling needs to be integrated in order to enable science to inform political processes and decisions on land-use planning and change, e.g. where the agricultural boundary should be allowed to expand, where wildlife losses may be inevitable and where conservation efforts need to be strengthened.

FIGURE 2: THEORY OF CHANGE

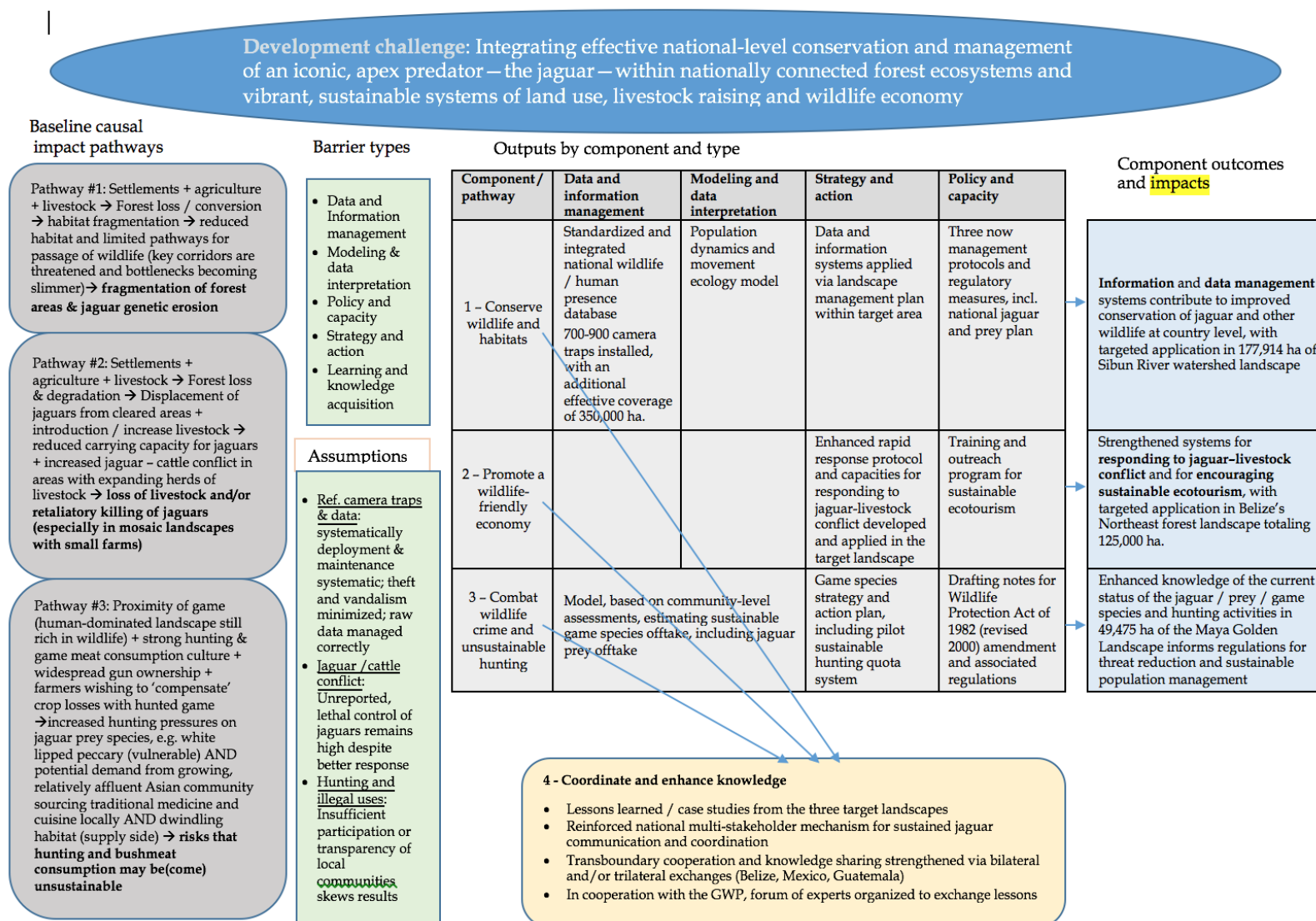


Figure 2 above presents the project's theory of change. It consists of the following elements:

- i. *Development challenge, or goal*: This represents the long-term goal to which the project will contribute.
- ii. *Baseline causal impact pathways*: Three distinct pathways are presented, with arrows (→) and '+' signs to indicate the causal logic of each.
- iii. *Barrier types*: This box presents four categories of barriers which will be addressed by the project in order to reduce the impacts discussed in the previous bullet. These are described in turn below.
 - Lack of capacities needed to assess and respond to habitat fragmentation and corresponding jaguar genetic erosion: Multiple skills and approaches need to be brought to bear to address the problem outlined in Impact Pathway 1 of the Theory of Change. Current shortcomings are associated with the following barriers and baseline conditions:
 - (i) Systematic gathering of wildlife data for national-level assessment is currently nonexistent in Belize. Scattered studies are conducted, mainly by two larger foreign institutes, without any further incentive system to assure mobilization for national assessments or assurance of long-term data storage. These studies are confined to specific study sites. Local managers of various protected areas have some rudimentary field components of camera trapping, but mobilization and storage of data remain none existent, with data disappearing with crashes of computers and changes in personnel. The recent high influx of camera traps and capacity to deploy requires an equally urgent follow up to harness this capacity in terms of standardized and a collective system of permanent storage. In summary, management efforts would be greatly enhanced by the existence of a national Belizean team to maintain a system of data gathering, storage, analyses, and final reporting.
 - (ii) Even a greatly enhanced and up-to-date system for managing camera trap data would not be sufficient to inform policy (see next bullet) in the absence of specialized techniques for modeling this data. Lack of capacity for wildlife modeling exacerbates this issue.
 - (iii) Policies based on systematically gathered and modeled data are needed to inform management of protected areas and associated landscapes. This may include targeted surveillance efforts tailored to limited budgets and early warning systems / data.
 - Lack of knowledge and capacity to help turn wildlife into an asset, while reducing conflict situations in an environment where human settlements and wild areas are frequently adjacent / overlapping: The success story of Belize as a conservation beacon, having 60% of its landmass under natural wilderness cover, has unintended side-effects for the local economy. The intact trophic species structure of the wilderness environment means a relative high density of top predators. All rural communities and farms are surrounded by wilderness with jaguars living at the edges of farms and communities. Jaguars frequently have a tendency in such situations to prey on livestock. Most intensive livestock production takes place in predator free areas and livestock have been bred to be docile and have lost all anti-predator behaviour. Without extra protective measures, livestock are thus extremely vulnerable to jaguar predation. Jaguar predation of livestock is widespread and a problem across the country. Retaliatory killing of jaguars is common and allowed by law as the current wildlife act indicates that people can protect their livelihood. Managing this problem requires a combination of technical and 'diplomatic' skills, the former for handling errant jaguars, the latter for effectively addressing the concerns of cattle ranchers. To date, Belize has not built up the necessary capacities, particularly the technical ones but also to some extent in working with ranchers as stakeholders, to address this challenge effectively.
 - Insufficient understanding of wildlife - prey dynamics and impact of hunting pressures on jaguar viability: Belize has a strong hunting and game meat consumption culture, with high levels of hunting rifle ownership and widespread hunting. However, hunting is scarcely regulated. Most hunting by rural people is carried out with guns that are licensed through the farm license system, which allows them to go armed on their own farm / property in order to protect themselves and their livelihood. As such, they

have the right to shoot game on their property under the logic of protecting their crops. Little information is therefore collected regarding quantities of hunted game and few people apply for licenses. It is also quite easy to purchase game meat—food stalls openly sell it by the side of the road—including deer, peccary, paca, armadillo and others. Selling of game meat falls under a different part of the wildlife act, and here regulation has improved recently. Public selling appears to have become less common, with a recent publicized enforcement campaign on seller licenses. This does not seem to have reduced the availability of game meat, however, but simply made it is less visible. The majority of hunting therefore takes place within a human-dominated landscape that is still rich in wildlife, especially in areas neighboring some of the larger protected areas. The baseline situation is marked by limited understanding of game species populations, availability of game, hunting effort and offtake levels and by informal bush meat markets. Many of the species in question also represent food sources for jaguars. Growing human populations and shrinking forests outside protected areas are contributing to the challenge. Together, these factors create a situation where it is difficult to manage prey populations sustainably.

- Learning and knowledge acquisition: In a somewhat fragmented knowledge and management ecosystem, where multiple NGOs in particular are responsible for managing what are in some cases fairly small portions of wider landscapes, unimpeded flows of knowledge are crucial to raising standards of management. This also holds true at a higher scale, in the sense that wildlife management issues and solutions worldwide can benefit Belize management interventions, and vice versa.
- iv. *Outputs by component and type*: The essential innovation here involves characterizing each output by type, rather than simply listing each under their respective components. Together with the previous items, this leads to a matrix which succinctly describes the project intervention strategy in relation to the barriers underlying the impact pathways. It's worth pointing out here that the project design differs from a classic approach in which demonstration work is undertaken under one component, another relates to enabling environment, etc. Here instead, each impact pathway is associated with a relatively contained (in size) demonstration landscape in which strategies and actions can play out and in support of which other gaps, such as data and information management, data interpretation and policy and capacity work can play respective roles. Component 4, 'Coordinate and enhance knowledge', provides the glue to hold things together as well as ensuring that cross-site and cross-theme learning takes place (see arrows denoting this relationship).
- v. *Component outcomes and impacts* presents each of these items by component, with clear reference back to the respective original (far left) impact pathways.
- vi. *Assumptions* are squeezed into the space beneath barrier types to allow this aspect to be included.

The project closely reflects the Global Wildlife Program (GWP) Theory of Change (TOC). The project structure is aligned with three of the four GWP pillars, namely Conserve Wildlife and Habitats, Promote Wildlife-Based Economy, and Combat Wildlife Crime, as well as with several of the activities/outputs outlined in the TOC (see **Table 1** below for details of correspondence). In turn, these activities will contribute to the short-term outcomes established for the GWP, such as landscapes with improved biodiversity management practices, increased incentives to protect wildlife and capacity to co-exist with wildlife, and strengthened institutional capacity to combat international wildlife trade (IWT), among others. Over the medium term, the project will contribute to the GWP outcomes of wildlife conservation and crime prevention, and in the long-term to the outcomes of global biodiversity conserved, livelihoods for local communities improved, and resilience enhanced. The project, together with other possible projects emerging following the Jaguar 2030 High-level Statement and Roadmap, plans to make full use of GWP coordination processes and structures for stimulating action across the jaguar range. The present project is expected to be a cornerstone in these efforts.

GEF funding will focus on support to incremental costs associated with conserving jaguars and their habitats. These include mainstreaming biodiversity conservation across economic sectors and addressing direct drivers to protect habitats and species. GEF incremental support will have an important impact on the long-term viability of jaguars and associated prey species in particular, as well as on other globally significant species and ecosystems.

TABLE 1: GWP ALIGNMENT

GWP components	GWP program outcomes	Key project contributions to GWP outcomes	Key project targets
<u>Component 1</u> Conserve wildlife and enhance habitat resilience	<ol style="list-style-type: none"> 1. Stabilization or increase in populations of, and area occupied by, wildlife at program sites 2. Areas of landscapes and terrestrial/marine protected areas under improved practices and management effectiveness (METT for PAs) 3. Strengthened long-term partnerships, governance, and finance frameworks for PAs 	<ol style="list-style-type: none"> 1. Setting up major monitoring projects, with potential follow up enforcement, in key vulnerable areas of the protected area system 2. Using species monitoring data to strengthen enforcement efforts, creating management plans for vulnerable areas. 3. Actively search and bring together local and international management stakeholders, and solidify their roles within the management plan 	<ol style="list-style-type: none"> 1. Understanding baseline abundance and distribution of jaguars in target area and assure stabilization or improvement based on acquired data. 2. Provide better management structure of vulnerable core jaguar areas in Belize. 3. Long-term stewardship of the key vulnerable areas.
<u>Component 2</u> Promote wildlife-based and resilient economies	<ol style="list-style-type: none"> 1. Additional livelihood activities established 2. Increased Human-Wildlife Conflict (HWC) strategies and related site interventions deployed 	<ol style="list-style-type: none"> 1. Small microloan program to provide incentives for reduced conflict. 2-4. Certification program for local tour guides to become involved in wildlife monitoring as a tourist-based activity 5. Local team of capture experts increase capacity to quickly and decisively deal with jaguar conflict situations 	<ol style="list-style-type: none"> 1-4 Change local economy to align with improved ecosystem function needs for improved survival of jaguar individuals. 5. Provide local stakeholders with confidence that local managers can deal with wildlife problems effectively.
<u>Component 4</u> Reduce demand	<ol style="list-style-type: none"> 1. Increased number of tools used to advocate against consumption of illicit wildlife products and promote ethical behavior 	<ol style="list-style-type: none"> 1. Introduction of tool, allowing local stakeholders to understand and self-regulate their own game meat consumption. 	<ol style="list-style-type: none"> 1. Work towards sustainable use of game species in relation to local protein and cultural needs
<u>Component 5</u> Coordinate and enhance learning	<ol style="list-style-type: none"> 1. Enhanced understanding of wildlife as an economic asset 2. Strengthened Public-private partnerships for promoting wildlife-based economies 3. Enhanced upstream sector engagement 4. Improved coordination among countries, donors, and other key stakeholders engaged in the implementation of the GWP 5. Increased global policy dialogue and engagement on IWT and wildlife for sustainable development 6. Enhanced GWP management and monitoring platform 	<ol style="list-style-type: none"> 1. Accurate and precise quantification of game meat consumption allows quantification of economic value, protein needs, and livelihood value 2. Introduction of expert monitoring of wildlife in relation to game meat offtake, will start dialogue regarding sustainability, use, and future management. 5. Setting up conferences/workshops regarding lessons learned on setting national networks 5. Indicating to global wildlife community the lessons learned 	<ol style="list-style-type: none"> 1. Embedding knowledge gained within the wider international community. 2-3. Work towards sustainable use of game species in relation to local protein and cultural needs 5. Show further to GWP how Latin American conservation varies from African and Asian species conservation and ecosystem management.

GWP components	GWP program outcomes	Key project contributions to GWP outcomes	Key project targets
		on monitoring and management of platforms and national wildlife conflict management.	

Project target landscapes based on their essential contributions to jaguar conservation in Belize. Each demonstrates a particular type of threat to the species as follows:

- The Sibun River Watershed Landscape (see Map 1, p.50) was chosen as a central site within the jaguar range with limited management and enforcement ability. The monitoring efforts are equally meant as an initial effort to create infrastructure and planning to allow surveillance and monitoring of the overall site. The area appears to suffer from moderate to high levels of poaching of game species, linked to fragmentation and increased access. As a result, the carrying capacity for these areas to sustain jaguar populations is lowered considerably, with a knock-on effect of increased human-jaguar conflict as jaguars are forced to leave the forest reserves in search of food.
- The Northeast Forest Landscape (see Map 2, p.51) was chosen on the basis of the sharp edge between livestock rearing and the protected area, creating high opportunity for human-wildlife conflict. Here, the objective is to mitigate and set up a system for managing wildlife-cattle conflict on the basis of lessons learned in this high contact zone area.
- The Maya Golden Landscape (see Map 3, p.52) was chosen on the basis of high hunting of jaguar prey species by communities, mainly for consumption. The establishment of a regulatory system will ensure sustainable use of an unregulated offtake system, helping coming communities come to grips with using wildlife as a protein source.

All three sites and processes have the ability to contribute to more organised trade in wildlife. Human jaguar conflict can feed into an illegal wildlife trade under the guise of protecting livelihoods. Subsistence hunting can change into commercial hunting with networks. Monitoring of the three sites and engagement of stakeholders will enable enhanced monitoring the situation of national and international wildlife trade in Belize.

IV. RESULTS AND PARTNERSHIPS

Project components and results / outcomes are described below. Details regarding individual outputs and associated activities are presented in Annex 2, Multi-year workplan.

Component 1: Conserving wildlife and habitats

OUTCOME 1: INFORMATION AND DATA MANAGEMENT SYSTEMS CONTRIBUTE TO IMPROVED CONSERVATION OF JAGUAR AND OTHER WILDLIFE AT COUNTRY LEVEL, WITH TARGETED APPLICATION IN 177,914 HA OF SIBUN RIVER WATERSHED LANDSCAPE

The project will help to ensure Belize's ability to monitor jaguars and their prey throughout the country. This outcome will be significantly enhanced via the consolidation of a wildlife monitoring network, based largely on camera trap data, and of a means of bringing data together within a single database. This will require key stakeholders to work together to populate the database and to assure the systematic upkeep of its constituent elements. Outstanding gaps in existing monitoring have been identified and will be filled, thus providing the added data needed to ensure a significantly enhanced understanding of jaguar distribution and presence across a contiguous core area of the jaguar landscape. Understanding will be further enhanced through the development and application of a population dynamics and movement ecology model.

In addition to its national-level aspects, the project will demonstrate its gap-filling and information-using approach in a contiguous area of central Belize, the Sibun River watershed (see Annex 1, Map 1). The area consists of a variable landscape in terms of habitat, with majority broadleaf forest and some pine savannah habitat at the edges. The more accessible areas in the Northern (flatter) portions of Manatee Forest Reserve have been selectively logged through several logging concessions. The Southern forest reserves of Sibun and Sittie River are extremely rugged and stream rich and as such difficult to traverse with heavy machinery. Here the vegetation is more intact. Manatee Reserve has considerable hunter presence and as such could be depleted of larger ungulate species (white lipped peccary extinct).

Outputs needed to deliver the above outcome, and associated indicative activities, are described below.

1.1 A standardized and integrated national database for wildlife and human presence monitoring, with emphasis on underpinning conservation of jaguars and associated (prey) species

The project will implement a standardized and centralized system of data management, with detailed systems for sharing data among contributing partner organizations. All camera trapping entities, both national and international, are expected to contribute data to the national database to allow national assessment of the state of wildlife across Belize. This will enable country reporting to the Convention on Biological Diversity (CBD) and other international bodies to be done in far greater detail, based on enhanced knowledge of the viability of larger mammalian wildlife populations.

The following indicative activities are expected:

- 1.1.2 Conclude an MoU governing data sharing amongst all camera trap partners, including agreement on design of new camera trap studies
- 1.1.3 Introduce cloud-based camera trap data management platform universally and ensure adoption by all partners
- 1.1.4 Train users of data management system, including central hub managers
- 1.1.5 Equip satellite input agencies with hardware adequate to support regulated dataflow from field to database at fixed intervals, thereby assuring timely entry of data into the system
- 1.1.6 Support platform management capacities within the Forest Department

1.2 Approximately 700-900 camera traps installed, complementing, improving and extending existing installations, with an additional effective coverage of 350,000 ha.

This output will expand upon the existing baseline camera trap monitoring infrastructure, present mainly within the currently active areas of NGO management. An important camera trap monitoring gap—located between the Rio Bravo and Maya Forest Corridor, previously the Central Belize Corridor, and the current most Northern monitoring efforts of the Maya Mountain Massive around Chiquibul, Mountain Pine Ridge and Cockscomb Basin Wildlife Sanctuary—will be filled with approximately 100 new camera traps to be procured by the project. Filling this gap will enable monitoring of the most important, contiguous jaguar conservation units—together with the most important central corridor—as a single unit, allowing monitoring and management of this overall landscape without any gaps. Together with strategic placement of previously purchased but not yet installed camera traps in other areas—mainly protected areas, but also within the productive landscape—a total of 700-900 new camera traps will be installed and resulting images brought into the national database (see Output 1.1), with an additional effective coverage of 350,000 ha.

The following indicative activities are expected:

- 1.2.1 Establish a well-trained camera trapping field team, under guidance of the forest department
- 1.2.2 Scout out and assess appropriate locations for deploying camera traps across the target landscape
- 1.2.3 Procure, deploy and maintain camera grid throughout the target landscape

1.3 A model of population dynamics and movement ecology of jaguars and wide-ranging prey species based on enhanced monitoring data

The increased monitoring system, setting up a national collaborative network will result in monitoring information at the appropriate national scale. This improved scale will require and stimulate the development of new analytical tools by a network of international collaborators. The unique scale of the national Belizean dataset will allow Belize to spearhead a new means of management and monitoring, bringing together stakeholders from management and scientific communities.

The following indicative activities are expected:

1.3.1 Develop the analytical tools needed to continuously assess variation across the landscape in: jaguar density, distribution, dispersal distances, survival, habitat use with emphasis on fresh water availability, enhancing knowledge on climate change within the upper regions of the jaguar range

1.3.2 Develop the analytical tools needed to continuously assess variation across the landscape in: prey density, and distribution, habitat use with emphasis on freshwater availability

1.4 Three new management protocols and regulatory measures, including a National Jaguar and Prey Policy, Strategy and Management Plan

Belize's wildlife laws date back to the times of British Honduras and the country lacks species-specific management strategies. The well-designed protected area system plan provides solid management structures within a co-management framework. However, this has the downside that the fragmented management structure of human defined protected areas boundaries is insufficient to assure management of wide-ranging species, with population structures transcending the individual protected area boundaries. To address this barrier, the project will develop management protocols and regulatory measures for these species at national and landscape scales. This will include, inter alia, a National Jaguar and Prey Policy, Strategy and Management Plan.

The following indicative activities are expected:

1.4.1 Develop National Jaguar Action Plan to improve national structures and systems of collaboration for the maintenance of Belizean jaguar populations

1.4.2 Develop National Guidelines for prey species management, with a focus on white-lipped peccary

1.4.3 Develop national protocols for assessing major game species in Belize

1.5 Enhanced data and information systems applied to design and initiate implementation of, a landscape management plan within the c. 178,000 ha target area

Manatee, Sibun and Sittee River Forest Reserves are located at the heartland core of protected areas. They provide a vital link between the North and the South of the country. They are, however, among the areas currently receiving the least amount of attention and management. Expanding camera trap monitoring under Output 1.1 will greatly enhance knowledge of this landscape. This knowledge will be used to underpin a constructive dialogue regarding further management and monitoring of the reserves. This output will thus fill an extremely important gap by providing a data-based assessment of the status, distribution, and security of jaguar and prey populations in general, while initiating processes of increased management structures for the area. The latter will include the mapping out of efficient access routes to enable movement around the landscape (e.g. drop off points, easiest pathways to traverse) by management personnel, which will allow presence, monitoring, and full landscape assessment for the area.

The following indicative activities are expected:

1.5.1 Identify high priority conservation areas for jaguar / wildlife conservation corridors within existing forest reserves with recommendations for reclassification for enhanced protection

1.5.2 Develop a landscape management plan for the 178,000 ha. target area, including, inter alia, road barrier management, in support of the national jaguar corridor system

Component 2: Promoting a wildlife-friendly economy

OUTCOME 2: STRENGTHENED SYSTEMS FOR RESPONDING TO JAGUAR–LIVESTOCK CONFLICT AND FOR ENCOURAGING SUSTAINABLE ECOTOURISM, WITH TARGETED APPLICATION IN BELIZE’S NORTHEAST FOREST LANDSCAPE TOTALING 116,913 HA.

This outcome aims to assure the capacity of Belizean authorities to safely and professionally capture individual jaguars that may be threatening lives or livelihoods of people in the human dominated landscape. This team needs to be able to capture jaguars, using the latest techniques with the least possible harm to jaguars, or possible harm to team members or public. The team need to be well versed in jaguar ecology in human dominated landscapes and able to make expert assessments of whether trapping is necessary or not in any given situation. In this way, the project will contribute to a more harmonious relationship with the livestock sector in particular.

In broader economic terms, the project will aim to stimulate jaguar-themed tourism outside of protected areas in conflict areas, as a remedy against negative perception of jaguars. Several initiatives for creating economic activity around tourism and citizen science projects will be tested.

Outputs needed to deliver the above outcome, and associated indicative activities, are described below.

2.1 Enhanced rapid response protocol and capacities for responding to jaguar-livestock conflict developed and applied in the target landscape

The testing of a field team will be done in the North of the country, spearheaded by the Corozal Sustainable Future Initiative (CSFI). Here an expert jaguar trapper, together with a jaguar expert in ecology of jaguars in human-dominated landscapes, will provide training to the newly established team on how to trap jaguars and when, developing protocols in close collaboration with the Forest Department as the government entity. These trainers will help recruit and build a team. The team will be tried and fielded during the GEF7 project.

The following indicative activities are expected:

2.1.1 Work with CSFI to build a national jaguar conservation / capture team.

2.1.2 Provide intensive training in ecological assessments of jaguars in human-dominated landscapes, allowing accurate threat assessments

2.1.3 Conduct field work / learning-by-doing to capture 20 jaguars in human-dominated landscapes and follow their subsequent movements through GPS telemetry

2.1.4 Engage local communities and management entities in the development of early warning and wildlife conflict incident reporting protocols.

2.2 Training and outreach program for wildlife-friendly economic activities

The project's promotion of a wildlife-friendly economy will aim to foster co-existence between wildlife and people. Local peoples, including herders, ranchers, farmers, artisans and indigenous peoples, will benefit from ecosystem-based livelihoods in parallel with their active participation in conservation measures and their adoption of non-lethal co-existence practices. Sustainable ecotourism, including cultural / educational and ecosystem-based tourism products, will provide an opportunity for community participation in a wildlife-friendly economy, while enhancing local support for wildlife conservation by encouraging jaguar-focused visitation and mitigating negative attitudes arising from conflict. The project will support, in cooperation with the Belize Tourism Board, the development of a new ecotourism package which can be certified as wildlife friendly and promoted by communities buffering the national jaguar corridor. Relevant private sector tourism operators will be fully engaged throughout this process.

Also under this output, the project will enable landowners to participate in conservation practices as citizen scientists, i.e. as contributors to the national camera trap network.

Finally, the project will make seed funding accessible to communities buffering the Jaguar corridor to build new sustainable opportunities for livelihoods. These opportunities will be designed to improve quality of life as well as

benefiting conservation in the area. During the first year of implementation the project will conduct livelihood analysis/ assessments to establish sustainable livelihood alternatives through a thorough stakeholder consultation process within the buffer communities of the northern “Jaguar Corridor”. Once defined, such alternative livelihood activities will undergo the environmental and social risk screening process following the UNDP SES procedure. If risks are identified, the project will develop the appropriate management measures and plans, such as a Livelihood Action Plan to avoid, reduce or mitigate the impact of such risks.

The following indicative activities are expected:

2.2.1 Engage the Belize Tourism Board to develop a specialized tourism product and certification linked to jaguars, including camera trapping activities, honey and other products and services to be developed under Activity 2.2.3

2.2.2 Provide technical support to participating guides and landowners enabling them to contribute to the national camera trap network.

2.2.3 Support selected livelihoods alternatives within buffer communities of the northern "Jaguar Corridor", e.g. buffer zone honey, while conducting necessary risk screening procedures.

Component 3: Combatting wildlife crime and unsustainable hunting

OUTCOME 3: ENHANCED KNOWLEDGE OF THE CURRENT STATUS OF THE JAGUAR / PREY / GAME SPECIES AND HUNTING ACTIVITIES IN 49,475 HA OF THE MAYA GOLDEN LANDSCAPE INFORMS REGULATIONS FOR THREAT REDUCTION AND SUSTAINABLE POPULATION MANAGEMENT

Under the GEF alternative, six communities will be empowered to manage wildlife sustainably on community lands in Toledo District, within an area known as the Mayan Golden Landscape. The habitat here is edge habitat, meaning logged, recovering and fragmented. Hurricane Iris in 2001 caused considerable damage in this area. The area is water rich and this southern region is the wettest part of the country. This area is the transition zone from the higher elevation Maya Mountain Massive to the coastal plain with changing into Pine-savannah habitat and literal forest. All this habitat is at the edge of large stretches of intact protected broadleaf forest habitat and as such, wildlife spillover can be considerable. Hunting is traditional and widespread. Species assemblages are still complete.

Sustainable offtake—including that associated with hunting by the area’s jaguar population—will be estimated through a combination of camera trap data, community surveys and modeling. A quota system will be designed and tested. Information derived from surveys and a community-based monitoring system will be instrumental in establishing an early warning system for overhunting of prey species, as well as for any signs of emerging commercial trade in wildlife, including jaguar parts. Results will be captured and will be made available for use in ongoing efforts to update the Wildlife Law and for potential adaptation to other areas of the country.

Outputs needed to deliver the above outcome, and associated indicative activities, are described below.

3.1 Model, based on community-level assessments, estimating sustainable game species offtake, including jaguar prey offtake by viable predator populations

To assess how much wildlife is potentially available for legal offtake within the rural landscape, the project will place camera traps on farms in community land, which will provide visitation rates and frequencies of capture on camera for the different game species. General abundance measures will be estimated for the different wildlife species present on farms, providing an informed baseline for presence of wildlife. The camera trap data will likewise inform about the presence and abundance of jaguars in the area.

In addition to camera trap data, surveys will be undertaken at specified intervals throughout the project period, in which hunter/farmers will be interviewed regarding hunting frequency, area covered, average offtake per species, offtake of jaguars and other aspects of hunting practices. A broader subset of villagers will be interviewed regarding consumption of wildlife/game species for subsistence. Significant differences between hunting levels and local game consumption will serve to indicate a commercial market for game.

The following indicative activities are expected:

3.1.1 Recruit community members to participate in camera trap surveys on community lands to assess game species abundance and jaguar presence.

3.1.2 Design and administer social surveys in six communities as a means of estimating current hunting levels and local subsistence use (consumption), as well as degree of commercialization of game

3.1.3 Estimate the economic value of the wildlife resource to local communities and the potential economic loss if it were to collapse through unsustainable offtake

3.2 A strategy and action plan for the monitoring, sustainable management and use of game species, including a pilot sustainable hunting quota system, developed and implemented in six communities

Communities will be supported in moving from a “free for all”, unchecked hunting system to a regulated, controlled system in which abundance of game species is known and, with the help of data-driven expert opinion, quotas are negotiated with local hunter community and implemented. The wildlife economy surrounding this legal activity will be assessed and quantified.

The following indicative activities are expected:

3.2.1 Based on enhanced data and understanding emerging from Output 3.1, develop community resource use management plans

3.2.2 Seek community support in the mainstreaming of wildlife / game species monitoring in community governance systems

3.2.3 Build capacities of local communities to monitor wildlife levels with cameras, in collaboration with Forest Department and managing NGOs

3.2.4 Develop recommendations for broader national-level application / uptake, i.e. how lessons learned can be implemented nationwide, e.g. creation of other “hunting community” structures.

3.2.5 Develop technical guidance/ drafting notes on sustainable hunting levels, per game species, to inform amendment of Wildlife Protection Act.

Component 4: Coordinating and enhancing knowledge

OUTCOME 4: ENHANCED NATIONAL / TRANSBOUNDARY / JAGUAR RANGE COLLABORATION, KNOWLEDGE MANAGEMENT AND COMMUNICATION

The project will pay close attention to knowledge management, which will take place at multiple geographic and thematic levels:

- *Within the Global Wildlife Program:* As a child project under the Global Wildlife Program (GWP), the present project will maintain especially close ties with other child projects under the GWP. It will support the diffusion of knowledge, know-how and ingenuity: (i) across the Jaguar Corridor, which extends across 16 countries and 6,000 km², and (ii) with other projects and regions that may be addressing the conservation of big cats or other umbrella species.
- *Within Belize:* Throughout its implementation, the project will develop knowledge sharing products such as: report of lessons learned and good practices, south-south cooperation, triangular cooperation, as well as tools and methodologies that can be applicable to the jaguar as well as other species, at different levels, both locally and nationally. Additionally, the obtained results will be shared with countries in the region (LAC), in a way that contributes to the strengthening of the Jaguar Roadmap 2020-2030 as well as the implementation of the Agenda 2030, mainly associated with SDG 15.
- *Within GEF:* The project will liaise and exchange knowledge with relevant GEF-7 Impact Programs, particularly the Food Systems, Land Use and Restoration Impact Program (FOLUR), which will support transformational shifts in large landscapes by taking into account competing demands for production

of staple foods and major agricultural commodities, while harnessing opportunities to protect natural environments and restore degraded landscapes. Given the importance of expanding production of agricultural commodities as a threat to jaguars and a driver of habitat loss within the Jaguar Corridor, the FOLUR programme—both its methodological approaches and the on-the-ground support afforded—will be a target for knowledge sharing by the project.

4.1 Knowledge capture and sharing

The project will commission programmatic impact assessments of each of the three main outcomes. This action will inform case studies which will be shared nationally, including through public fora. It will support Belize's active participation in transboundary/ jaguar network sharing events and information exchanges, which will support, *inter alia*, implementation of the COP 71 decision on jaguars. Particular attention will be paid to coordinating with national jaguar-focused projects in Belize and Panama on lessons learned with respect to jaguar management, particularly in the area of camera trapping and data management systems being developed under Component 1. More generally, knowledge sharing efforts will engage other jaguar range countries and will reflect priority issues agreed by these countries in the Jaguar 2030 Roadmap, including conservation-compatible sustainable development models in jaguar conservation units and corridors.⁴ Finally, Belize is considered an important partner in maintaining jaguar populations and in ensuring connectivity in the regional jaguar range. As the project is expected to generate useful information, pilot innovative management models, etc., it will support the broader dissemination of lessons learned through the country's hosting of a regional forum on jaguar management, to be organized in close cooperation with the GEF's Global Wildlife Program (GWP).

The following indicative activities are expected:

- 4.1.1 Lessons learned / case studies from the three target landscapes are captured and disseminated
- 4.1.2 Transboundary cooperation and knowledge sharing strengthened via bilateral and/or trilateral exchanges (Belize, Mexico, Guatemala) with a focus on key transboundary landscapes
- 4.1.3 In cooperation with the GEF Global Wildlife Programme, a forum of experts organized to exchange lessons learned regarding key topics such as landscape management of jaguars and wildlife crime / trafficking
- 4.1.4 Ensure that knowledge gained through association with the Global Wildlife Program (GWP) is shared widely within Belize

4.2 Reinforced national multi-stakeholder mechanism for sustained jaguar communication and coordination

The project will help to reinvigorate a coordinating mechanism that was originally established in 2009. The Ministry of Fisheries, Forestry, the Environment and Sustainable Development will lead this National Jaguar Working Group. The group will also include representatives of the organizations (mostly NGOs) responsible for managing protected areas in the project landscapes. Participation by other Ministries will be determined during the first year of the project, when a consultant will be recruited to define the ToR and protocols guiding the work of the group. Development of a terms of reference and protocols to guide the work of the group will be supported. The group will help to coordinate efforts in a number of areas, including: (i) maintenance of yearly monitoring and camera trapping efforts, database updates and records; (ii) record keeping and updating of jaguar – cattle conflict situations throughout the country; (iii) enforcement issues related to jaguar and prey hunting; (i) funding constraints and grant applications, and; (v) assessing research permit proposals on jaguars and prey.

The following indicative activities are expected:

- 4.2.1 Support the functioning of the National Jaguar Working Group

⁴ See [Jaguar 2030 Roadmap: Regional plan to save America's largest cat and its ecosystems](#), which has been endorsed by 14 of 18 jaguar range countries.

4.3 Project monitored and evaluated

During the preparatory phase, significant outreach was made to indigenous groups who will be impacted by project activities under component 3. These consultations will be complemented by a process to obtain full FPIC of the final project document during the inception phase. The project includes three safeguard plans—gender, indigenous peoples and stakeholder—along with associated risks. Together, these will require careful monitoring. Finally, in the final months of the project, a terminal evaluation will be conducted.

The following indicative activities are expected:

- 4.3.1 Inception workshop and FPIC under Indigenous People's Plan
- 4.3.2 Monitoring of all stakeholder plans and risks
- 4.3.3 Project evaluation conducted

Partnerships

Working together in partnerships represents a critical element of the project strategy. Perhaps the most central example of this emphasis is under Component 1, where a partnership of organizations will be established for sharing camera trap data and utilizing the collective results for analytical purposes.

In addition to the overarching partnership between the GEF implementing agency (UNDP), and the Government executing partner (the Forestry Department), the project relies on key partnerships under each of its main components (1-3). These partnerships may be briefly summarized as follows (additional details may be found above under the project description):

- Panthera: Panthera is an international, non-governmental organization focused on the global preservation and management of wild cat species. Panthera's work in Belize is focused primarily on the jaguar, maintaining healthy prey populations and jaguar range connectivity, primarily through reducing jaguar conflict with livestock growers. Panthera is based in Mayflower Bocawina National Park, Belize. Panthera will play a key role, working with the Forestry Department, as responsible party under component 1 for development of the Belize wildlife monitoring network and application in the central corridor.
- Corozal Sustainable Future Initiative (CSFI): CSFI is the Government's primary partner in managing the Northern Biological Corridor, which is in the process of being reshaped as a protected area. In partnership with the Forestry Department, CSFI will spearhead work to establish a response team for wildlife – jaguar conflict. It will also support the project's efforts to engage with local communities in the development of wildlife-friendly economic activities.
- Ya'axche Conservation Trust (YCT): YCT will play a central role, in association with the Forestry Department, as a responsible party under Component 3. YCT has a consistent, long-term presence in the southern corridor where activities related to sustainable hunting will take place. It has experience implementing similar projects in this area and strong relationships with the area's indigenous communities. Its Board of Directors includes representatives of the indigenous communities.

Risks

Based on the finding of the Social and Environmental Screening Procedure (SESP), the project has been assessed as "moderate" risk (see Annex 4). It involves the participation of indigenous peoples and other vulnerable or marginalized groups and has several additional moderately rated risks. It should be noted, however, that the concept builds on the lessons and the processes of recent similar actions undertaken by natural resource managers, including community consultation and participation in REDD+ programming, the development of a management strategy and plan for the central Belize Corridor System and the expansion of the North Eastern corridor system.

Project development has been informed through consultations with a broad cross section of national stakeholders and thorough analysis of national and local circumstances. Project developers have also elaborated three action plans to manage and mitigate the cumulative nature of the risks and/or the complexity of assessing and managing the moderate risks identified in the SESP. These action plans are: (1) Stakeholder Engagement Plan, (2) Indigenous Peoples Plan (IPP) and (3) Gender Action Plan. The IPP plan for example, outlines key activities designed to obtain the FPIC of local communities during the project's inception phase.

An effective strategy for risk management has been developed (See Annexes 4 and 5) and is reflected in the safeguard plans (see Annex 7-9). Eight individual risks have been identified and rated in terms of impact and probability. Risk treatment and management measures have been identified and associated responsibilities allocated to risk 'owners'.

Stakeholder engagement and south-south cooperation

Stakeholder consultations were undertaken throughout the project preparation phase. During these consultations, stakeholders were informed about the project and its evolving strategy, their views were taken on board and their potential roles in project implementation were assessed and confirmed. Forty-six stakeholders were identified and categorized by project component, region and stakeholder type. They include communities, academia, government agencies, NGOs and social groups. Depending on an assessment of power and interest, each stakeholder was assigned to one of the following categories:

- Keep informed: Provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.
- Consult: Obtain stakeholder feedback on project analysis and design, alternatives and/or decisions and consider stakeholder concerns and aspirations
- Involve: Include stakeholders in reaching all key project decisions and ensure stakeholder input incorporated
- Collaborate: Partner with stakeholders in reaching all key project decisions and ensure stakeholder input incorporated to maximum extent possible.
- Empower: Transfer control over decision-making, resources and activities to stakeholders

Annex 7 presents the project's stakeholder engagement plan and identifies stakeholders and associated type of engagement strategy under each project component and output.

In addition to bringing the voice of Belize to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on wildlife conservation. The project will furthermore provide opportunities for regional, south-south cooperation with countries that are implementing initiatives on wildlife conservation in analogous geopolitical, social and environmental contexts.

Gender equality and women's empowerment

The total population in the areas of intervention is 15,113 spread out across a total of 26 communities.⁵ In this area, the combined female population (7,393) is less than the male population (7,720).⁶ 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 forest resources.

⁵ This population data is based on data from the Statistical Institute of Belize (2016) Abstract of Statistics 2016.

⁶ *Ibid.*

During the PPG, a gender analysis was conducted and a gender action plan developed on the basis of this analysis. Key issues identified in the gender analysis include the following:

- Wildlife attacks on farms directly affect the livelihood and earning capacities of male and female farmers. For smallholders, the impact is greater as they are slower to recover following the loss of their livestock. The constant threat of wildlife attacks limits the options of farming households for income generation, especially if they must then spend more time in one place to protect their livestock. For women, the loss of smaller animals such as poultry directly impacts their ability to earn incomes from the sale of meat and eggs.
- Men and women alike look to informal ways to cope with, and respond to, wildlife conflicts. They do so by relying on their own internal knowledge and on traditional practices and experiences. Despite being farmers within close proximity of forests, men and women lack standardized knowledge and practice in dealing with wildlife conflicts.
- When responding to calls about wildlife attacks, Agriculture as well as Forestry Officers are likely to meet women at home and not male farmers. In this regard, women are effectively the frontline contact for wildlife conflicts response and mediation. They are the ones to get information first-hand from technical officers about what can be done to manage conflicts. However, given their roles in the home, they are unlikely to directly implement the suggested actions. Women thus have an informal role as intermediaries in the existing system of response between the officials and the male farmers. Increased recognition of the role that women play can help to improve the currently inadequate response mechanism. Furthermore, building the capacities of women to manage the communication with farmers can build overall household capacities to resolve wildlife conflicts.
- Men are considered to be the owners of the family farm, as women are less likely to own titled land.⁷ Despite their lack of land ownership, however, women like men undertake other economic activities to increase and diversify their income. In the surrounding northeastern communities, there is a common practice among women to engage in small scale economic groups, which are often women's groups. These groups are social structures that help women pool their resources, skills and expertise to generate much needed income. Generally, women who are active in these groups use skills such as sewing, jewelry making, and cooking. They also generate an income from sales in cosmetics, shoes, and telemarketing. In some instances, husbands who don't fish assist their wives with the production of local craft products. In the project landscapes, there are five (5) women's groups in the northeastern region and one (1) in the Maya Golden region.

Implementation of the project's gender action plan will contribute to gender equality and women's empowerment under each project component as follows:

- Components 1 & 3: Scientific data, primarily captured from camera traps, will provide the basis for the formulation of environmental communication at the community level, which can accurately inform on-farm practices of men and women. This means, for example, that farming and production practices can be better planned in these regions. This is an important consideration for food security and the conduct of traditional, cultural practices in a sustainable manner.
- Component 2: This component offers two main avenues for gender-specific action for a wildlife-friendly economy. *First*, in the area of empowerment and decision-making, the project will provide for the institutionalization of a rapid and effective response protocol that is easily understood and accessible by both men and women at the community level. This intervention will enhance the acceptability of women's formal engagement in wildlife conflict mediation and decision-making in the communities. In doing so, the project will usher in a soft, inclusive approach to conflict with jaguars with more trained human resources at the community level. Such an approach can also gain community buy-in, ownership and cooperation in the management of problem jaguars and other wildlife. *Second*, the project will provide an opportunity for communities to directly engage in sustainable practices associated with the brand of the jaguar. For women, the project can support and promote sustainable production activities.

⁷ Caribbean Development Bank, Country Gender Assessment, 2016.

Men as well as women can generate incomes from the production of honey from the nearby mangrove forest, and produce jaguar-branded souvenirs and gift items in the growing tourism industry, especially in the northeastern region of Belize.

- Component 4: The project will support the documentation of Belizean women's experience as partners in conservation and sustainable resource use for viable jaguar habitats. Knowledge products emanating from this effort should provide for the documentation of experiences in the northeastern and the Maya Golden regions in particular. This research can be co-developed with women in the communities at the inception of the project.

Finally, the project's results framework includes gender-responsive indicators.

Innovativeness, Sustainability and Potential for Scaling Up

Innovativeness: The project takes an innovative approach in its use of a single iconic apex predator as a fulcrum around which to design its activities. The logic of this approach depends on the jaguar's status as an umbrella species, its importance in local culture and conservation and its unique potential to support wildlife branding efforts. The jaguar's need for connectivity has inspired the project's emphasis on maintaining the integrity and connections among the country's remaining wildlife corridors.

Sustainability: The national project structures set up will be financially sustained through various mechanisms. Some larger international wildlife NGOs are, and have been, highly active in Belize, working in close collaboration with many of the on the ground NGOs. For example, Wildlife Conservation Society (WCS) is growing its terrestrial programme capacity in Belize, and Panthera has been active for a considerable time. Large portions of the camera trap network are assisted and managed by their activities, together with a substantial number of international university research groups. Here, through the jaguar group, fundraising capacity will be mobilized to assure sustained maintenance of the activities.

This project will be the impetus to show the successful operation of national systems. The assurance of sustained data and wildlife management posts will be done through long-term MoUs with the larger NGO partners, guaranteeing commitment from these parties and assuring integration into government plans and roles through their expert guidance. On previous occasions, the FD has absorbed NGO personnel on temporary contract working with the government. Through this mechanism, the FD has absorbed well-trained people, working through NGO projects, within their ranks and retained the knowledge gained through these temporary projects. The trained people were employed and integrated within a larger project process and the knowledge retained (two jaguar conflict officers from Panthera are currently working in the department).

While the Forest Department is working with other information systems outside of wildlife projects (e.g. REDD+ forest plot management), the wildlife projects are the furthest advanced. Here, the wildlife system can be embedded within the larger planned total national systems for which larger international funds are sought. All components have an overarching information and database system to it. This project will function as a spearhead to create traction for mobilizing such funding and thus allow embedding of the monitoring and wildlife management within these emerging national systems. This is possible in part due to the sustained support of international NGOs. As Belize has a strong tropical research destination tradition for European and US universities, research fees for permits can be used to leverage funds to use and control data streams created from such activities. Payment for database management and conflict resolution is already on the table as a potential item of payment. Here again, the jaguar working group can be key for regulating such activities and assuring the wise use of fund leveraging.

Potential for scaling up: Belize is a relatively small country and a significant portion of project activities, e.g. the wildlife monitoring system, are national in scale. In these cases, opportunities for scale up / replication are mainly at the sub-regional level, with the support of the project's knowledge sharing elements under Component 4. In the case of wildlife – cattle conflict reduction (component 2) and sustainable hunting (component 3) efforts, the National Jaguar Working Group will serve as a key vehicle for national-level dissemination and uptake.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): <i>SDG</i>				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): NATIONAL PRIORITY: Horizon 2030: Belizeans have a deep appreciation and love for Belize's natural resources and work collectively to protect the natural heritage and the economic value of these natural resources is quantified and officially recognized. GSDS CSF3: Sustained or improved health of environmental, historical, and cultural assets UN MSDF Outcome 8: Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources. UNDP CPD Outcome 2: <i>Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources.</i>				
	Objective and Outcome Indicators (no more than a total of 21 indicators)	Baseline	Mid-term target	End of Project Target
Project Objective: To secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation	Mandatory Indicator #1: # direct project beneficiaries disaggregated by gender (individual people)	N A	Male – 3,500 Female – 3,500	Male – 7,720 Female – 7,393
	Mandatory Indicator #2: Terrestrial protected areas under improved management for conservation and sustainable use (Hectares)		90,000	188,229 ⁸
	Mandatory Indicator #3: Area of landscapes under improved practices (excluding protected areas) (Hectares)		75,000	157,563 ⁹
Project component 1	Conserving wildlife and habitats			

⁸ This covers a total of 11 protected areas, as follows: (1) Three forest reserves covering 110,540 ha, targeted for increased management effectiveness based on enhanced data collection, analysis, action planning and implementation under Component 1; (2) five additional protected areas within the Component 1 landscape, totaling 25,298 ha, that will benefit indirectly through enhanced monitoring and knowledge due to participation of managing NGOs in capacity building, camera trap installation and data sharing activities; (3) two protected areas, totaling 16,062 ha, that will benefit from reduced hunting pressures within the Component 3 landscape, and (4) one protected area, covering 36,040 ha, that will be established with support within the Component 2 landscape. See Tracking tool (separate file) for additional details of these areas.

⁹ This consists of the unprotected portions of the three landscapes, which will benefit as follows: (1) Component 1 area (42,076 ha), which will benefit from enhanced wildlife monitoring; (2) Component 2 area (80,225 ha), which will benefit from reduced wildlife-livestock conflict and a more wildlife-friendly economy, and (3) Component 3 area (35,262 ha), which will benefit from more sustainable hunting and reduced risk of illegal hunting activities.

Project Outcome 1: Information and data management systems contribute to improved conservation of jaguar and other wildlife at country level, with targeted application in 177,914 ha of Sibun River watershed landscape.	<u>Indicator #4a:</u> Camera trap coverage of national jaguar habitat (Hectares)	380,000 hectares currently covered by camera traps	500,000 hectares	730,000 hectares
	<u>Indicator #4b:</u> Percentage of camera trap data (existing and new) incorporated into the national database	No national database	Database design parameters set and data sharing agreements in place	At least 80% of existing and new data sets inputted into the national database
	<u>Indicator #5:</u> Level of management effectiveness at three forest reserves	<u>Baseline METT scores</u> Sibun – 37 Sittee - 37 Manatee - 37	NA	<u>End of project METT scores</u> Sibun - 43 Sittee - 43 Manatee - 43
	<u>Indicator #6:</u> Change in the capacity of CSFI, BAS, PFB, FCD, YCT and FD to participate in data capture and management	<u>Baseline score of UNDP Capacity Development Scorecard (out of possible 54)</u> CSFI – 34, BAS – 19, PFB - 13, FCD - 40, YCT -36, FD - 21.	NA	<u>Target score by project end</u> CSFI – 41, BAS – 30 , PFB - 17, FCD - 42, YCT - 40, FD -35.
Outputs to achieve Outcome 1	1.1 A standardized and integrated national database for wildlife and human presence monitoring, with emphasis on underpinning conservation of jaguars and associated (prey) species. 1.2 Approximately 700-900 camera traps installed, complementing, improving and extending existing installations, with an additional effective coverage of 350,000 ha. 1.3 A model of population dynamics and movement ecology of jaguars and wide-ranging prey species based on enhanced monitoring data 1.4 Three new management protocols and regulatory measures, including a National Jaguar and Prey Policy, Strategy and Management Plan 1.5 Enhanced data and information systems applied to design and initiate implementation of, a landscape management plan within the c. 178,000 ha target area			
Project component 2	Promoting a more wildlife-friendly economy			
Outcome 2: Strengthened systems for responding to jaguar–livestock conflict and for encouraging sustainable	<u>Indicator #7:</u>	Less than 20%	Improved system for recording feedback in place	At least 70% of incidents in years 2 and 3 of project

ecotourism, with targeted application in Belize's Northeast forest landscape totaling 125,000 ha.	Percentage of referred jaguar - cattle conflict incidents in which the reporter is satisfied with the response delivered			
	<u>Indicator #8:</u> # of tour guides and landowners contributing to national camera trap network	0	Agreements in place with 10 tour guides or landowners	At least 25 by project end
Outputs to achieve Outcome 2	2.1 Enhanced rapid response protocol and capacities for responding to jaguar-livestock conflict developed and applied in the target landscape 2.2 Training and outreach program for wildlife-friendly economic activities			
Project component 3	Combatting wildlife crime and unsustainable hunting			
Outcome 3: Enhanced knowledge of the current status of the jaguar / prey / game species and hunting activities in 49,475 ha of the Maya Golden Landscape informs regulations for threat reduction and sustainable population management.	Indicator #9: Level of understanding of the dynamics of hunter-prey systems	No system	Survey data to support process collected from Maya Golden landscape	Level of understanding increased through a model and baseline of hunter-prey dynamics for informed policy and decision making
	Indicator #10: Drafting notes informing amendment of Wildlife Protection Act (WPA)	Current WPA is outdated in terms of open and closed seasons, bag limits (none), sustainable offtake quotas (with or without taking into account natural predation by larger predators like jaguars)	Survey data to support process collected from Maya Golden landscape	Draft notes for updating WPA
Outputs to achieve Outcome 3	3.1 Model, based on community-level assessments, estimating sustainable game species offtake, including jaguar prey offtake by viable predator populations 3.2 A strategy and action plan for the monitoring, sustainable management and use of game species, including a pilot sustainable hunting quota system, developed and implemented in 6 communities			

Project component 4	Coordinating and enhancing knowledge			
Outcome 4: Enhanced national / transboundary / jaguar range collaboration, knowledge management and communication	<u>Indicator #11:</u> # of lessons shared on jaguar conservation	Limited sharing / exchange / uptake of lessons learned in jaguar conservation	Identification of case study topics and data gathering; analysis procedures agreed for developing each	At least 5 case studies documented on lessons learnt and best practices captured and shared nationally and with experts in Mexico, Guatemala and other jaguar range countries.
Outputs to achieve Outcome 4	4.1 Knowledge capture and sharing 4.2 Reinforced national multi-stakeholder mechanism for sustained jaguar communication and coordination 4.3 Project monitored and evaluated			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 3 details the roles, responsibilities, and frequency of monitoring project results.

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 is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies¹⁰. The costed M&E plan included below, and the Monitoring plan in Annex, will guide the GEF-specific M&E activities to be undertaken by this project.

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.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, 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.

GEF Project Implementation Report (PIR):

The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

¹⁰ See https://www.thegef.org/gef/policies_guidelines

GEF Core Indicators:

The GEF Core indicators included as Annex 12 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground-truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF [website](#). The required Protected Area Management Effectiveness Tracking Tools (METTs) have been prepared and the scores included in the GEF Core Indicators (see Annex 11).

Independent Mid-term Review (MTR):

The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the [UNDP Evaluation Resource Center \(ERC\)](#).

The evaluation will be ‘independent, impartial and rigorous’. The evaluators 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. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by August 2022. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report’s completion.

Terminal Evaluation (TE):

An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the [UNDP Evaluation Resource Center](#).

The evaluation will be ‘independent, impartial and rigorous’. The evaluators 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. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by *(add date included on cover page of this project document)*. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report’s completion.

Final Report:

The project’s terminal GEF 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.

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 Policy¹¹ and the GEF policy on public involvement¹².

TABLE 2: MONITORING EVALUATION PLAN & BUDGET

Monitoring and Evaluation Plan and Budget: This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 4 of the Results Framework and TBWP. For ease of reporting M&E costs, please include all costs reported in the M&E plan under the one technical component. The oversight and participation of the UNDP Country Office/Regional technical advisors/HQ Units are not included as these are covered by the GEF Fee.			
GEF M&E requirements	Responsible Parties	Indicative costs (US\$)	Time frame
Inception Workshop & FPIC	Implementing Partner Project manager	8,000	Within 60 days of CEO endorsement of this project.
Inception Report	Project manager	None	Within 90 days of CEO endorsement of this project.
M & E of GEF core indicators and project results framework	Project manager	5,000	Annually and at mid-point and closure.
GEF Project Implementation Report (PIR)	RTA UNDP Country Office ¹³ PM/Coordinator/ CTA	None	Annually typically between June-August
Monitoring all risks (UNDP risk register)	UNDP Country Office PM/Coordinator/ CTA	5,000	On-going.
Monitoring of stakeholder engagement plan, gender action plan and indigenous people's plan	Monitoring, participation and safeguard consultant	12,000	On-going.
Supervision missions	UNDP Country Office	None ¹⁴	Annually
Oversight / troubleshooting missions	RTA and BPPS/GEF	None	Troubleshooting as needed
Terminal GEF Core indicators and METT Tracking Tool	Project manager	2,500	Before terminal evaluation mission takes place
Mid-term Review (MTR)	Independent evaluators	12,500	August 2022
Independent Terminal Evaluation (TE)	Independent evaluators	25,000	November 2023
TOTAL indicative COST		70,000	

¹¹ See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

¹² See https://www.thegef.org/gef/policies_guidelines

¹³ Or equivalent for regional or global project

¹⁴ The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner: The Implementing Partner for this project is the Belize Forest Department of the Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The project will be implemented using National Implementation Modality (NIM). UNDP has assessed Forest Department capacity to carry out the functions and activities of the project using the Harmonized Approach to Cash Transfers (HACT) methodology. The HACT micro-assessment found that Government rules and procedures are in accordance with international standards and practices, allowing full accountability for use of UNDP and other donor resources.

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.
- 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.

The Forest Department will be supported in its implementation by the entities described below¹⁵:

- Panthera: Panthera is an international, non-governmental organization focused on the global preservation and management of wild cat species. Panthera's work in Belize is focused primarily on the jaguar, maintaining healthy prey populations and jaguar range connectivity, primarily through reducing jaguar conflict with livestock growers. Panthera is based in Mayflower Bocawina National Park, Belize. Panthera will play a key role, working with the Forestry Department, in the provision of technical guidance in the implementation of component 1 for development of the Belize wildlife monitoring network and application in the central corridor.
- Corozal Sustainable Future Initiative (CSFI): CSFI is the Government's primary partner in managing the Northern Biological Corridor, which is in the process of being reshaped as a protected area. In partnership with the Forestry Department, CSFI will spearhead work to establish a response team for wildlife – jaguar conflict. It will also support the project's efforts to engage with local communities in the development of wildlife-friendly economic activities. CSFI will both provide technical backstopping for the implementation of Component 2 and will be directly responsible for the implementation of USD 244,213.

¹⁵ This list may be amended during project implementation by approval of the Project Board.

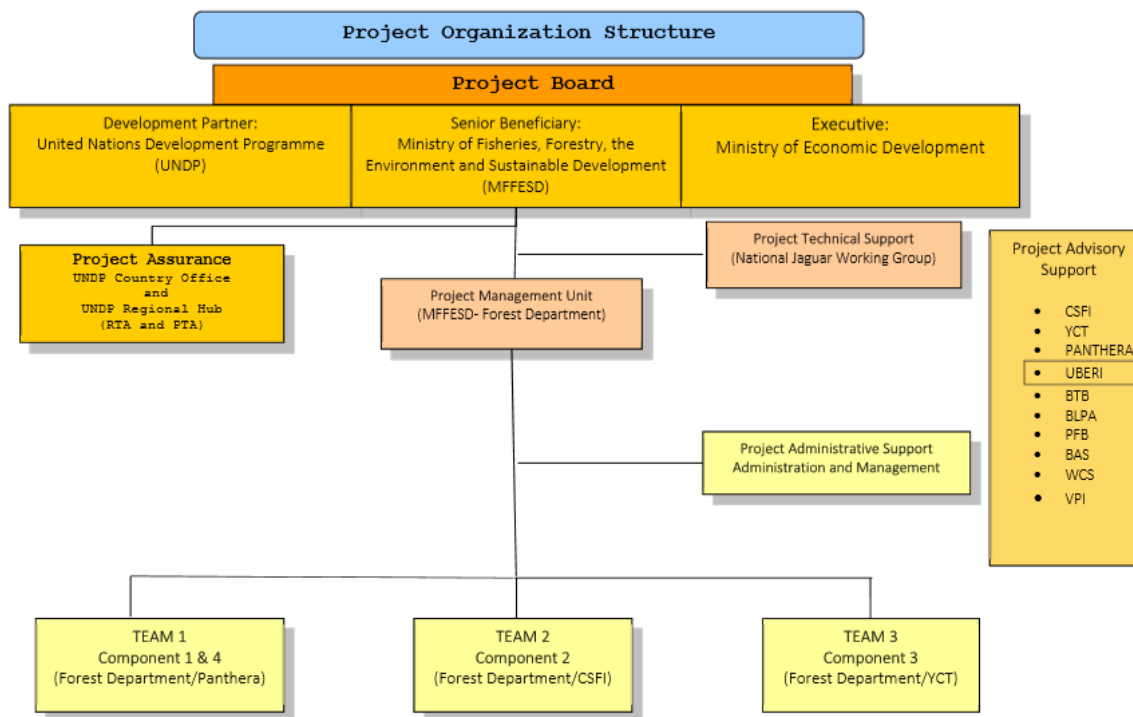
- **Ya'axche Conservation Trust (YCT):** YCT will play a central role, in association with the Forestry Department, as responsible party under Component 3. YCT has a consistent, long-term presence in the southern corridor where activities related to sustainable hunting will take place. It has experience implementing similar projects in this area and strong relationships with the area's indigenous communities. Its Board of Directors includes representatives of the indigenous communities. Ya'axche will both provide technical backstopping for the implementation of Component 3 and will be directly responsible for the implementation of USD 155,213.

The above stated non-governmental entities are responsible for budgets less than US\$300,000, therefore no HACT assessments have been prepared for them. The entities were subjected to the CSO Capacity Assessments as a part of the stakeholder engagement process (see Annex 15, Capacity Assessment Report).

Project stakeholders and target groups: The project will establish an advisory mechanism through which ten organizations not directly participating as members of the Project Board will have a voice in project decision making (see Figure 3 below). This advisory support will be provided on an ad hoc basis as well as through semi-annual consultation meetings.

UNDP: UNDP is accountable to the GEF for the implementation and financial oversight 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.

FIGURE 3: PROJECT ORGANIZATIONAL STRUCTURE



The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. The current board is a tripartite board; however, the possibility of expanding membership will be made following project start up. 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.

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;
- 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.

The composition of the Project Board must include the following roles:

- a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive will be the representative of the Ministry of Economic Development.
- b. Beneficiary Representative(s): Individuals or groups representing 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 representative (s) is/are: Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

- c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is UNDP.
- d. Project Assurance: UNDP performs the quality assurance and 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, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

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.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is *USD 11,348,404*. This is financed through a GEF grant of *USD 1,234,404*, *USD 30,000* in cash co-financing to be administered by UNDP and additional support of *USD 10,084,000*. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Confirmed 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. All project activities included in the project results framework that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP's social and environmental standards. Co-financing will be used for the following project activities/outputs:

TABLE 3: CO-FINANCING

Co-financing source	Name of Co-financier	Co-financing type	Co-financing amount	Planned Co-financing activities / outputs	Risks	Risk mitigation measures
Recipient Country Government	Ministry of Fisheries, Forestry, the Environment and Sustainable Development	In-kind	950,000 (Investment mobilized) 3,200,000 (Recurrent expenditures)	Supporting the overall policy and administration activities of the project, as the responsible entity for jaguars in the country. Provide on the ground support for management activities in forest reserves of component 1. Provide existing equipment in terms of camera traps.	No significant risks foreseen	NA
Civil Society Organisation	Panthera	Grant In Kind	460,000 420,000	Technical and expert support on jaguar and wildlife monitoring. Provide extra equipment and monitoring capacity.	No significant risks foreseen	NA
Civil Society Organisation	Wildtracks	Grants In kind	130,000 104,000	Technical management support in terms of management planning and logistical support up north for wildlife care	No significant risks foreseen	NA
Non-Governmental Organization	Ya'axche	In kind	180,000	Management and logistical support for all activities related to component 3, including provision of equipment in terms of camera traps	No significant risks foreseen	NA
Non-Governmental Organization	Belize Audubon Society	Grant In kind	150,000 190,000	Management and logistical support for Southern region of component 1, and general assistance with national database as one of the main stakeholders	No significant risks foreseen	NA

Co-financing source	Name of Co-financier	Co-financing type	Co-financing amount	Planned Co-financing activities / outputs	Risks	Risk mitigation measures
Non-Governmental Organization	Corozal Sustainable Future Initiative	Grant In kind	550,000 2,400,000	Mainly Output 2.1, some support to 2.2	No significant risks foreseen	NA
Quasi-Governmental Organization	Protected Areas Conservation Trust	Grant	940,000	General grants to support activities on the basis of need.	No significant risks foreseen	NA
Academia	University of Belize Environmental Research Institute (ERI)	In-kind	300,000	Support of personnel and students in terms of training and creation of management capacity throughout the project with specific emphasis on the corridor sections of component 1	No significant risks foreseen	NA
GEF Agency	UNDP	Grant	110,000	Project management	No significant risks foreseen	NA

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/CTA and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:

- a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;
- b) Introduction of new budget items that exceed 5% of original GEF allocation.

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).

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. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

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.

Operational completion: 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 with 3 months after posting the TE report to the UNDP ERC.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP 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 file¹⁶. The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): 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).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. 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/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

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.

¹⁶ See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00122762	Atlas Output Project ID:	00118244
Atlas Proposal or Award Title:	Enhancing jaguar corridors and strongholds		
Atlas Business Unit	BLZ10		
Atlas Primary Output Project Title	Enhancing jaguar corridors		
UNDP-GEF PIMS No.	6397		
Implementing Partner	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)		

Atlas Activity (GEF Component)	Atlas Implementing Agent (Responsible Party/ , IP, or UNDP)	Atlas Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Account Description	Amount Year 2021 (USD)	Amount Year 2022 (USD)	Amount Year 2023 (USD)	Total (USD)	See Budget Note:
COMPONENT 1 Conserve wildlife and habitats	MFFESD	62000	GEF Trustee	71200	International Consultants	82,000	25,000	32,000	139,000	1
				71300	Local Consultants	44,500	12,000	11,700	68,200	2
				71600	Travel	2,000	2,000	2,000	6,000	3
				71800	Contractual services – Imp. partner	0	22,500	22,500	45,000	4
				72100	Contractual services - Companies	20,000	70,000	5,000	95,000	5
				72200	Equipment and furniture	64,000	30,000	10,000	104,000	6
				75700	Training, Workshops and Conference	1,500	1,500	1,713	4,713	7
					Total Outcome 1	214,000	163,000	84,913	461,913	
COMPONENT 2: Wildlife-friendly economy	MFFESD		GEF	71200	International Consultants	35,000	35,000	0	70,000	8
				71300	Local Consultants	27,500	2,500	2,500	32,500	9
				71600	Travel	2,000	2,000	1,500	5,500	10
				71800	Contractual services – Imp. partner	0	28,000	18,000	46,000	11

			Trustee	72100	Contractual services - Companies	22,500	35,000	20,000	77,500	12
				72400	Communic & Audio Equip	30,000	0	0	30,000	13
				72600	Grants	0	50,000	25,000	75,000	14
				75700	Training, Workshops and Conference	2,500	1,500	1,713	5,713	15
					Total Outcome 2	119,500	154,000	68,713	342,213	
COMPONENT 3: Combatting wildlife crime and unsustainable hunting	MFFESD	62000	GEF	71200	International Consultants	31,000	0	18,000	49,000	16
				71300	Local Consultants	14,250	30,000	7,500	51,750	17
				71600	Travel	2,000	2,000	750	4,750	18
				71800	Contractual services – Imp. partner	9,000	9,000	0	18,000	19
				72100	Contractual services - Companies	19,500	23,500	0	43,000	20
				75700	Training, Workshops and Conference	7,500	1,500	1,713	10,713	21
					Total Outcome 3	83,250	66,000	27,963	177,213	
COMPONENT 4: Coordinating and enhancing knowledge, and M&E	MFFESD	62000	GEF	71200	International Consultants	0	10,000	35,000	45,000	22
				71300	Local Consultants	0	6,250	6,250	12,500	24
				71800	Contractual services – Imp. partner	5,000	5,000	15,000	25,000	23
				72100	Contractual services - Companies	12,000	12,000	17,000	41,000	25
				75700	Training, Workshops and Conference	7,500	3,000	8,426	18,926	26
					Total Outcome 4	24,500	36,250	81,676	142,426	

PROJECT MANAGEMENT UNIT	MFFESD	62000	GEF Trustee	71400	Contractual Services – Individ.	25,000	25,000	25,000	75,000	27
				71600	Travel	5,000	4,500	5,500	15,000	28
				72400	Communic. & Audio Equip	1,500	1,500	0	3,000	29
				74100	Professional Services	5,000	5,000	5,000	15,000	30
				74500	Miscellaneous Expenses	1,000	800	839	2,639	31
					sub-total GEF	37,500	36,800	36,339	110,639	
		04000	UNDP TRAC	71800	Contractual services – Imp. partner	10,500	10,500	9,000	30,000	32
					Total Management	48,000	47,300	45,339	140,639	
		TOTAL GEF GRANT				478,750	456,050	299,604	1,234,404	
		PROJECT TOTAL				489,250	466,550	308,604	1,264,404	

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Total
GEF	478,750	456,050	299,604	1,234,404
UNDP TRAC	10,500	10,500	9,000	30,000
Ministry of Fisheries, Forestry, the Environment and Sustainable Development	1,000,000	1,750,000	1,400,000	4,150,000
Panthera	300,000	330,000	250,000	880,000
Wildtracks	78,000	78,000	78,000	234,000
Ya'axche	40,000	70,000	70,000	180,000
Belize Audubon Society	100,000	120,000	120,000	340,000
Corozal Sustainable Future Initiative	950,000	1,000,000	1,000,000	2,950,000
Protected Areas Conservation Trust	300,000	300,000	340,000	940,000
University of Belize Environmental Research Institute (ERI)	100,000	100,000	100,000	300,000
UNDP	30,000	40,000	40,000	110,000
TOTAL	3,387,250	4,254,550	3,706,604	11,348,404

Budget notes

Budget note number	Budget Line	Total per BN, USD	Activity number and input description
1	71200	139,000	<u>Component 1 International consultants:</u> (1) Activity 1.1.3: Consultancy: IT services specialist for platform development (110 days @ 500/day = 55,000). (2) Activity 1.4.1: Consultancy: Wildlife Management Specialist (40 days @ 400 per day = 16,000). (3) Activity 1.4.2: Consultancy: Wildlife Management Specialist (40 days @ 400 per day = 16,000); (4) Activity 1.4.3: Consultancy: Wildlife Management Specialist (30 days @ 400 per day = 12,000). (5) Activity 1.5.2: Consultancy: Wildlife Management Specialist (75 days @ 400 per day = 30,000); (6) Activity 1.5.2: Wildlife regulatory specialist (20 days @ 500 / day = 10,000). <u>Total</u> = 139,000.
2	71300	68,200	<u>Component 1 Local consultants:</u> (1) Activity 1.1.1: Consultancy: Institutional development and wildlife monitoring specialist (40 days @ 250/day = 10,000); (2) Activity 1.1.2: Consultancy: Legislation and policies specialist to draft partnership agreements for data sharing (40 days @ 250/day = 10,000). (3) Activity 1.3.1 & 1.3.2: Wildlife Monitoring and Modeling Specialist (40 days @ 250/day = 10,000); (4) Activity 1.1.6: Short term TA: 1 Senior Forester/ Data Manager (2 years @ 19,100 per year = 38,200). <u>Total</u> = 68,200
3	71600	6,000	<u>Travel:</u> Mission travel to landscape #1 - 6,000
4	71800	45,000	<u>Component 1 Contractual services – implementing agency:</u> (1) Activity 1.2.2: TA/TC - The FD, drawing on technical support from Panthera, will develop a camera trap grid within the targeted region. Grid will ensure optimal placement of traps assuring detailed reporting on general state of reserve, level of incursions, sightings of species of concern. <u>Total</u> = 45,000.
5	72100	95,000	<u>Component 1 Contractual services – companies:</u> (1) Activity 1.1.4: Training: 10,000 per year for 1.5 years = 15,000. (2) Activity 1.2.1: Team lead providing training and guidance of local monitoring team (2 years @ 7,000 per year). Stipend for community monitors (3 persons @ \$75 per week for 52 weeks). Sub-total = 25,700. (3) Activity 1.5.1: 4 surveys @13,575/ survey = 54,300. <u>Total</u> = 95,000.
6	72200	104,000	<u>Component 1 Equipment and furniture:</u> (1) Activity 1.1.5: IT Equipment: 4 servers @ 7,000 = 28,000; 4 high capacity processors @ 4,000 per machine = 16,000. Sub-total = 44,000. (2) Activity 1.2.3: Equipment: 100 camera traps @ \$500 per trap; Materials for securing deployed traps: 10,000. Sub-total = 60,000. <u>Total</u> = 104,000.
7	75700	4,713	<u>Component 1 Training, Workshops:</u> Workshops for Outcome 1, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. <u>Total</u> = 4,713.
8	71200	70,000	<u>Component 2 International consultants:</u> (1) Activity 2.1.2: Consultancy: Training of local jaguar monitors/ managers (Wildlife Modelling expert 20 days @ \$500 per day = 10,000); (2) Activity 2.2.1: Consultancy: Tourism Product Development (50 days @ 500 per day = 25,000); (3) Activity 2.1.3 Wildlife/ large cats trapping expert: 50 days @ \$500 per day = 25,000). (4) Activity 2.1.3: Training in the use and application of camera trapping and telemetry (Wildlife monitoring expert, 20 days @ \$500 per day = 10,000). <u>Total</u> = 70,000
9	71300	32,500	<u>Component 2 Local consultants:</u> (1) Activity 2.1.1: Consultancy: Wildlife Expert development of response protocols (60 days @ 250 per day = 15,000). (2) Activity 2.1.2: Gender consultant (30 days @ 250 / day = 7,500); (2) Activity 2.1.4: Consultancy: Wildlife Management Expert - Protocol development and follow up consultations (40 days @ 250 per day = 10,000). <u>Total</u> = 32,500.
10	71600	5,500	<u>Travel:</u> Mission travel to landscape #2 - 5,500
11	71800	46,000	<u>Component 2 Contractual services – implementing agency:</u> (1) Activity 2.1.1: Support for established response team (3 rangers @ \$500 per month for 24 months = 36,000); Activity 2.1.2: Support for training through field training school. Sub-total = 10,000. <u>TOTAL</u> = 46,000.
12	72100	77,500	<u>Component 2 Contractual services – companies:</u> (1) Activity 2.1.3: Support to field training, which involves the capturing and documenting of a minimum of 20 cats. (2 years @ 20,000 per year = 40,000); (2) Activity 2.1.4: Support to community consultative process related to conflict, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. (30 sessions @ \$750 per session = 22,500); (3) Activity 2.2.2: Community participation in wildlife-friendly economy (community outreach and engagement 20 sessions @ 750 per session = 15,000). <u>Total</u> = 77,500.

13	72400	30,000	<u>Component 2 Communications and audio-visual equipment:</u> (1) Activity 2.1.3: Telemetry equipment - \$15,000; (2) 2.1.4 Communication material (print audio visual costs) = 15,000. <u>Total</u> = 30,000
14	72600	75,000	<u>Component 2 Grants:</u> Activity 2.2.3: Seed Funding: Micro-grants. <u>Total</u> = 75,000. The selection and implementation of all grants will be done in compliance with UNDP's Policy and Operational Guidance on Low-Value Grants.
15	75700	5,713	<u>Component 2 Training, Workshops:</u> (1) Workshops for Outcome 2, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. <u>Total</u> = 5,713.
16	71200	49,000	<u>Component 3 International consultants:</u> (1) Development of Indigenous Peoples Plan (30 days @ 500 / day = 15,000); (2) Activity 3.1.3: Consultancy: Ecological Economist (40 days @ 400 per day = 16,000); (3) Activity 3.2.5: Consultancy: Drafting of technical guidance/ drafting notes on sustainable hunting levels, per game species (45 days @ 400 per day = 18,000). <u>Total</u> – 49,000
17	71300	51,750	<u>Component 3 Local consultants:</u> ; (2) Activity 3.1.2: Support to the application of survey instrument (6 communities @ 3,000 per community = 18,000); (3) Activity 3.2.1: Consultancy: Development of Community resource use management plans (20 days @ 250 per day for 6 communities = 30,000); (4) Activity 3.2.4: Consultancy: Systematization exercise (15 days @ 250 per day = 3,750);. <u>Total</u> – 51,750
18	71600	4,750	<u>Component 3 Travel:</u> Mission travel to landscape #3 - 4,750
19	71800	18,000	<u>Component 3 Contractual services – Implementing Agency:</u> (1) Activity 3.1.1: TA/ TC: Wildlife Monitoring Officer - YCT (24 months @ 750 per month = 18,000)
20	72100	43,000	<u>Component 3 Contractual services – companies:</u> (1) Activity 3.1.1: Support to community engagement/ training (2 years @ 5,000 per year = 10,000); (2) Activity 3.2.1: Support to community outreach and consultations (1,500 x 6 communities = 9,000); (3) Activity 3.2.2: Support to Community Advocacy (6 communities @ 2,000 per community = 12,000); (4) Activity 3.2.3: TA/TC: Training of community volunteers in data collection and use of camera trapping. (24 field sessions @ 500 per session = 12,000). <u>Total</u> = 43,000.
21	75700	10,713	<u>Component 3 Training, Workshops:</u> Workshops for Outcome 3, including consultations needed to develop and implement IPP, stakeholder and gender plan requirements associated with this outcome. <u>Total</u> = 10,713.
22	71200	45,000	<u>Component 4 International consultants:</u> (1) Activity 4.1.1: Consultancy: Outcome review and case study development (40 days @ 500 per day = 20,000); (2) Activity 4.3.3: Project evaluation specialists for mid-term review and final evaluation (50 days @ 500 = 25,000). <u>Total</u> = 45,000
23	71800	25,000	<u>Component 4 Contractual Services- Implementing Agencies:</u> (1) Activity 4.1.1: Consultancy: Outcome review and case study development (40 days @ 250 per day = 10,000); (2) Activity 4.2.1: Institutional coordination specialist (30 days @ 250 per day = 7,500); (3) Project monitoring, participation and safeguards specialist – (30 days @ 250 per day = 7,500. <u>Total</u> =25,000
24	71300	12,500	<u>Component 4 Local Consultants:</u> Activity 4.3.3: Project evaluation specialists for mid-term review and final evaluation (50 days @ 250 = 12,500). <u>Total</u> – 12,500
25	72100	41,000	<u>Component 4 Contractual services – companies:</u> (1) Activity 4.1.2: TA / TC: 6 events at 5,000 per event = 30,000; (2) Activity 4.1.3: Support to organization of Forum (5,000); (3) Activity 4.2.1: Support convening platforms/ meetings of the National Jaguar Working Group (NJWG) (Quarterly meetings for 3 years @ 500 per meeting = 6,000). <u>Total</u> = 41,000
26	75700	18,926	<u>Component 4 Training, Workshops:</u> (1) Activity 4.1.1 – Workshops to disseminate lessons learned and case studies (5,000); (2) Activity 4.1.2 – Bi-national and tri-national workshops (3,213); (3) Activity 4.1.3 – Global wildlife forum (3,213). (4) Activity 4.3.1 - Inception workshop and associated consultations (including FPIC) – 7,500. <u>Total</u> = 18,926.
27	71400	75,000	<u>PMC Contractual services – individuals:</u> (1) Project manager 3 years @ 25,000 per year. <u>Total</u> = 75,000
28	71600	15,000	<u>PMC travel</u> – (1) Mission travel (15 trips @ 1,000 per trip = 15,000).
29	72400	3,000	<u>PMC communications and audio-visual equipment</u> = 3,000.
30	74100	15,000	<u>PMC contractual services - companies - Annual audits @ 5,000. Total</u> = 15,000.
31	74500	2,639	<u>PMC misc. expenses</u> , including costs for personal protective equipment (PPE) – 2,639.
32	71800	30,000	<u>Contractual services (UNDP funded)</u> = 30,000 - Project assistant 3 years @ 10,000 per year = 30,000.

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date). All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by [name of entity] (“Implementing Partner”) 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.

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.

XI. RISK MANAGEMENT

Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, 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.

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.

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.

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 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.

(c) 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.

(d) 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.

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>).

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

XII. MANDATORY ANNEXES

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ANNEX 1: GEF BUDGET

Expenditure Category	Detailed Description	Component (USDeq.)						Total (USDeq.)	Responsible Entity
		Component 1	Component 2	Component 3	Sub-Total	M&E	PMC		(Executing Entity receiving funds from the GEF Agency)[1]
		Sub-component 1.1	Sub-component 2.1	Sub-component 3.1					
Goods	Component 1 Equipment and furniture: (1) Activity 1.1.5: IT Equipment: 4 servers @ 7,000 = 28,000; 4 high capacity processors @ 4,000 per machine = 16,000. Sub-total = 44,000. (2) Activity 1.2.3: Equipment: 100 camera traps @ \$500 per trap; Materials for securing deployed traps: 10,000. Sub-total = 60,000. Total = 104,000.	104,000			104,000			104,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Goods	Component 2 Communications and audio-visual equipment: (1) Activity 2.1.3: Telemetry equipment - \$15,000; (2) 2.1.4 Communication material (print audio visual costs) = 15,000. Total = 30,000		30,000		30,000			30,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Goods	PMC communications and audio-visual equipment = 3,000.				-		3,000	3,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

Goods	PMC contractual services - companies - Annual audits @ 5,000. Total = 15,000.				-		15,000	15,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Goods	PMC misc. expenses, including costs for personal protective equipment (PPE) – 2,639.				-		2,639	2,639	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Grants	Component 2 Grants: Activity 2.2.3: Seed Funding: Micro-grants. Total = 75,000. The selection and implementation of all grants will be done in compliance with UNDP's Policy and Operational Guidance on Low-Value Grants.		75,000		75,000			75,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Individual	Component 1 Contractual services – implementing agency: (1) Activity 1.2.2: TA/TC - The FD, drawing on technical support from Panthera, will develop a camera trap grid within the targeted region. Grid will ensure optimal placement of traps assuring detailed reporting on general state of reserve, level of incursions, sightings of species of concern. Total = 45,000.	45,000			45,000			45,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

Contractual Services – Individual	Component 2 Contractual services – implementing agency: (1) Activity 2.1.1: Support for established response team (3 rangers @ \$500 per month for 24 months = 36,000); Activity 2.1.2: Support for training through field training school. Sub-total = 10,000. TOTAL = 46,000.		46,000		46,000			46,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Individual	Component 3 Contractual services – Implementing Agency: (1) Activity 3.1.1: TA/ TC: Wildlife Monitoring Officer - YCT (24 months @ 750 per month = 18,000)			18,000	18,000			18,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Individual	Component 4 Contractual Services- Implementing Agencies: (1) Activity 4.1.1: Consultancy: Outcome review and case study development (40 days @ 250 per day = 10,000); (2) Activity 4.2.1: Institutional coordination specialist (30 days @ 250 per day = 7,500); (3) Project monitoring, participation and safeguards specialist – (30 days @ 250 per day = 7,500. Total =25,000				-	25,000		25,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Company	Component 1 Contractual services – companies: (1) Activity 1.1.4: Training: 10,000 per year for 1.5 years = 15,000. (2) Activity 1.2.1: Team lead providing training and guidance of local monitoring team (2 years @ 7,000 per year). Stipend for community monitors (3 persons @ \$75 per week for 52 weeks). Sub-total = 25,700. (3) Activity 1.5.1: 4 surveys @13,575/ survey = 54,300. Total = 95,000.	95,000			95,000			95,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

Contractual Services – Company	Component 2 Contractual services – companies: (1) Activity 2.1.3: Support to field training, which involves the capturing and documenting of a minimum of 20 cats. (2 years @ 20,000 per year = 40,000); (2) Activity 2.1.4: Support to community consultative process related to conflict, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. (30 sessions @ \$750 per session = 22,500); (3) Activity 2.2.2: Community participation in wildlife-friendly economy (community outreach and engagement 20 sessions @ 750 per session = 15,000). Total = 77,500.		77,500		77,500			77,500	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Company	Component 3 Contractual services – companies: (1) Activity 3.1.1: Support to community engagement/ training (2 years @ 5,000 per year = 10,000); (2) Activity 3.2.1: Support to community outreach and consultations (1,500 x 6 communities = 9,000); (3) Activity 3.2.2: Support to Community Advocacy (6 communities @ 2,000 per community = 12,000); (4) Activity 3.2.3: TA/TC: Training of community volunteers in data collection and use of camera trapping. (24 field sessions @ 500 per session = 12,000). Total = 43,000.			43,000	43,000			43,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Contractual Services – Company	Component 4 Contractual services – companies: (1) Activity 4.1.2: TA / TC: 6 events at 5,000 per event = 30,000; (2) Activity 4.1.3: Support to organization of Forum (5,000); (3) Activity 4.2.1: Support convening platforms/ meetings of the National Jaguar Working Group (NJWG) (Quarterly meetings for 3 years @ 500 per meeting = 6,000). Total = 41,000				-	41,000		41,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

Contractual Services – Company	PMC Contractual services – individuals: (1) Project manager 3 years @ 25,000 per year. Total = 75,000					-	75,000	75,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
International Consultants	Component 1 International consultants: (1) Activity 1.1.3: Consultancy: IT services specialist for platform development (110 days @ 500/day = 55,000). (2) Activity 1.4.1: Consultancy: Wildlife Management Specialist (40 days @ 400 per day = 16,000). (3) Activity 1.4.2: Consultancy: Wildlife Management Specialist (40 days @ 400 per day = 16,000); (4) Activity 1.4.3: Consultancy: Wildlife Management Specialist (30 days @ 400 per day = 12,000). (5) Activity 1.5.2: Consultancy: Wildlife Management Specialist (75 days @ 400 per day = 30,000); (6) Activity 1.5.2: Wildlife regulatory specialist (20 days @ 500 / day = 10,000). Total = 139,000	139,000			139,000		139,000	139,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
International Consultants	Component 2 International consultants: (1) Activity 2.1.2: Consultancy: Training of local jaguar monitors/ managers (Wildlife Modelling expert 20 days @ \$500 per day = 10,000); (2) Activity 2.2.1: Consultancy: Tourism Product Development (50 days @ 500 per day = 25,000); (3) Activity 2.1.3 Wildlife/ large cats trapping expert: 50 days @ \$500 per day = 25,000). (4) Activity 2.1.3: Training in the use and application of camera trapping and telemetry (Wildlife monitoring expert, 20 days @ \$500 per day = 10,000). Total = 70,000		70,000		70,000			70,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

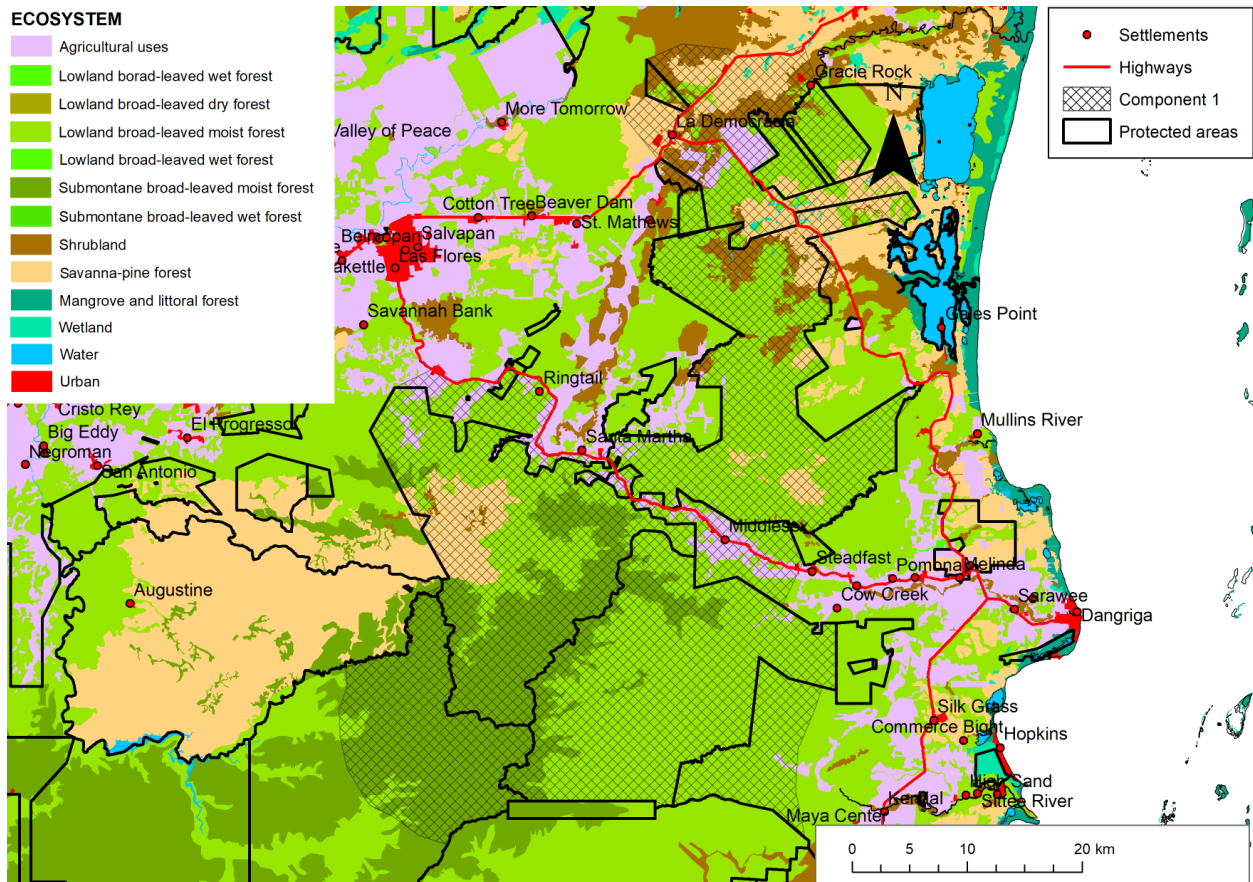
International Consultants	Component 3 International consultants: (1) Development of Indigenous Peoples Plan (30 days @500 / day = 15,000); (2) Activity 3.1.3: Consultancy: Ecological Economist (40 days @ 400 per day = 16,000); (3) Activity 3.2.5: Consultancy: Drafting of technical guidance/ drafting notes on sustainable hunting levels, per game species (45 days @ 400 per day = 18,000). Total – 49,000			49,000	49,000			49,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
International Consultants	Component 4 International consultants: (1) Activity 4.1.1: Consultancy: Outcome review and case study development (40 days @ 500 per day = 20,000); (2) Activity 4.3.3: Project evaluation specialists for mid-term review and final evaluation (50 days @ 500 = 25,000). Total = 45,000				-	45,000		45,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Local Consultants	Component 1 Local consultants: (1) Activity 1.1.1: Consultancy: Institutional development and wildlife monitoring specialist (40 days @ 250/day = 10,000); (2) Activity 1.1.2: Consultancy: Legislation and policies specialist to draft partnership agreements for data sharing (40 days @ 250/day = 10,000). (3) Activity 1.3.1 & 1.3.2: Wildlife Monitoring and Modeling Specialist (40 days @ 250/day = 10,000); (4) Activity 1.1.6: Short term TA: 1 Senior Forester/ Data Manager (2 years @ 19,100 per year = 38,200). Total = 68,200	68,200			68,200			68,200	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

Local Consultants	Component 2 Local consultants: (1) Activity 2.1.1: Consultancy: Wildlife Expert development of response protocols (60 days @ 250 per day = 15,000). (2) Activity 2.1.2: Gender consultant (30 days @ 250 / day = 7,500); (2) Activity 2.1.4: Consultancy: Wildlife Management Expert - Protocol development and follow up consultations (40 days @ 250 per day = 10,000). Total = 32,500.		32,500		32,500			32,500	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Local Consultants	Component 3 Local consultants: (2) Activity 3.1.2: Support to the application of survey instrument (6 communities @ 3,000 per community = 18,000); (3) Activity 3.2.1: Consultancy: Development of Community resource use management plans (20 days @ 250 per day for 6 communities = 30,000); (4) Activity 3.2.4: Consultancy: Systematization exercise (15 days @ 250 per day = 3,750);. Total – 51,750			51,750	51,750			51,750	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Local Consultants	Component 4 Local Consultants: Activity 4.3.3: Project evaluation specialists for mid-term review and final evaluation (50 days @ 250 = 12,500). Total – 12,500				-	12,500		12,500	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Trainings, Workshops, Meetings	Component 1 Training, Workshops: Workshops for Outcome 1, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. Total = 4,713.	4,713			4,713			4,713	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Trainings, Workshops, Meetings	Component 2 Training, Workshops: (1) Workshops for Outcome 2, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome. Total = 5,713.		5,713		5,713			5,713	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)

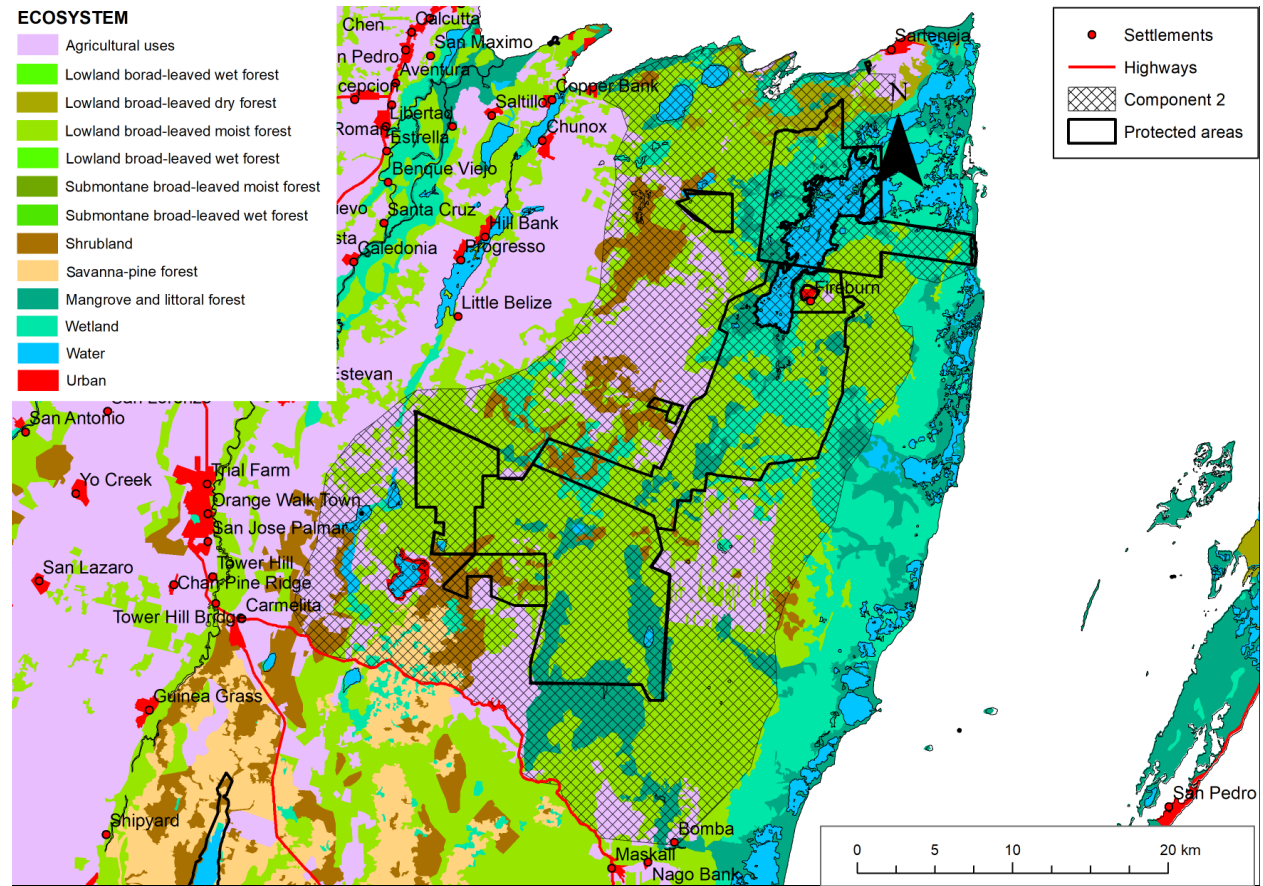
Trainings, Workshops, Meetings	Component 3 Training, Workshops: Workshops for Outcome 3, including consultations needed to develop and implement IPP, stakeholder and gender plan requirements associated with this outcome. Total = 10,713.			10,713	10,713			10,713	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Trainings, Workshops, Meetings	Component 4 Training, Workshops: (1) Activity 4.1.1 – Workshops to disseminate lessons learned and case studies (5,000); (2) Activity 4.1.2 – Bi-national and tri-national workshops (3,213); (3) Activity 4.1.3 – Global wildlife forum (3,213). (4) Activity 4.3.1 - Inception workshop and associated consultations (including FPIC) – 7,500. Total = 18,926.				-	18,926		18,926	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Travel	Travel: Mission travel to landscape #1 - 6,000	6,000			6,000			6,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Travel	Travel: Mission travel to landscape #2 - 5,500		5,500		5,500			5,500	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Travel	Component 3 Travel: Mission travel to landscape #3 - 4,750			4,750	4,750			4,750	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Travel	PMC travel – (1) Mission travel (15 trips @ 1,000 per trip = 15,000).				-		15,000	15,000	Forest Department, Ministry of Fisheries, Forestry, the Environment and Sustainable Development (MFFESD)
Grand Total		461,913	342,213	177,213	981,339	142,426	110,639	1 234,404	

ANNEX 2: PROJECT MAPS AND GEOSPATIAL COORDINATES

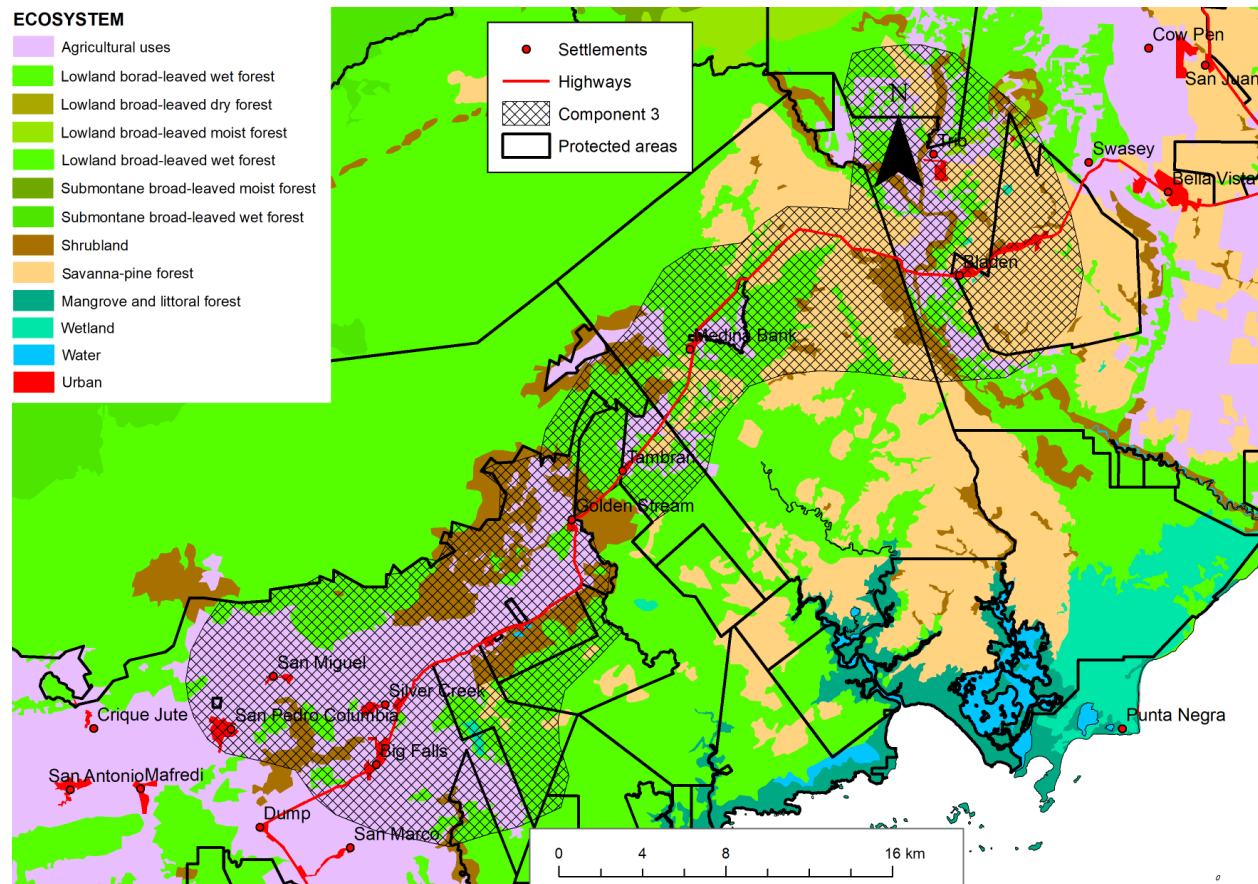
MAP 1: SIBUN RIVER WATERSHED LANDSCAPE



MAP 2: NORTHEAST FOREST LANDSCAPE



MAP 3: MAYA GOLDEN LANDSCAPE



ANNEX 3: MULTI YEAR WORK PLAN

Component 1: Conserving wildlife and habitats

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 1.1: A standardized and integrated national database for wildlife and human presence monitoring, with emphasis on underpinning conservation of jaguars and associated (prey) species.	1.1.1 Design National Monitoring Network, based on existing national circumstances, structures and capacities.												
	1.1.2 Conclude an MoU governing data sharing amongst all camera trap partners, including agreement on design of new camera trap studies												
	1.1.3 Introduce cloud-based camera trap data management platform universally and ensure adoption by all partners												
	1.1.4 Train users of data management system, including central hub managers												
	1.1.5 Equip satellite input agencies with hardware adequate to support regulated dataflow from field to database at fixed intervals, thereby assuring timely entry of data into the system												
	1.1.6 Support platform management capacities within the Forest Department												
Output 1.2: Approximately 700-900 camera traps installed, complementing, improving and extending existing installations, with an additional effective coverage of 350,000 ha.	1.2.1 Establish a well-trained camera trapping field team, under guidance of the forest department												
	1.2.2 Scout out and assess appropriate locations for deploying camera traps across the target landscape												
	1.2.3 Procure, deploy and maintain camera grid throughout the target landscape												
Output 1.3: A model of population dynamics and movement ecology of jaguars and wide-ranging prey species based on enhanced monitoring data	1.3.1 Develop the analytical tools needed to continuously assess variation across the landscape in: jaguar density, distribution, dispersal distances, survival, habitat use with emphasis on fresh water availability, enhancing knowledge on climate change within the upper regions of the jaguar range												
	1.3.2 Develop the analytical tools needed to continuously assess variation across the landscape in: prey density, and distribution, habitat use with emphasis on fresh water availability												

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 1.4: Three new management protocols and regulatory measures, including a National Jaguar and Prey Policy, Strategy and Management Plan	1.4.1 Develop National Jaguar Action Plan to improve national structures and systems of collaboration for the maintenance of Belizean jaguar populations												
	1.4.2 Develop National Guidelines for prey species management, with a focus on white-lipped peccary												
	1.4.3 Develop national protocols for assessing major game species in Belize												
Output 1.5: Enhanced data and information systems applied to design and initiate implementation of, a landscape management plan within the c. 178,000 ha target area, including elements	1.5.1 Identify high priority conservation areas for jaguar / wildlife conservation corridors within existing forest reserves with recommendations for reclassification for enhanced protection												
	1.5.2 Develop a landscape management plan for the 178,000 ha target area, including, <i>inter alia</i> , road barrier management, in support of the national jaguar corridor system												

Component 2: Promoting a more wildlife-friendly economy

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 2.1: Enhanced rapid response protocol and capacities for responding to jaguar-livestock conflict developed and applied in the target landscape	2.1.1 Work with CSFI to build a national jaguar conservation / capture team.												
	2.1.2 Provide intensive training in ecological assessments of jaguars in human-dominated landscapes, allowing accurate threat assessments												
	2.1.3 Conduct field work / learning-by-doing to capture 20 jaguars in human-dominated landscapes and follow their subsequent movements through GPS telemetry												
	2.1.4 Engage local communities and management entities in the development of early warning and wildlife conflict incident reporting protocols.												
Output 2.2: Training and outreach program for wildlife-friendly economic activities	2.2.1 Engage the Belize Tourism Board to develop a specialized tourism product and certification linked to jaguars, including camera trapping activities, honey and other products and services to be developed under Activity 2.2.3												
	2.2.2 Provide technical support to participating guides and landowners enabling them to contribute to the national camera trap network.												
	2.2.3 Support selected livelihoods alternatives within buffer communities of the northern "Jaguar Corridor", e.g. buffer zone honey												

Component 3: Combatting wildlife crime and unsustainable hunting

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 3.1: Model based on community-level assessments, estimating sustainable game species offtake, including jaguar prey offtake by viable predator populations	3.1.1 Recruit community members to participate in camera trap surveys on community lands to assess game species abundance and jaguar presence.												
	3.1.2 Design and administer social surveys in six communities as a means of estimating current hunting levels and local subsistence use (consumption), as well as degree of commercialization of game												
	3.1.3 Estimate the economic value of the wildlife resource to local communities and the potential economic loss if it were to collapse through unsustainable offtake												
	3.1.4 Develop technical guidance/ drafting notes on sustainable hunting levels, per game species.												
Output 3.2: A strategy and action plan for the monitoring, sustainable management and use of game species, including a pilot sustainable hunting quota system, developed and implemented in six communities	3.2.1 Based on enhanced data and understanding emerging from Output 3.1, develop community resource use management plans												
	3.2.2 Seek community support in the mainstreaming of wildlife / game species monitoring in community governance systems												
	3.2.3 Build capacities of local communities to monitor wildlife levels with cameras in collaboration with FD and managing NGOs												
	3.2.4 Develop recommendations for broader national-level application / uptake, i.e. how lessons learned can be implemented nationwide, e.g. creation of other “hunting community” structures.												
	3.2.5 Develop technical guidance/ drafting notes on sustainable hunting levels, per game species, to inform amendment of Wildlife Protection Act.												

Component 4: Coordinating and enhancing knowledge

Outputs	Indicative activities	YEAR 1				YEAR 2				YEAR 3			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Output 4.1: Knowledge capture and sharing	4.1.1 Lessons learned / case studies from the three target landscapes are captured and disseminated												
	4.1.2 Transboundary cooperation and knowledge sharing strengthened via bilateral and/or trilateral exchanges (Belize, Mexico, Guatemala) with a focus on key transboundary landscapes												
	4.1.3 In cooperation with the GEF Global Wildlife Programme, a forum of experts organized to exchange lessons learned regarding key topics such as landscape management of jaguars and wildlife crime / trafficking												
	4.1.4 Ensure that knowledge gained through association with the Global Wildlife Program (GWP) is shared widely within Belize												
Output 4.2: Reinforced national multi-stakeholder mechanism for sustained jaguar communication and coordination	4.2.1 Support the functioning of the National Jaguar Working Group												
Output 4.3: Project monitored and evaluated	4.3.1 Inception workshop and FPIC under Indigenous People's Plan												
	4.3.2 Monitoring of all stakeholder plans and risks												
	4.3.3 Project evaluation conducted												

ANNEX 4: MONITORING PLAN

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
To secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation	Indicator 1: # Direct project beneficiaries disaggregated by gender (individual people)	15,113 direct beneficiaries (Male 7,720; Female 7,393)	Estimated # of people who will measurably benefit from the project or who will use the resources that the project maintains or enhances	Baseline estimate for each outcome derived from expert assessments and summed (with double counting avoided)	Annual updates	Project team	Project implementation report (PIR)	Beneficiary numbers would be reduced if any specific benefits failed to materialize or if effort overwhelmed by external factors
	Indicator 2: Terrestrial protected areas created or under improved management for conservation and sustainable use (Hectares)	184,749 ha	Combined areas of: (1) Northern Corridor, currently under establishment as an amalgamation of existing protected and unprotected areas (2) three primary forest reserves targeted for increased management effectiveness based on enhanced data collection, analysis, action planning	Baseline METT scores estimated by Forest Department staff, with expert review. Follow up METTs to be conducted in last year of project implementation	End of project	Belize Forest Department together with expert consultants	METT analyses (attached to prodod and final evaluation)	Data gathered from camera trap is sufficiently informative to lead to significantly improved management outcomes on the ground, i.e. beyond simply 'better information'

¹⁷ Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
			and implementation under Component 1 and (3) seven smaller reserves within project landscapes, which are expected to benefit indirectly through enhanced monitoring and understanding due to participation of managing NGOs in camera trapping and data sharing.					
	Indicator 3: Area of landscapes under improved practices (excluding protected areas) (Hectares)	157,563 ha	Area of polygon drawn to represent approximate unprotected portions of three project landscapes.	Area calculated using GPS software	End of project mapping of response area	Belize Forest Department together with expert consultants	Project reports	<ul style="list-style-type: none"> Improved practices, consisting of more jaguar-friendly farming and livestock sector, results from an enhanced response system
Outcome 1: Information and data management systems contribute to improved conservation of jaguar and other wildlife	Indicator 4a: Camera trap coverage nationally (OR as % of total jaguar habitat) (Hectares)	730,000 hectares	Yearly national camera trap coverage: Area of clusters of camera traps (grids) with a maximum distance of 4 (mean 2-3) kilometers apart, being active for a	Downloaded images from camera traps for total duration of surveys	Minimum every 2 months	Expert consultants, NGO science managers together with Forest Department	Number of projected camera traps incorporated in national survey and data stream photos	<ul style="list-style-type: none"> Sufficient ATV drivable tracks and walkable trail infrastructure can be created for deployment of sufficient new camera

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
at country level, with targeted application in 177,914 ha of Sibun River watershed landscape.			minimum of 2 months.				match in numbers	traps and maintenance, i.e. terrain does not prove too rugged <ul style="list-style-type: none"> • All parties systematically deploy and maintain camera traps. • Theft and vandalism of camera traps is minimal • Extreme rain and sudden flooding events are minimal
	Indicator 4b: Percentage of camera trap data (existing and new) incorporated into the national database	At least 80% of existing and new data sets inputted into the national database	Camera trap data entered into a camera trap database platform	Processed camera trap records from both newly installed camera traps and historic records entered accurately into the database platform	New batch entered every two months	Expert consultants, NGO science managers together with Forest Department	Number of camera trap entries and period of monitoring, matches with supplied raw data	<ul style="list-style-type: none"> • Management of raw data are inadequate causing problems with entering into database • Mismanagement of data at the data platform
	Indicator 5: Level of management effectiveness at three forest reserves	<u>End of project METT scores</u> Sibun - 43 Sittee - 43 Manatee - 43	Target values reflect the realistic assessment of potential improvement from estimated baseline	<ul style="list-style-type: none"> • Baseline data and targets based on consultations with Forest Department staff and management. 	End of project	Belize Forest Department together with expert consultants,	Updated METTs	Increased presence and systematic monitoring will lead to improved management

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
			values, given the nature of the planned project intervention			and involved NGOs		
	Indicator 6: Change in the capacity of FD, CSFI, BAS, Ya'axche, and FCD to participate in data capture and management	<u>UNDP Capacity Development Scorecard results</u> CSFI: 41 BAS: 30 PFB: 17 FCD: 42 YCT: 40 FD: 35	Increased capacity to independently carry out systematic camera trapping surveys and (assist in) storing resulted data in the national database	Per NGO: <ul style="list-style-type: none"> Increased number of NGO staff responsible for higher level camera trap and data management Decreased number of foreign consultants or NGOs involved in local camera trap and data management 	Start Midterm End	Expert consultants, and science council for camera trapping	Increased UNDP Capacity Development Scorecard results	<ul style="list-style-type: none"> NGOs motivated to improve their capacity Capable management personnel available
Outcome 2: Strengthened systems for responding to jaguar–livestock conflict and for encouraging sustainable ecotourism, with targeted application in Belize's Northeast forest landscape totaling 125,000 ha.	Indicator 7: Percentage of referred jaguar - cattle conflict visited and expertly handled according to protocol.	At least 70% of incidents in years 2 and 3 of project	Jaguar trapping team removes all problem cats according to protocol and works closely with local communities to find solutions for less severe problems.	All incidents logged systematically in data file. Contact with affected stakeholders maintained according to developed protocols. Assistance provided within financial means of the project	Yearly log of conflict cases and means of processing	Jaguar working group with expert consultants and the Forest Department	National database	Unreported and illegal lethal control of jaguars remains high
	Indicator 8: # of tour guides and landowners contributing to national camera trap network	At least 25 by project end	Guides and landowners will be trained and certified as competent in the deployment of camera traps and general ecology of jaguars and larger wildlife expected to be captured on	Number of participants being provided with a certificate will be recorded along with number of participants using camera traps	Yearly assessment among participants	BTIA or Belize Tourist Board, National Tour guide association. Managing NGOs	Project evaluation	Database delivers sufficient benefits, including those derived from ecotourism, to stimulate continued private sector participation

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
			camera traps. Tour-guides and operators will thus be contributing to national camera database by collecting systematic data					
Outcome 3: Enhanced knowledge of the current status of the jaguar / prey / game species and hunting activities in 49,475 ha of the Maya Golden Landscape informs regulations for threat reduction and sustainable population management.	Indicator 9: Level of understanding of the dynamics of hunter-prey systems	Level of understanding increased through a model and baseline of hunter-prey dynamics for informed policy and decision making	Accurate information on game species offtake and consumption to assure maintenance of viable wildlife populations for both biodiversity and ecosystem function maintenance, while equally assuring livelihood maintenance of local protein source	<ul style="list-style-type: none"> • Camera traps produce data on game species abundance in the area • Social surveys provide data on level of game species offtake in the area • Social surveys provide data on level of game meat consumption in the area 	Assessment 1 time per year	Expert consultants, and science council for camera trapping	Published papers in peer reviewed journals with impact factors > 1.5, assuring data are of sufficient accuracy and precision.	Project is able to convince local communities of the importance of sustainable wildlife management
	Indicator 10: Drafting notes informing amendment of Wildlife Protection Act (WPA)	Draft notes for updating WPA	Wildlife Act needs to reflect current levels of economic gain and vulnerability of wildlife populations	Different stakeholders participate in all meetings of drafting	2 workshops	Forest Department	Draft notes considered by cabinet	<ul style="list-style-type: none"> • The complex process of many stakeholder angles hinders rapid enough processing within 3 years.
Outcome 4: Enhanced	Indicator 11: # of Lessons	At least 5 case studies	Increased capacity of the country to	Based on the generated data streams of	2 times, end of	Expert consultants,	<ul style="list-style-type: none"> • Papers and 	<ul style="list-style-type: none"> • Political situation with

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods ¹⁷	Frequency	Responsible for data collection	Means of verification	Risks/ Assumptions
national / transboundary / jaguar range collaboration, knowledge management and communication	shared on jaguar conservation	documented on lessons learnt and best practices captured and shared nationally and with experts in Mexico, Guatemala and other jaguar range countries.	showcase its wildlife conservation targets and expertise in the international conservation arena	components 1,2, and 3, the production of high quality analyses, written up as reports and publications.	second year and at end of project	and science council for camera trapping	reports published <ul style="list-style-type: none"> • Presentations given at international conferences 	Guatemala does not allow easy exchange with country

ANNEX 5: UNDP SOCIAL AND ENVIRONMENTAL SCREENING PROCEDURE (SESP)

Project Information

Project Information	
1. Project Title	Enhancing jaguar corridors and strongholds through improved management and threat reduction
2. Project Number	6397
3. Location (Global/Region/Country)	Belize

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

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
<i>Briefly describe in the space below how the Project mainstreams the human-rights based approach</i>
<p>The project as presented ensures the meaningful participation of communities in the effective management of environmental resources directly impacting/ influencing lives and livelihoods. The project design ensures social equity and equality through its targeting of marginalized populations who commonly interface with Belize's natural systems (includes community groups, indigenous groups, women and youth). The participatory approach considered in project design, development and implementation empowers community resource users as well as resource managers, ensuring the protection of the country's natural heritage. The project explores in its design the interaction between environment protection and human rights, asserting rights to access and use of resources, building on the principles of "sustainable development," which considers the needs of present and future generations. The inclusion of the human rights approach in environmental protection is important as it allows for the effective treatment of developmental and environmental conflicts through the management of human/ environment interfaces.</p> <p>The project interfaces with a cross section of Belize's most vulnerable, its rural dwellers, who depend heavily on the health of the environment and the effective management of natural resources for the meeting of basic needs, including shelter, food security and livelihoods. The targeted areas for intervention coincide with the country's poorest districts and areas which in some cases support substantial indigenous communities.</p>
<i>Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment</i>
<p>The project through its design and implementation is expected to treat the differentiated roles of men and women in the management of the country's biodiversity, as the wellbeing and the livelihoods of both women and men in rural Belize depend on an effectively managed natural resource base. The utilization of Gender assessments during the project design phase has created a clearer understanding of these differentiated roles which allows for more effective and targeted project communications and engagement of women beneficiaries in project implementation. This is particularly important in Component 2 of the initiative which speaks to the "promotion of wildlife-based economy" which targets specifically women as beneficiaries of proposed interventions in an attempt to take women's needs and the needs of indigenous resource users into greater consideration. Because of the traditional close affiliation between women and indigenous groups and the environment, the project encourages the involvement of these groups in advising and participating in the management of the resources.</p>
<i>Briefly describe in the space below how the Project mainstreams environmental sustainability</i>

The project recognizes the importance of maintaining ecological functionality and connectivity as a critical success factor of Belize's sustainable development pathway. The project promotes the jaguar as a flagship species which supports the introduction of transformational changes to the national governance architecture supporting sustainable resource management in the country. Belize's long-term development strategy relies on the performance of key productive sectors such as agriculture and tourism linked to the country's fragile/ vulnerable natural resource base. The expansion of the agriculture frontier and investments supporting the tourism industry have resulted in negative environmental impacts and degradation / depletion of the supporting natural resource base due to increased acceptance among decision makers of trade-offs between economic and environmental goals. The project introduces tools, programmes and institutional and policy changes to address human/ wildlife conflicts and enable a long-term shift to a more sustainable growth path.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
Risk 1: Government agencies / institutions may not effectively engage and coordinate the participation of the wider targeted critical population. (Principle 1: q4; Standard 6: 6.1, 6.2)	I = 4 P = 2	Moderate	The success of this project is closely tied to the ability of implementing entities to ensure communities' buy in and support as well as their ability to broker effective public/ private partnerships, as connectivity of systems and effective wildlife management is dependent on the inclusion of non-state lands within established networks and the engagement of communities and land owners in wildlife conflict resolution measures.	The project has included in its design a stakeholder (community, indigenous and private sector) engagement plan supporting project interventions to minimize this risk, along with an Indigenous Peoples Planning Framework (IPPF). The project has allocated significant budgetary resources (see Budget Notes #5, 8, 10, 11, 18 and 20) to ensure the full participation of key groups in project implementation.
Risk 2: Project implementation reproduces existing discrimination against women	I= 3 P= 2	Moderate	Within the national setting the role of women in community	The Gender Action Plan (GAP) of this project proposes empowerment and decision-making spaces, livelihood

(Principle 2: Standard 2)			level conservation efforts is not sufficiently valued or officially recognized.	opportunities and environmental education for women beneficiaries and stakeholders in response to this risk. Gender-specific activities and indicators strongly encourage positive impacts by the project.
<p>Risk 3: Any eventual limits on wildlife harvests might be interpreted by some as limiting customary rights to wildlife resources</p> <p>(Principle 3; Standard 5: 5.4; Standard 6: 6.1; 6.2)</p>	I = 3 P = 2	Moderate	This risk has been identified because the project, under Activity 3.2.1, will include the development of community resource use management plans to support efforts by indigenous communities to sustainably manage wildlife resources within their area. In the context of increased human population and hunting pressure, the project aims to ensure that communities are empowered to use wildlife sustainably by providing them with instruments to self-check the status of available wildlife for offtake. This requires setting up monitoring systems and help with analysis on potential level of sustainable offtake in relation to wildlife carrying capacity.	Under Component 3, the project seeks to establish processes and structures within which communities may exercise their customary rights within a broader context of sustainable development. The project design ensures that communities are fully engaged and participating in all processes of wildlife population and hunting assessments and that they have direct responsibility for designing and overseeing implementation of, regulatory systems designed to ensure the sustainability of harvests. In so doing, the project promotes a high level of community-level engagement and management of natural resources. Together, these measures will serve to address any concerns that potential limitations on harvests represent anything other than communities increasing their resource management capacities and exercising responsibilities for same. Per the project's Indigenous Peoples Planning Framework (IPPF), however, this risk and all other relevant risks will be further assessed and the necessary management measures (including FPIC protocols) will be included in the project's Indigenous Peoples Plan (IPP).
<p>Risk 4: Project support for conservation of wildlife as an economic resource for indigenous populations may lead communities to impose limitations on their hunting, via catch quotas or other measures, with short-term reductions in harvests (but probable long-term gains)</p> <p>(Principle 3: Standard 5: 5.4; Standard 6: 6.3, 6.5, 6.9)</p>	I = 3 P = 4	Moderate	Communities in the project region rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. The project ensures long-term livelihood opportunities through the institution of systems to maintain wildlife populations. The implementation of instruments of feedback loops on the sustainability of the	As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations. The project is designed to collect, share and disseminate data in collaboration with the communities. This data and information will be used jointly with the community to set quotas and/or seasonal access. Per the IPPF, procedures for doing so will be developed as part of the IPP, at which time this risk will be further assessed.

			activities under their own control means that this can be regarded as an empowering instrument, assuring long-term management of wildlife presence in the area.	
Risk 5 Capture of jaguars poses risk of bodily harm to personnel both trainees and trainer, and jaguars (Principle 3: Standard 3.7)	I = 4 P = 1	Moderate	The risk is real and almost completely related to the expertise of the trainer and capture expert. The trapping requires high expertise in terms of the physical capture mechanisms and control of timing of capture, knowledge of jaguar behavior when captured, high veterinary knowledge about jaguars, and ability to take charge and control the situation in terms of people trained around him.	Belize has a strong record of safe jaguar captures with several highly experienced trappers, having worked within Belize. The trapper tentatively identified for the project likely has the highest number of safe live release captures of jaguars in the world, has worked previously with CSFI in the North, and understands the landscape and culture of personnel. He has extremely rigid safety protocols that will be implemented with care, and with this we feel the project can place the risk of accidents as extremely low with confidence. These will be carefully chosen and will have a proven record of no harm to jaguars, themselves, and involved personnel.
Risk 6: Project activities and outcomes could be vulnerable to the potential impacts of climate change. (Principle 3; Standard 2: 2.2)	I=3 P=3	Moderate	Corridors (and increased landscape connectivity more generally) are the most frequently recommended conservation strategy to protect biodiversity as climate changes. Climate change, however, can influence natural corridors and connectivity of systems. Those managing corridors must consider range shifts, as well as alternative corridors which provide paths for individuals to recolonize habitats where populations have been lost.	This risk is managed within the project design by further bolstering corridor systems delineated formally through government decree and by supporting actions within productive landscapes to further benefit connectivity.
Risk 7: Trail cutting for camera trapping will increase the possibility of access by hunters to sensitive habitats and wildlife, including within and adjacent to protected areas (Principle 3; Standard 1: 1.1, 1.2)	I=3 P=2	Moderate	The project target landscapes are located within ecologically important areas and within, or adjacent to, formally protected areas. While the project design aims to improve the	Trail design will ensure minimal disturbance to the ecosystem, in line with conservation biology criteria. Project staff, who understand risks created by enhanced access, will take action to safeguard against this, e.g. minimize trail cutting to minimal requirements, assuring trails easily overgrow within

			effectiveness and value of this habitat for its constituent biodiversity, including jaguar and prey species, some activities, such as ecotourism and creation or expansion of trails to support camera trapping, may include <i>slight</i> risks of increased impacts associated with human presence.	short period. This has been captured in the design of output 1.2.2.
Risk 8: Project's approach to promoting cultural heritage, in the context of ecotourism, could result in unintended social and cultural consequences. (Principle 3: Standard 4: 4.2)	I= 2 P= 2	Low	<p>Belize promotes cultural tourism. In an effort to introduce opportunities for non-traditional livelihoods within the project area, and to further engage local, mainly Creole communities in conservation efforts, the project proposes to further develop and scale up the model being piloted under Output 2.2 which presents a hybrid cultural and ecosystem-based tourism.</p> <p>This risk is assessed as low, first because tourism activities will not take place in sites having indigenous communities. In addition, the project is not introducing a new avenue of activity, but helping communities participate better and benefit from existing tourism packages. Finally, Belize has significant existing safeguards, including a tourism board and industry association. Nevertheless, the project has been designed to monitor and maintain ongoing and close engagement with participating</p>	

			communities, ensuring that project-supported interventions serve their needs and that cultural practices are fully respected.	
Risk 9: Due to the COVID-19 pandemic, there may be risks to individuals participating in project activities, including consultations, until the crisis is under control (Principle 3: Standard 3: 3.6)	I = 3 P = 3	Moderate	The spread of the novel Coronavirus has created new risks to project implementation.	At the time of writing, reported cases in Belize are few. However, this will of course change and it is extremely difficult to predict the degree of future spread. Should future circumstances warrant, and in order to mitigate risk, travel by central office personnel in Belmopan to the project sites may be cancelled and meetings with local and strategic partners will be held using virtual platforms. The fact that the country has good internet connectivity makes it possible to implement these alternative forms of work with relative ease. Activities in the field that require the presence of project personnel or staff from partner organizations (especially activities involving travel for multiple staff) will be postponed if necessary. Instead, virtual communication will be promoted using mobile phone networks to exchange messages and images, and virtual forums will be held. Virtual meetings will be held with local beneficiaries' associations, using the proper prevention measures and only when necessary, at locations that have the required connectivity. This will ensure a reduced number of participants to those who are considered essential. On a quarterly basis, project progress will be assessed and activities will be rescheduled as needed.
Risk 10: The risks associated with the seed funding (output 2.2) are currently unknown because the specific alternative livelihoods will be selected and designed during the project's implementation. (Principles/Standards TBD)	I = 4 P = 2	Moderate		During the first year of implementation, the project will conduct livelihood analysis/ assessments to establish sustainable livelihood alternatives through a thorough stakeholder consultation process within the buffer communities of the northern "Jaguar Corridor". Once defined, such alternative livelihood activities will undergo the environmental and social risk screening process following the UNDP SES procedure. If risks are identified, the project will develop the appropriate management measures and plans, such as a Livelihood Action Plan to avoid, reduce or mitigate the impact of such risks.
QUESTION 4: What is the overall Project risk categorization?				
Select one (see <u>SESP</u> for guidance)			Comments	

	Low Risk	<input type="checkbox"/>	
	Moderate Risk	<input checked="" type="checkbox"/>	The project is assessed as “moderate” risk, as it involves the participation of indigenous peoples and other vulnerable or marginalized groups and has several additional moderately rated risks. It should be noted, however, that the concept builds on the lessons and the processes of recent similar actions undertaken by natural resource managers, including community consultation and participation in REDD+ programming, the development of a management strategy and plan for the central Belize Corridor System and the expansion of the North Eastern corridor system. Project development has been informed through consultations with a broad cross section of national stakeholders and thorough analysis of national and local circumstances. Project developers have also elaborated three action plans to manage and mitigate the cumulative nature of the risks and/or the complexity of assessing and managing the moderate risks identified in the SESP. These action plans are: (1) Stakeholder Engagement Plan, (2) Indigenous Peoples Planning Framework (IPPF) and (3) Gender Action Plan. The IPPF for example, outlines key activities designed to obtain the FPIC of local communities during the project’s inception phase. A full Indigenous Peoples Plan (IPP) will be prepared during project implementation.
	High Risk	<input type="checkbox"/>	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments
	Principle 1: Human Rights	<input checked="" type="checkbox"/>	The project recognizes people as key actors in their own development; however, communities have traditionally been marginalized by a centralized system of environmental governance limiting their abilities to fully participate in decisions pertaining to the management of the natural resource base. The project design ensures that communities are fully informed as to processes pertaining to wildlife management and monitoring and allows them access to systems of decision making and power facilitating their possible influence on these processes.

	Principle 2: Gender Equality and Women's Empowerment	x	A gender analysis, action plan and gender-differentiated indicators have been prepared
	1. Biodiversity Conservation and Natural Resource Management	x	Despite the project's inclusion of critical habitats within its scope, the project is designed to enhance these features and is expected to have an overall benefit on biodiversity and natural resource management.
	2. Climate Change Mitigation and Adaptation	x	As noted above, climate change can influence natural corridors and connectivity of systems. Those managing corridors must consider range shifts, as well as alternative corridors which provide paths for individuals to recolonize habitats where populations have been lost.
	3. Community Health, Safety and Working Conditions	x	Issues related to COVID-19 and other risks.
	4. Cultural Heritage	x	Minimal impacts possible due to promotion of traditional cultural heritage of Creole people
	5. Displacement and Resettlement	x	Communities in the Component 3 landscape rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations.
	6. Indigenous Peoples	x	Communities in the component 3 landscape rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations.
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	

Final Sign Off

Signature	Date	Description
QA Assessor		Diane Wade-Moore
QA Approver		Ian King
PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ¹⁸	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	Yes
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No

¹⁸ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, 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 people and transsexuals.

2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit 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? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	Yes
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	Yes
1.3	Does the Project involve 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)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	No
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No

1.11	<p>Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?</p> <p><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i></p>	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ¹⁹ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	<p>Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)?</p> <p><i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i></p>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	Yes

¹⁹ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact 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
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	Yes
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in 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)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ²⁰	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	Yes
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	Yes
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	Yes
6.3	Would the proposed Project potentially affect 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	Yes

²⁰ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

	by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	
6.4	Has there been an 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?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	Yes
6.6	Is there a potential for 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	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	Yes
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in 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?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

ANNEX 6: UNDP RISK REGISTER

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
1	<p><u>Government agencies / institutions may not effectively engage and coordinate the participation of the wider targeted critical population:</u> The success of this project is closely tied to the ability of implementing entities to ensure communities' buy in and support as well as their ability to broker effective public/ private partnerships, as connectivity of systems and effective wildlife management is dependent on the inclusion of non-state lands within established networks and the engagement of communities and land owners in wildlife conflict resolution measures.</p> <p>(Source: SESP Principle 1: q4; Standard 6: 6.1, 6.2)</p>	Political	<p>I = 2 P = 4 Risk level = Moderate</p>	<p>The project has included in its design a stakeholder (community, indigenous and private sector) engagement plan supporting project interventions to minimize this risk. The project has allocated significant budgetary resources (see Budget Notes #5, 8, 10, 11, 18 and 20) to ensure the full participation of key groups in project implementation.</p>	Project Manager, stakeholder engagement specialist and safeguards consultant
2	<p><u>Project implementation reproduces existing discrimination against women:</u> Within the national setting the role of women in community level conservation efforts is not sufficiently valued or officially recognized.</p> <p>(Source: Principle 2: Standard 2)</p>	Social	<p>I= 3 P= 2 Moderate</p>	<p>The Gender Action Plan (GAP) of this project proposes empowerment and decision-making spaces, livelihood opportunities and environmental education for women beneficiaries and stakeholders in response to this risk. Gender-specific activities and indicators strongly encourage positive impacts by the project.</p>	Project manager and safeguards consultant
3	<p><u>Any eventual limits on wildlife harvests might be interpreted by some as limiting customary rights to wildlife resources:</u> This risk has been identified because the project, under Activity 3.2.1, will include the development of community resource use management plans to support efforts by indigenous communities to sustainably manage wildlife resources within their area. In the context of increased human population and hunting pressure, the project aims to ensure that communities are empowered to use wildlife sustainably by providing them with instruments to self-check the status of available wildlife for offtake. This requires setting up monitoring systems and help with analysis on potential level of sustainable offtake in relation to wildlife carrying capacity.</p> <p>(Source: Principle 3; Standard 5: 5.4; Standard 6: 6.1; 6.2)</p>	Environmental	<p>I = 3 P = 2 Moderate</p>	<p>Under Component 3, the project seeks to establish processes and structures within which communities may exercise their customary rights within a broader context of sustainable development. The project design ensures that communities are fully engaged and participating in all processes of wildlife population and hunting assessments and that they have direct responsibility for designing and overseeing implementation of, regulatory systems designed to ensure the sustainability of harvests. In so doing, the project promotes a high level of community-level engagement and management of natural resources. Together, these measures will serve to address any concerns that potential</p>	Project manager

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
				limitations on harvests represent anything other than communities increasing their resource management capacities and exercising responsibilities for same.	
4	<p><u>Project support for conservation of wildlife as an economic resource for indigenous populations may lead communities to impose limitations on their hunting, via catch quotas or other measures, with short-term reductions in harvests (but probable long-term gains):</u> Communities in the project region rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. The project ensures long-term livelihood opportunities through the institution of systems to maintain wildlife populations. The implementation of instruments of feedback loops on the sustainability of the activities under their own control means that this can be regarded as an empowering instrument, assuring long-term management of wildlife presence in the area.</p> <p>(Source: Principle 3: Standard 5: 5.4; Standard 6: 6.3, 6.5, 6.9)</p>	Social	<p>I = 3 P = 4 Moderate</p>	As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations. The project is designed to collect, share and disseminate data in collaboration with the communities. This data and information will be used jointly with the community to set quotas and/or seasonal access. Procedures for doing so will be developed as part of the IPP, at which time this risk will be further assessed.	Project Manager
5	<p><u>Capture of jaguars poses risk of bodily harm to personnel both trainees and trainer, and jaguars:</u> The risk is real and almost completely related to the expertise of the trainer and capture expert. The trapping requires high expertise in terms of the physical capture mechanisms and control of timing of capture, knowledge of jaguar behavior when captured, high veterinary knowledge about jaguars, and ability to take charge and control the situation in terms of people trained around him.</p> <p>(Source: Principle 3: Standard 3.7)</p>	Health and safety	<p>I = 4 P = 1 Moderate</p>	Belize has a strong record of safe jaguar captures with several highly experienced trappers, having worked within Belize. The trapper tentatively identified for the project likely has the highest number of safe live release captures of jaguars in the world, has worked previously with CSFI in the North, and understands the landscape and culture of personnel. He has extremely rigid safety protocols that will be implemented with care, and with this we feel the project can place the risk of accidents as extremely low with confidence. These will be carefully chosen and will have a proven record of no harm to jaguars, themselves, and involved personnel.	Project manager
6	<p><u>Project activities and outcomes could be vulnerable to the potential impacts of climate change:</u> Corridors (and increased landscape connectivity more generally) are the most frequently recommended conservation strategy to protect biodiversity as climate changes. Climate change, however, can influence natural corridors and</p>	Environmental	<p>I = 3 P = 3 Moderate</p>	This risk is managed within the project design by further bolstering corridor systems delineated formally through government decree and by supporting actions within	Project manager and gender officer

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
	<p>connectivity of systems. Those managing corridors must consider range shifts, as well as alternative corridors which provide paths for individuals to recolonize habitats where populations have been lost.</p> <p>(Source: Principle 3; Standard 2: 2.2)</p>			productive landscapes to further benefit connectivity.	
7	<p><u>Trail cutting for camera trapping will increase the possibility of access by hunters to sensitive habitats and wildlife, including within and adjacent to protected areas:</u> The project target landscapes are located within ecologically important areas and within, or adjacent to, formally protected areas. While the project design aims to improve the effectiveness and value of this habitat for its constituent biodiversity, including jaguar and prey species, some activities, such as ecotourism and creation or expansion of trails to support camera trapping, may include <i>slight</i> risks of increased impacts associated with human presence.</p> <p>(Source: Principle 3; Standard 1: 1.1, 1.2)</p>	Environmental	<p>I=2 P=2 Low</p>	Trail design will ensure minimal disturbance to the ecosystem, in line with conservation biology criteria. Project staff, who understand risks created by enhanced access, will take action to safeguard against this, e.g. minimize trail cutting to minimal requirements, assuring trails easily overgrow within short period.	Project manager
8	<p><u>Project's approach to promoting cultural heritage, in the context of ecotourism, could result in unintended social and cultural consequences:</u> Belize promotes cultural tourism. In an effort to introduce opportunities for non-traditional livelihoods within the project area, and to further engage local, mainly Creole communities in conservation efforts, the project proposes to further develop and scale up the model being piloted under Output 2.2 which presents a hybrid cultural and ecosystem-based tourism.</p> <p>(Source: Principle 3: Standard 4: 4.2)</p>	Social	<p>I= 2 P= 2 Low</p>	This risk is assessed as relatively low, first because tourism activities will not take place in sites having indigenous communities. In addition, the project is not introducing a new avenue of activity, but helping communities participate better and benefit from existing tourism packages. Finally, Belize has significant existing safeguards, including a tourism board and industry association. Nevertheless, the project has been designed to monitor and maintain ongoing and close engagement with participating communities, ensuring that project-supported interventions serve their needs and that cultural practices are fully respected.	Project manager
9	<p><u>Due to the COVID-19 pandemic, there may be risks to individuals participating in project activities, including consultations, until the crisis is under control:</u> The spread of the novel Coronavirus has created new risks to project implementation.</p> <p>(Source: Principle 3: Standard 3: 3.6)</p>	Health and safety	<p>I = 3 P = 3 Moderate</p>	At the time of writing, reported cases in Belize are few. However, this will of course change and it is extremely difficult to predict the degree of future spread. Should future circumstances warrant, and in order to mitigate risk, travel by central office personnel in Belmopan to the project sites	

#	Description	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner
				may be cancelled and meetings with local and strategic partners will be held using virtual platforms. The fact that the country has good internet connectivity makes it possible to implement these alternative forms of work with relative ease. Activities in the field that require the presence of project personnel or staff from partner organizations (especially activities involving travel for multiple staff) will be postponed if necessary. Instead, virtual communication will be promoted using mobile phone networks to exchange messages and images, and virtual forums will be held. Virtual meetings will be held with local beneficiaries' associations, using the proper prevention measures and only when necessary, at locations that have the required connectivity. This will ensure a reduced number of participants to those who are considered essential. On a quarterly basis, project progress will be assessed and activities will be rescheduled as needed.	

ANNEX 7: OVERVIEW OF PROJECT STAFF AND TECHNICAL CONSULTANCIES

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National contracting		
Project Manager/Coordinator Rate: \$_30,000 per annum	36 months	<p>The Project Manager (PM) will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors.</p> <p>Duties and Responsibilities</p> <ul style="list-style-type: none"> • Manage the overall conduct of the project. • Plan the activities of the project and monitor progress against the approved workplan. • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. • Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results. • Ensure that changes are controlled and problems addressed. • Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities. • Prepare and submit financial reports to UNDP on a quarterly basis. • Manage and monitor the project risks – including social and environmental 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 revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required. • Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. • Prepare the GEF PIR; • Assess major and minor amendments to the project within the parameters set by UNDP-GEF;

Consultant	Time Input	Tasks, Inputs and Outputs
		<ul style="list-style-type: none"> Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; Monitor and track progress against the GEF Core indicators. Support the Mid-term review and Terminal Evaluation process.
Project Assistant / finance assistant	36 months	<p>Duties and Responsibilities</p> <p>Under the guidance and supervision of the Project Manager, the Project Assistant will carry out the following tasks:</p> <ul style="list-style-type: none"> Assist the Project Manager in day-to-day management and oversight of project activities; Assist the M&E 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 PB, TAC, UNDP, project consultants and other PMU staff; Provide PMU-related administrative and logistical assistance. 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 GoB 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.
For Technical Assistance		
Outcome 1		
Local / National contracting		
Institutional development and wildlife monitoring specialist Rate: \$250 / day	40 days	Design National Monitoring Network, based on existing national circumstances, structures and capacities (Activity 1.1.1)
Legislation and Policy Consultant (drafting of partnership	40 days	Conclude an MoU governing data sharing amongst all camera trap partners, including agreement on design of new camera trap studies (Activity 1.1.2). This requires a consultant understanding the intricacies between data protection needs for stakeholders gathering data within the protected areas (NGOs and entities operating cameras), and users of data, writing reports and analyzing

Consultant	Time Input	Tasks, Inputs and Outputs
agreements reflective of network data sharing protocols) Rate: \$250/day		data (the end users for analysis). This requires understanding and experience of both sets of stakeholder processes, with experience in negotiating networks and writing up collaborative agreements.
Wildlife Monitoring and Modeling Specialist Rate: \$250/day	40 days	<p>Develop robust statistical analytical tools needed to continuously assess variation across the landscape in: jaguar density, distribution, dispersal distances, survival, habitat use with emphasis on fresh water availability, enhancing knowledge on climate change within the upper regions of the jaguar range, for use in the camera trap data management platform (Activity 1.3.1). This requires high end analytical knowledge on quantification of the described wildlife parameters, with the ability to transfer knowledge to local wildlife experts through sharing of analytical tools, when writing national reports within the proposed network. Several junior wildlife candidates are in-country who would highly benefit from such involvement. With implementation methodologies, we can foresee high level training within real-time data processing of processed national data (learning on the job of analyzing and producing national reports).</p> <p>Develop the analytical tools needed to continuously assess variation across the landscape in: prey density, and distribution, habitat use with emphasis on fresh water availability, for use in the camera trap data management platform (Activity 1.3.2)</p>
Short term TA: 1 Senior Forester/ Data Manager Rate: \$19,100/year	2 years	<p>Support platform management capacities of high end camera trap database system within the Forest Department, including (Activity 1.1.6):</p> <ul style="list-style-type: none"> • Overall management and maintenance of the database on a day to day bases, assuring transfer of raw data to the database platform, and ability to retrieve data by stakeholders. • Quality control of inputted data in terms of accuracy (date, time, location, species identification, ID of jaguars and ocelots). • Provide the necessary Tec-support to all stakeholder organisations, using camera traps for wildlife monitoring; assuring regular contact to maintain data-stream of camera trap to database platform, and quality of input. • Manage dataflow between partners and assure MoU standards of data protection for individual providers. Logging and regulating data-sharing events between stakeholders (both government and camera providers) and follow up with these stakeholders to assure appropriate procedures of use according to share contracts for analysis and products (e.g. publications and reports finalized; no expertise input required into reporting and product development). • Organise necessary meetings and updates to partners to maintain a sense of database community of Belize <p>The sheer bulk of camera trap databases, with search and automated capacity of data processing, has a considerable complexity of maintenance, requiring initial international support to set up and maintain. When set up, local database managers can be trained to assure the database becomes a national entity, incorporating national network needs as requested by stakeholders in previous assessments.</p>

Consultant	Time Input	Tasks, Inputs and Outputs
Team lead providing training and guidance of local monitoring team Rate: \$7,000/year	2 years	Establish a well-trained camera trapping field team, under guidance of the forest department (Activity 1.2.1). This requires a person with enough experience of the total chain of data processing, from camera trap placement to analysis and reporting. Frequently camera trap training stops after the field training of placement. Training has to involve how local teams have to pass on data, with associated meta-data, to local managers and how this is passed on to larger database network. The total chain requires efficiency and any break will mean data are not stored properly. This requires a thorough understanding of the total chain.
International / Regional and global contracting		
IT services (platform development) Rate: \$500/day	110 days	Introduce cloud-based camera trap data management platform universally and ensure adoption by all partners (Activity 1.1.3). This requires IT service development at the high end with ability to tailor service towards local needs of this total database.
Wildlife Management Specialist Rate: \$400/day	185 days	Based on the incoming camera trap data and data streams from around the country, develop a National Jaguar Action Plan to improve national structures and systems of collaboration for the maintenance of Belizean jaguar populations (Activity 1.4.1). Improving monitoring and management structures based on the incoming data, ensuring a viable feedback loop between incoming data and management. Develop National Guidelines for prey species management, with a focus on white-lipped peccary (Activity 1.4.2), ensuring input from presence and distribution data from national monitoring, assessing hotspots of vulnerability to overhunting, core areas, and breakages in connectivity between subpopulations. Develop national protocols for assessing major game species in Belize (Activity 1.4.3). Based on incoming camera data, assess if we can sufficiently quantify distribution and presence for all target species and/or if we require extra measures per species. Develop landscape management plan (Activity 1.5.2), based on feedback of monitoring data, ensuring that the Belizean National Protected Area System can provide sufficient carrying capacity for all wide-ranging wildlife species, with an emphasis on jaguars. Note: Above plans require considerable quantitative skills, with deep understanding of the different types of possible analyses derived from camera trap data, with possible additional activities per species.
Wildlife regulatory specialist Rate: \$500/day	20 days	Develop proposed regulatory changes arising from landscape management plan (Activity 1.5.2). Provide feedback mechanism from improved national monitoring to management of species.
Outcome 2		
Local / National contracting		
Wildlife Expert development of response protocols Rate: \$250/day	60 days	Work with CSFI to build a national jaguar conservation / capture team. (Activity 2.1.1). This requires high knowledge of jaguar behaviour (interplay of moving between protected and unprotected landscapes), experience with jaguar capture, understand the use of monitoring data to assess problem cases, and understanding of Belizean report chain from problem case to response. Person should be well embedded within existing network of problem jaguar work at the national scale and the Northern target area of component 2.
Gender specialist Rate: \$250/day	30 days	Work with local communities to ensure women's active participation and engagement in development and implementation of response protocols and in alternative livelihoods support (Activities 2.1.4, 2.2.3)
Wildlife Management Expert- Protocol	40 days	Engage local communities and management entities in the development of early warning and wildlife conflict incident reporting protocols. (Activity 2.1.4). This requires high knowledge of jaguar behaviour (interplay of moving between protected and unprotected landscapes), experience with jaguar capture, understand the use of monitoring data to assess problem cases, and

Consultant	Time Input	Tasks, Inputs and Outputs
development and follow up consultations Rate: \$250/day		understanding of Belizean report chain from problem case to response. Person should be well embedded within existing network of problem jaguar work at the national scale and the Northern target area of component 2.
International / Regional and global contracting		
Training of local jaguar monitors/ managers (Wildlife Modelling expert) Rate: \$500/day	20 days	Provide intensive training in ecological assessments of jaguars in human-dominated landscapes, allowing accurate threat assessments (Activity 2.1.2). Providing a solid ecological framework of jaguar population dynamics inside and outside protected areas, while equally familiar with understanding the behavioural and demographic characteristics associated with conflict jaguars. This consultancy has both a component of knowledge and experience with jaguar population dynamics within the wider landscapes, as well as requiring analytical knowledge to train stakeholders in the continuous gathering of data with cameras within the human dominated landscape (monitoring inside and outside of protected areas).
Tourism Product Development Rate: \$500/day	50 days	Engage the Belize Tourism Board to develop a specialized tourism product and certification linked to jaguars, including camera trapping activities, honey and other products and services to be developed under Activity 2.2.3 (Activity 2.2.1)
Wildlife / large cats trapping expert Rate: \$500/day	50 days	Demonstration and field training in capture and release of large cats. This requires an experienced trapper/vet with high numbers of safe jaguar captures under their belt, equally having considerable experience training people.
Wildlife monitoring expert Rate: \$500/day	20 days	Training in the use and application of camera trapping and telemetry. This requires a person with experience in jaguar trapping (able to assist the expert trainer), experience with GPS collars, and familiarity with processing telemetry and camera trap data. The combination of the trapper/vet and wildlife monitoring expert assures standardized data gathering.
Outcome 3:		
Local / National contracting		
Wildlife Monitoring Officer (YCT) Rate: \$750/month	24 months	Recruit community members to participate in camera trap surveys on community lands to assess game species abundance and jaguar presence. (Activity 3.1.1)
Support to the application of survey instrument (6 communities @ 3,000 per community) Rate: \$6,000 / month	3 months	Design and administer social surveys in six communities as a means of estimating current hunting levels and local subsistence use (consumption), as well as degree of commercialization of game (Activity 3.1.2)
Consultant for the development of Community resource use management plans Rate: \$250/day (for 6 communities)	20 days	Based on enhanced data and understanding emerging from Output 3.1, develop community resource use management plans (Activity 3.2.1)
Consultancy: Systematization exercise	15 days	Develop recommendations for broader national-level application / uptake, i.e. how lessons learned can be implemented nationwide, e.g. creation of other "hunting community" structures. (Activity 3.2.4)

Consultant	Time Input	Tasks, Inputs and Outputs
Rate: \$250/day		
International / Regional and global contracting		
Development of Indigenous Peoples' Plan Rate: \$500/day	30 days	Lead additional consultations needed in order to obtain FPIC and to convert existing Indigenous Peoples' Plan Framework (IPPF) into full-scale Indigenous Peoples' Plan.
Ecological Economist Rate: \$400/day	40 days	Estimate the economic value of the wildlife resource to local communities and the potential economic loss if it were to collapse through unsustainable offtake (Activity 3.1.3). This requires a person with a deep economic understanding of how local food and wildlife markets are embedded within local economies, having an oversight of total value of various economic scenarios of changes in food habits and how different economies can be set up in terms of variable pricing of game meat and food production.
Consultant for preparation of technical guidance/ drafting notes on sustainable hunting levels Rate: \$400/day	45 days	Develop technical guidance/ drafting notes on sustainable hunting levels, per game species. (Activity 3.1.4). This requires a person who understands the legal implications of drafting notes within the Belizean and regional context of laws.
Outcome 4:		
Local / National contracting		
Outcome review and case study development Rate: \$250/day	30 days	Lessons learned / case studies from the three target landscapes are captured and disseminated (Activity 4.1.1)
Institutional coordination specialist Rate: \$250/day	20 days	Development of and approval of TOR and protocols guiding the work of the National Jaguar Working Group (Activity 4.2.1)
Project monitoring, participation and safeguards specialist Rate: \$250/day	48 days	Support to monitoring implementation of stakeholder engagement plan, gender action plan and Indigenous people's plan (Activity 4.3.2)
Project evaluation specialists Rate: \$250/day	60 days	Contribute to mid-term review and terminal evaluation of project (Activity 4.3.3)
International / Regional and global contracting		
Consultant for the outcome review and case study development Rate: \$500/day	45 days	Lessons learned / case studies from the three target landscapes are captured and disseminated (Activity 4.1.1). This requires a consultant with high understanding of the local and regional jaguar landscape, able to present the national findings within the regional and larger wildlife framework (preferably embedded within the wider world of carnivore ecology around the world).

Consultant	Time Input	Tasks, Inputs and Outputs
Project evaluation specialists Rate: \$500/day	60 days	Lead mid-term review and terminal evaluation of project (Activity 4.3.3). Able to assess the project in all aspects of progress: data processing, analysis, local capacity increase, and managerial and policy capacity derived from the developed structures.

ANNEX 8: STAKEHOLDER ANALYSIS AND ENGAGEMENT PLAN

1. Introduction

Background

The Global Environment Facility (GEF) Project Preparation Grant (PPG) aims to convert the project concept, titled “Enhancing jaguar corridors and strongholds through improved management and threat reduction” into a comprehensive project. The project objective is to secure jaguar corridors and strengthen the management of jaguar conservation units through the reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation.

The project is composed of four (4) components²¹:

1. **Conserve wildlife and habitats** - This component aims to improve the conservation of c. 200,000 Hectares (ha) of the Sibun River watershed landscape for jaguar protection through enhanced monitoring and management. It will implement a national-level data collection and data management system (based on extended camera trap deployment) to support and enhance conservation management.
2. **Promote a more wildlife-friendly economy** - This component aims to strengthen the systems for responding to jaguar/livestock conflict and encourage sustainable ecotourism, with targeted application in Belize’s Northeast forest landscape (area totalling 180,000 ha.).
3. **Combat wildlife crime and unsustainable hunting** - This component aims to enhance the knowledge of the current status of the jaguar/prey/game species and hunting activities in the Maya Golden Landscape informing regulations for threat reduction and sustainable population management (49,500 ha).
4. **Coordinating and enhancing knowledge** - This component aims to enhance the national / transboundary / jaguar range collaboration, knowledge management and communication.

Components one (1) - three (3) will be piloted in separate project areas²². There are three (3) project areas: 1) the Central Biological Corridor, 2) the Northeastern Biological Corridor and 3) Southern Biological Corridor.

Purpose

There are two (2) core outputs for this consultancy: the Stakeholder Analysis Report and the Stakeholder Engagement Plan. The present Stakeholder Analysis Report aims to identify priority stakeholders to further engage within project design and implementation. The remainder of the report is separated into three (3) sections: (2.0) Approach (3.0) Stakeholder Analysis and (4.0) Conclusion. The Approach section describes the framework used to perform the Stakeholder Analysis, including the identification of stakeholders and a power/interest framework used to prioritize stakeholders. The Stakeholder Analysis presents a macro-economic overview of Belize within the project context, stakeholder profiles and power/interest ranking of stakeholders within the project. Finally, the Conclusion summarizes findings of the stakeholder analysis.

2. Approach

The stakeholder analysis was conducted using a variation of the Stakeholder Engagement Guidance Note under the Social and Environmental Standards (SES) from the United Nations Development Programme²³ (UNDP) and The Nexus Stakeholder Analysis Methodology²⁴.

²¹ Details on each component and respective project outputs can be seen in APPENDIX 7.1.

²² For details on the Project Areas, please see APPENDIX 7.2.

²³ (UNDP, 2017)

²⁴ (Zhakenova, 2017)

FIGURE 1: STEPS TO PERFORM STAKEHOLDER ANALYSIS



2.1 Project Document Reviewed

This phase included a review of project documents (including but not limited to the project results framework), and other secondary data sources. Inception meetings were held amongst the project team to review these documents and discuss the overall project and project details.

2.2 Stakeholders Identified

An initial stakeholder consultation meeting was held in November 2019 to discuss the project concept and develop a results framework. Stakeholders participating in the consultation meeting were identified as stakeholders, then engaged to identify other stakeholders and affected communities. Other stakeholders were also identified by the project team and a list of forty-three (43) potential stakeholders was developed.

2.3 Priority Stakeholders Identified

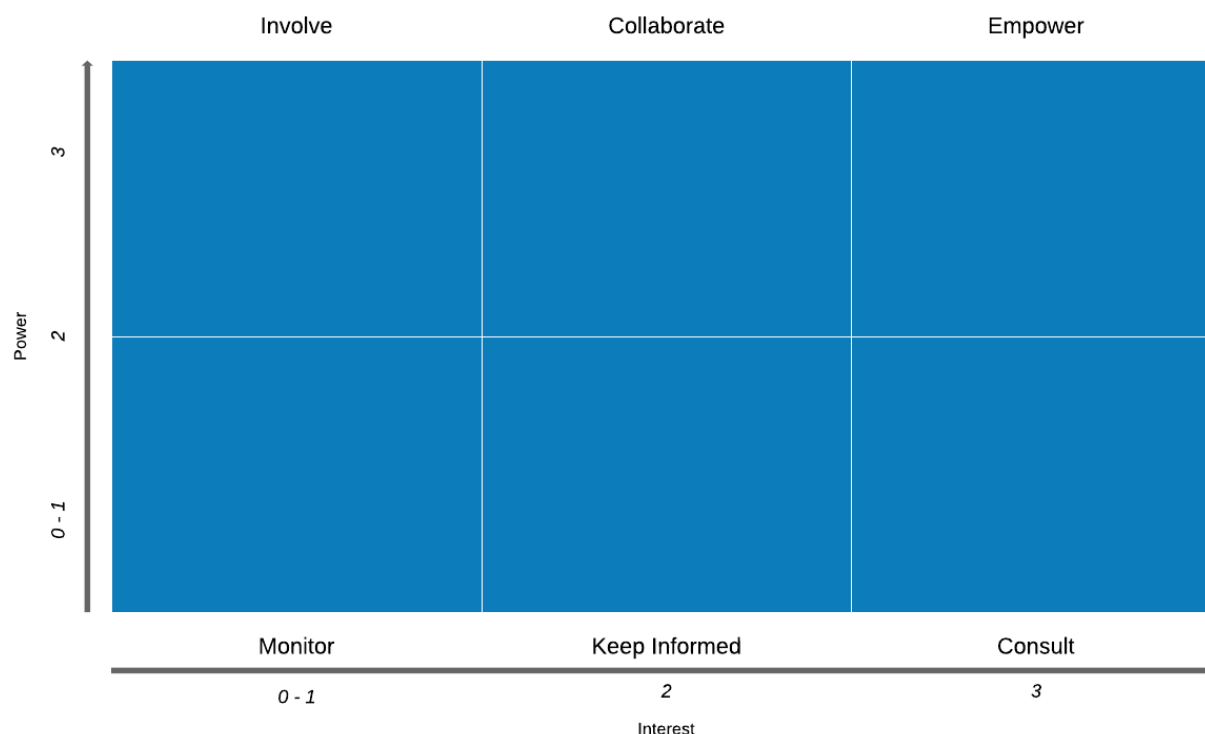
This phase aimed to identify priority stakeholders for the project. Steps included:

1. the development of a broad socio-economic analysis,
2. the development of stakeholder profiles and
3. the conduction of a stakeholder prioritization exercise.

Desktop research was conducted to develop the socio-economic analysis. The analysis assessed the current state of both Belize and the three (3) project areas from a social and economic perspective. In addition, stakeholder consultations were held to develop the stakeholder profiles of all forty-three (43) identified stakeholders. Stakeholders were categorized by component, by geographic region and by type.

Thereafter, a stakeholder prioritization exercise was conducted. The exercise used a variation of the power/interest framework which aims to assess the level of impact of stakeholders by measuring their respective power and interest in the project. Criteria were developed to perform the exercise, suiting project context (see APPENDIX 4). A power/interest grid was used to illustrate the results of the exercise (see Figure 2 below).

FIGURE 2: POWER/INTEREST GRID



Stakeholders were assessed and plotted in one (1) of the following six (6) boxes:

- **Monitor** - Stakeholders plotted herein would be solely observed throughout project-life. Stakeholders have minimal power and interest within the project scope.
- **Keep informed** - Project results and data would be disseminated to stakeholders plotted herein. Stakeholders have minimal power but medium-interest within the project scope.
- **Consult** - Project design and results will be disseminated for validation to stakeholders plotted herein. Stakeholders have minimal power but high interest and knowledge within the project scope.
- **Involve** - Stakeholders plotted herein will be engaged minimally within project design and implementation. Stakeholders have low interest however high to medium power within project scope.
- **Collaborate** - Stakeholders plotted herein will work jointly with the project team and other critical stakeholders in project design and implementation. Stakeholders have medium interest but medium to high power within project scope.
- **Empower** - Stakeholders would receive the authority to lead the piloting of project activities. Stakeholders have high power and high interest within project scope.

2.4 Stakeholder Meetings Completed

In this stage, a series of stakeholder consultations was held with priority stakeholders for validation. Consultations were done via teleconferencing and in-person meetings/interviews.

2.5 Stakeholder Analysis Report

The results of the stakeholder analysis were consolidated and presented in a report-form.

3. Stakeholder Analysis

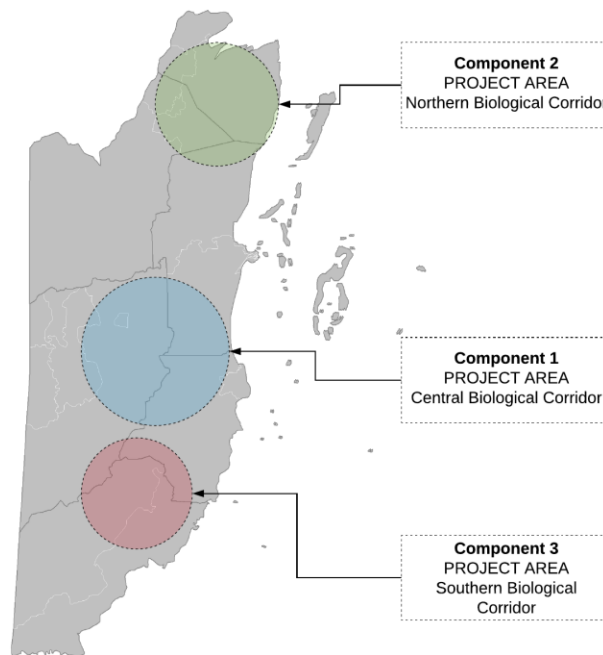
A part of both Central America and the Caribbean, Belize is bordered by Mexico to the north and Guatemala to the west. Belize also forms a part of the Mesoamerican Biological Corridor bridging Mexico and Central America. Belize

holds biodiversity and ecosystem wealth which underpins its natural resource-based economy, mainly the agriculture and tourism sectors - contributing approximately 10%²⁵ (2018) and 41.3%²⁶ (2017) to Gross Domestic Product (GDP) respectively.

Jaguars are flagship species in conservation whose population-health indicates the general biodiversity and ecosystem health in Belize. Anthropogenic pressures on biodiversity and ecosystems have created challenges for Belize's jaguar population. Human activity expansion such as land clearing (deforestation) and unsustainable hunting of jaguar prey have displaced jaguars closer to communities. Approximately 710,000 ha of ecosystems remain capable of supporting jaguar populations in Belize (J. Meerman, 2005).

The project aims to strengthen the conservation and management of jaguars and biological corridors by increasing the engagement of key stakeholders. Each project component will be piloted within a respective region of Belize, except for component 4 that will work nationally. As seen in Figure 3, the project will be implemented in three (3) biological corridors of Belize: 1) Central Biological Corridor, 2) Northeastern Biological Corridor and 3) Southern Biological Corridor.

FIGURE 3: OVERVIEW OF PROJECT MAPS



The Stakeholder Analysis identified key stakeholders to help inform project development and engagement in project implementation and operation. A total of forty-three (43) stakeholders were identified collectively within all project regions. Stakeholders were identified under each component of the project and further classified by one of the following categories: 1) academia, 2) community, 3) government agency, 4) non-government organization or 5) social group.

3.1 Key Groupings

The project focuses on improving the conservation and protection of habitats, and reducing human/jaguar conflict. The target areas, i.e. Northern, Central and Southern Regions, include a number of villages which are mainly organized around agriculture and other extractive activities, e.g. fishing, hunting and logging.

3.1.1 Communities and Livelihoods

²⁵ Statistical Institute of Belize (2018)

²⁶ World Travel and Tourism Council (2018)

Belize's population is estimated at 408,487, with a relatively low density (37 persons per square mile)²⁷. The majority of the population—some 55.2%—resides in rural communities, while the remaining 44.8% live in urban areas. The urban areas of Belize are comprised of two (2) cities²⁸ and seven (7) towns²⁹, while the rural areas are comprised of approximately one-hundred and ninety-two (192) villages/communities³⁰.

There are a total of twenty-five (25) villages identified as stakeholder communities under this project from north-eastern, central and southern regions of Belize. The total population in the areas of intervention is 15,113 spread out across a total of 26 communities.³¹ In this area, the combined female population (7,393) is less than the male population (7,720), thus females account for an estimated 48.9% and males 51.1%.³²

TABLE 1: POVERTY RATE BY COMMUNITY TYPE³³

Indicators	Country	Urban	Rural
Poverty Rate	41.3%	27.9%	55.3%
Indigenous poverty rate	15.8%	6.2%	25.8%

Like many developing countries, poverty and unemployment remain challenges in Belize with the former disproportionately affecting those residing in rural areas. Belize's national poverty rate was estimated at 41.3%, with the highest levels in the Toledo and Corozal Districts at 60.4% and 56.2%, respectively (see Table 2). In September 2019, national unemployment was estimated at 10.4%, with a marginal difference between urban and rural levels (see Table 3). Unemployment was significantly higher among female respondents (15.7%, versus 6.6% among males).

TABLE 2: POVERTY RATES BY DISTRICT³⁴

Districts	Poverty Rate
Corozal	56.2%
Orange Walk	42.8%
Belize	28.8%
Cayo	40.6%
Stann Creek	43.7%
Toledo	60.4%

²⁷ Statistical Institute of Belize, Postcensal Estimates 2010-2019 (as accessed Feb 2020)

²⁸ The cities in Belize are namely Belize City and the City of Belmopan governed by the Belize City Council Act (Chapter 85) and Belmopan City Council Act (Chapter 86) of the laws of Belize, respectively.

²⁹ The towns in Belize are governed by the Town Council Act (Chapter 87) of the laws of Belize.

³⁰ The villages are governed by the Village Council Act (Chapter 88) of the laws of Belize or other communities are governed by an Alcalde (*a local magistrate who has both an administrative and a judicial role*).

³¹ This population data is based on data from the Statistical Institute of Belize (2016) Abstract of Statistics 2016.

³² *Ibid.*

³³ Caribbean Development Bank - Country Poverty Assessment (2010)

³⁴ (*Ibid*)

TABLE 3: LABOUR STATISTICS³⁵

Unemployment	% Rate
National	10.4%
Urban	10.5%
Rural	10.3%
Male	6.6%
Female	15.7%
Corozal District	9.4%
Orange Walk District	11.6%
Belize District	12.5%
Cayo District	9.6%
Stann Creek District	9.8%
Toledo District	5.4%

The project target communities are concentrated in rural areas. Livelihoods in the communities within these regions are mainly based on agricultural production (small-scale crops and livestock), tourism (adventure and ecotourism tour guiding) and other extractive activities, e.g. hunting, fishing and logging.

TABLE 4: LIVELIHOODS BY COMMUNITY STAKEHOLDERS

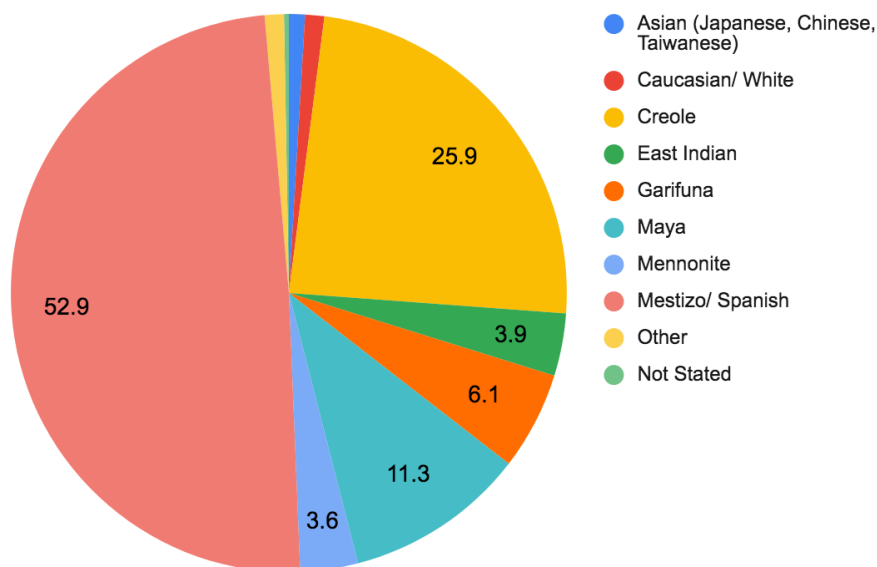
Communities	Project Region	Livelihoods
Big Falls	Southern	Farming
Bladen	Southern	Farming
La Democracia	Central	Farming
Fireburn	Northern	Farming (including plantains)
Gallon Jug	Central	Farming (including coffee beans and peppers)
Golden Stream	Southern	Farming
Gracie Rock	Central	Farming
Indian Creek	Southern	Farming
Little Belize	Northern	Farming (including corn), livestock, cultural tourism
Mahogany Heights	Central	NA
Medina Bank	Southern	Farming

³⁵ Labour Force Survey, September 2019 (Statistical Institute of Belize)

Middlesex	Central	Farming
Neuland	Northern	Farming (including corn), livestock
San Miguel	Southern	Farming
Santa Martha	Central	Farming
Sartaneja	Northern	Fishing, farming, livestock, tourism
Silver Creek	Southern	Farming
St. Matthews	Central	Farming
Steadfast	Central	Farming
Trio	Southern	Farming

3.1.2 Ethnic Groups and Indigenous People

FIGURE 4: PERCENTAGE DISTRIBUTION OF TOTAL POPULATION BY ETHNIC GROUP³⁶



Belize is known for its rich cultural roots and continues to enjoy significant diversity. The figure above shows the proportions of the population belonging to each of the major ethnic groups present in Belize. The most predominant ethnic group, representing more than half of the total population at 52.9% in Belize is the Mestizos/ Spanish who originally descended from a mix of Spanish and Indigenous Maya peoples. A majority of the Mestizo population settled in the northern and central regions (Orange Walk, Corozal and Cayo). The second largest ethnic group is the Creole at 25.9%, just over half of whom live in Belize district. These groups are followed by the Maya at 11.3%, along with the Garifuna at 6.1%, together representing the two indigenous groups in Belize³⁷. The indigenous Maya people are located mainly in the southern region (Toledo and Stann Creek), where small villages of Maya people can still be found embracing traditional habits and in some respects remain largely unintegrated with the broader society. While there isn't an equal distribution of ethnic groups amongst the districts, each district is culturally diverse as these ethnic groups are well represented throughout the country.

TABLE 5: DEMOGRAPHICS OF MAYA POPULATION IN BELIZE³⁸

Total Population	366,304
Indigenous Mayan Population	45,257
% of Total Population	11.3%
Male : Female Ratio	12:13

The first to inhabit Belize were the indigenous Maya. Majority of the Maya population reside in rural communities and are essentially farmers engaged in subsistence and small scale commercial farming. The Maya population makes up about 11.3%³⁹ of the total population. The male to female distribution is around 22,052 and 23,206,

³⁶ 2010 Population and Housing Census. Statistical Institute of Belize

³⁷ (Ibid)

³⁸ 2015 Compendium of statistics. Statistical Institute of Belize website: <http://sib.org.bz/>

³⁹ 2015 Compendium of statistics. Statistical Institute of Belize website: <http://sib.org.bz/>

respectively⁴⁰. Most of the indigenous Maya live in the southern area of Belize (Cayo, Stann Creek and Toledo). The Q'eqchi' and Mopan Maya live mainly in the district of Stann Creek and Toledo although Orange Walk is a home to some of the indigenous Maya people as well. The Yucatecan Maya are located mainly in the Cayo District, and a smaller population resides in the Corozal District. In the northern area, the Yucatecan Maya people have an economy based on growing sugarcane to produce sugar for export. The indigenous Maya people in the southern area practice subsistence farming using traditional cropping methods⁴¹. As with every community, the Maya communities have faced immense changes over time. During the early 1850s, every Maya village was autonomous and self sufficient. With the emergence of education and transport systems, the indigenous Maya have had to adapt. Today, every village has a village council, primary school and a community center. The indigenous Maya people maintain their language and cultural heritage.

3.1.3 Farming and Farmers

Agriculture is important to the economy of Belize - contributing approximately 10% to GDP in 2018⁴². The main agricultural produce of Belize includes banana, citrus and sugar. Belize's agricultural system can be considered as bimodal, with small and commercial producers that can be categorized in four types namely, large commercial farms, traditional (including slash and burn Milpa) farms, small commercial farms for local markets and small commercial farms for export markets⁴³. Belize's agricultural landscape is dominated by small farmers (less than 25 acres per household), with the 2011 Agricultural Census indicating that of the 19,200 farmers 78% were smallholders⁴⁴. The highest concentration of small farmers is in the Toledo District (approximately 25%) (Southern Region, Component 3) followed by the Orange Walk and Corozal Districts (Northern Region, Component 2). Small farmers generally engage in subsistence and light commercial farming (fruits, vegetables, corn, beans, etc.) as well as livestock raising (cattle, sheep, pigs).

3.1.4 Tourism and Tour Guides

Tourism is a critical driver of economic activity in Belize, contributing 41.3%⁴⁵ (2017) of GDP. Tourism is also the largest foreign exchange-earner for Belize, representing 43.1% of exports in 2017. Belize provides a diverse tourism product—including, but not limited to ecotourism, adventure tourism, sun and beach tourism and nautical tourism—which provide 37.3% of total employment (direct, indirect and induced) nationally. Tourism is most prominent in the Belize (Caye Caulker and San Pedro) and Cayo Districts. Together, these districts account for approximately 66.4% of tourism employment in Belize (see Figure 5). Registered tour guides are also based mainly in Belize and Cayo (see Figure 6).

⁴⁰ 2015 Compendium of statistics. Statistical Institute of Belize website: <http://sib.org.bz/>

⁴¹ Source: IFAD- Centre for Indigenous Peoples' Autonomy and Development

⁴² Statistical Institute of Belize (2018)

⁴³ Ministry of Agriculture (2015) National Agriculture and Food Policy of Belize 2015 to 2030, *Agriculture - Bedrock of the Economy*,

⁴⁴ Agriculture Census 2011, Statistical Institute of Belize

⁴⁵ World Travel and Tourism Council (2018)

FIGURE 5: TOURISM EMPLOYMENT BY DISTRICT (2018)⁴⁶

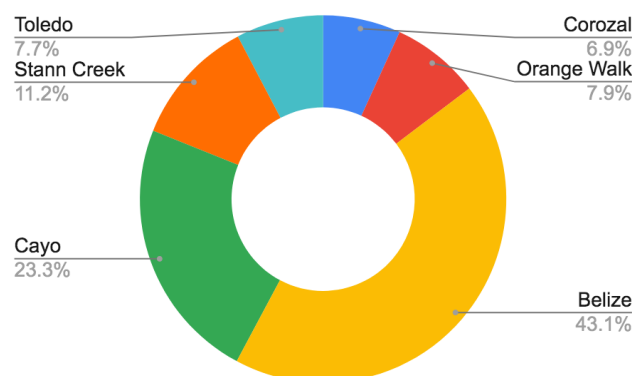
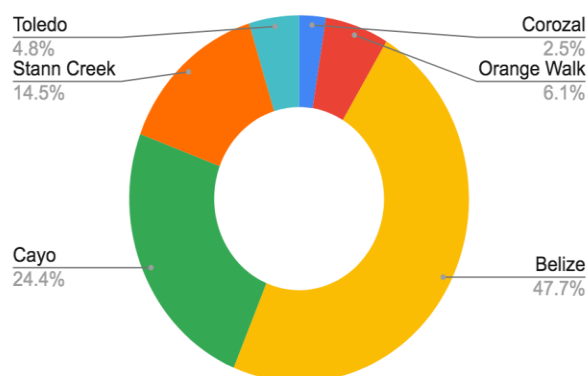


FIGURE 6: REGISTERED TOUR GUIDES BY DISTRICT (2018)⁴⁷



Despite the current concentration in economic activity and by extension employment, potential exists for tourism growth and development in Belize's northern and southern regions. Northern Belize (Sarteneja Village, Fireburn, the Shipstern Nature Reserve and other surrounding communities) holds the natural and cultural resources to develop its ecotourism and cultural/adventure tourism products and merchandise. Southern Belize (Mayan communities) provides similar opportunities for historical and cultural, agricultural and jungle/adventure tourism product development.

3.1.5 Hunting, Fishing and Logging

The hunting, fishing and logging industries account for a small share of economic activity relative to the key drivers, i.e. agriculture and tourism. In 2018, the fishing and logging industries contributed 1.0%⁴⁸ and 0.2%⁴⁹ of national output (GDP), respectively. Agriculture and forestry collectively employ an estimated 14.9% of Belize's labour force, the majority of whom are males. The district of Toledo consists of the largest labour force within these sectors compared to the other districts (see Table 6).

TABLE 6: AGRICULTURE AND FORESTRY LABOUR FORCE BY SEX AND DISTRICT⁵⁰

Categories	Number of Workers
Total Labour Force	25,311
Male	20,212
Female	5,099
Corozal	3,285
Orange Walk	2,990
Belize	2,119

⁴⁶ Travel & Tourism Mid-Year Report 2019 - Belize Tourism Board

⁴⁷ (Ibid)

⁴⁸ Statistical Institute of Belize (2018)

⁴⁹ (Ibid)

⁵⁰ Labour Force Survey - Statistical Institute of Belize Sept 2019 (accessed Feb 2020)

Cayo	4,227
Stann Creek	4,021
Toledo	8,669

Hunting, fishing and logging have historical ties to Belize, especially in the rural regions. The logging industry in Belize dates back at least to 1655, when Belize began harvesting and exporting logwood and timber species to the United Kingdom. Demand for logwood has declined over the years, but demand for timber persists⁵¹. Commercial fishing is prominent (but not exclusive) in communities along the northern coast of Belize (e.g. Sarteneja Village, which is the largest fishing community in the north). Main export species within the fishing industry include lobster, conch and finfish. Fishing has traditionally been a protein source for rural communities, alongside hunting. Hunting most occurs in the rural areas of Belize for subsistence and small-scale commercial purposes.

3.2 Component 1 - Conserve Wildlife and Habitats

Under component 1, the project aims to improve the conservation of jaguar and other wildlife through improved information and data management systems. Project application will be targeted in 177,914 ha of Sibun River watershed landscape (a portion of the CBC) - falling within the Cayo, Belize and the upper Stann Creek districts. Within the project area for component 1, a total of eighteen (18) stakeholders were identified. Majority of the stakeholders come from two (2) main groups. Communities and NGOs composed of 44.4% and 33.3% of all stakeholders, respectively. Other groups such as Academia and Government Agencies composed the remaining 22.3% of stakeholders.

Communities

Eight (8) communities were identified within the project area for component 1, including:

1. **La Democracia** is a village located in the Belize District inhabited by 353 persons. The falls within or in-close proximity of the Monkey Bay Wildlife Sanctuary. The village is known for its historical sites and also the hosting of the Belize Zoo. The current village chairman is Luis Castellanos.
2. **Gracie Rock** is a village located in the Belize District along the Sibun River inhabited by 255 persons. Once a logging community, Gracie Rock's main source of livelihood is farming. The current village chairman is Wayne Pollard.
3. **Mahogany Heights** is a village located in the Belize District in close proximity to La Democracia village inhabited by 1,063. The current village chairman is Simon Alvarez.
4. **Middlesex** is a village located in the Stann Creek District inhabited by 222. The village provides small-scale tourist attractions such as hotel accommodations and restaurants. The current village chairman is Domingo Cucul.
5. **Santa Martha** is a village located in the Stann Creek District inhabited by a population of 1,136. The current village chairperson is Maria Del Carmen Soza.
6. **St. Matthews** is a village in the Cayo District inhabited by a population of 1,153. The current village chairperson is Esperanza Arriaza.
7. **Steadfast** is a village in the Stann Creek District inhabited by a population of 482. The current village chairman is Orlando Choc.

Table 7 (below) presents community populations potentially impacted under Component 1.

⁵¹ Forestry Department - History (accessed Feb 2020)

TABLE 7: COMMUNITY DEMOGRAPHICS - COMPONENT 1⁵²

Community	Total	Male	Female	Household	Average Household Size
La Democracia	353	na	na	109	3.2
Gracie Rock	255	142	113	68	3.8
Mahogany Heights	1063	502	561	na	na
Middlesex	222	118	103	51	4.4
Santa Martha	1136	614	522	249	4.6
St. Matthews	1153	564	589	253	4.6
Steadfast	482	245	236	100	4.8
Total	4664	2185	2124	830	4.2

The following lists and provides a brief description for the remaining ten (10) stakeholder operating within the project area for Component 1:

Academia

1. **Environmental Research Institute** is a research institute that was inaugurated in 2010 under the University of Belize. The institute is based in the City of Belmopan in the Cayo District. The institute performs research and monitors natural resources to directly/indirectly inform the sustainable management of Belize's natural resources.
2. **Panthera** is an international, non-government organization currently performing research activities in Belize. Panthera is based in Mayflower Bocawina National Park, Belize, where research is performed on Belize's wild cat species. Panthera is focused on the global preservation and management of wild cat species.
3. **Virginia Polytechnic Institute and State University**, also known as Virginia Tech, is a public research institution with its main campus in Blacksburg, Virginia. This institution has a Jaguar Project – Belize, which studies wild cats in Belize.

Government Agency

4. **Forest Department** is a government agency under the Government of Belize that was established in 1935. This agency is responsible for the oversight and management of forest and biological resources in Belize.

Non-government Organization

1. **Belize Audubon Society** is a conservation group formed in 1969 by a group of conservationists who held the spirit and interest in wildlife. BAS facilitated the early passage of legislation for the protection of wildlife and establishment of protected areas. In the early 1980s, concern for jaguars was raised and BAS was addressed if they would like a study of jaguars in Belize. It was observed that Cockscomb Basin contained the highest density of jaguars ever recorded. As a result, the area was declared as a forest reserve with a "No Hunting" law to protect the jaguar population. However, after realizing that the Cockscomb Basin was not adequately protecting the jaguars' habitat, a portion of the Reserve was declared a wildlife sanctuary in 1986.

⁵² Statistical Institute of Belize (2010)

2. **Belize Tourism Industry Association** was formed in 1986 by a group of individuals who foresaw the importance of the tourism industry and realized the need for a channel through which tourism concerns could be expressed. The association was incorporated under the laws of Belize and became one of the largest non-profit organizations, with about 600 members from all six districts. In 2006, the organization was registered under the NGO Act. The Association plays an important role in connecting the private and public sectors.
3. **Corozal Sustainable Future Initiative:** is a non-government organization based in Shipstern Nature Reserve in the Corozal District. CSFS was created in 2012. CSFS aims to protect and conserve key representative ecosystems of northeastern Belize. CSFI maintains a strong partnership with the International Tropical Conservation Fund, which serves as their main funding organization. They also work alongside Belizean authorities such as the Forest Department, Belize Police Department and the Belize Defense Force.
4. **Friends for Conservation and Development** is a non-governmental organization created in 1989 and based in San Jose Succotz Village in Cayo District. FCD was formerly known as the Youth Environmental Action group. FCD is the only non-governmental organization with management presence in the Chiquibul Forest, aiming to preserve wildlife within the region.
5. **Programme for Belize** is a local non-government organization established in 1988. A memorandum of understanding established between PFB and the Government of Belize, granted PFB authority to manage the Rio Bravo Conservation and Management Area. PFB aims to manage and promote biodiversity conservation and sustainable development through management of this area.
6. **Ya'axche Conservation Trust** is a non-government organization founded in 1998. The organization was created to protect a natural corridor connecting the forests of the Maya Mountains with the lowland forests of the Caribbean coastal plains, named "Golden Stream Corridor Preserve". A Memorandum of Understanding was signed with Fauna & Flora International (FFI), which helped the organization access international donors and technical expertise and advice. Over the past 21 years, Ya'axche has had a long-lasting impact on the Maya Golden Landscape and other areas.

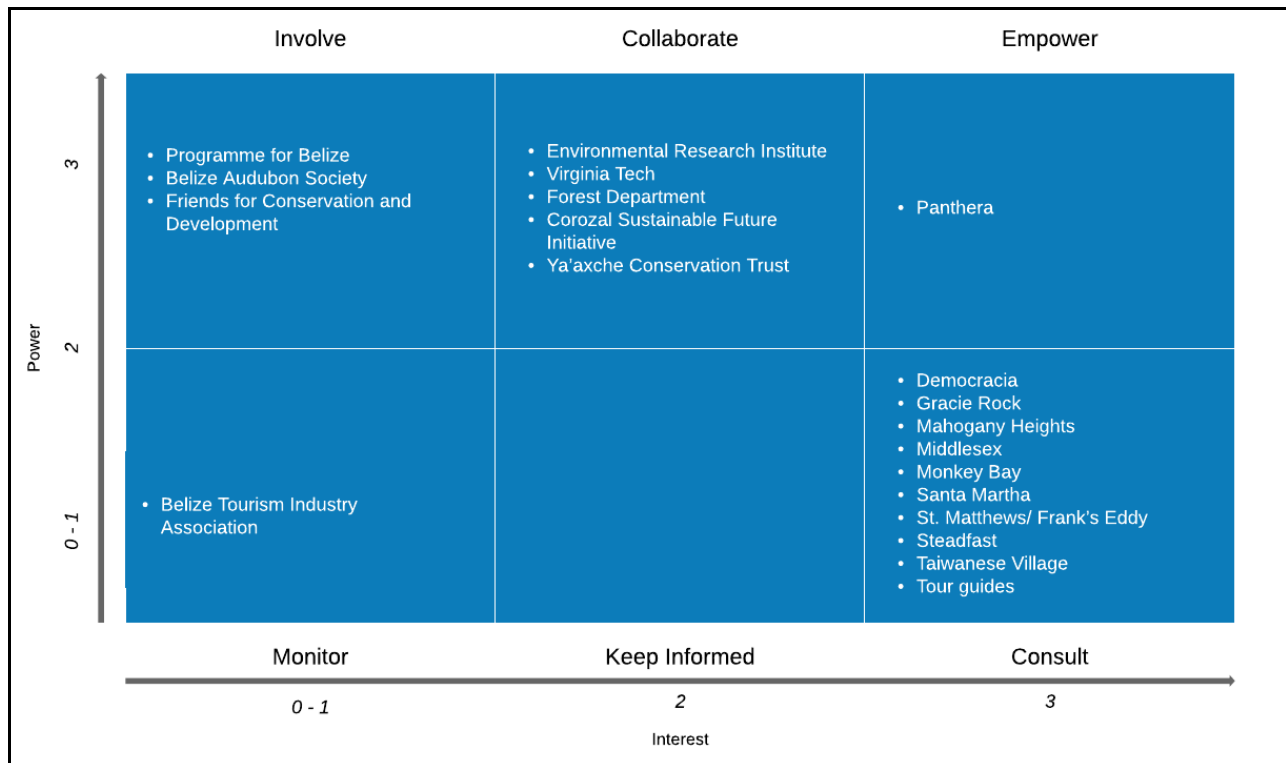
Power/Interest Rankings

A prioritization exercise was conducted via the use of a power/interest matrix to identify high priority stakeholders. Results for Component 1 show Panthera scoring highest. Panthera was found to have adequate capacity, authority and experience, and jurisdiction within the scope of Component 1-related activities, to lead and pilot Component 1 during project implementation (see Figure 7).

Institutions/agencies/organizations such as Environmental Research Institute, Virginia Polytechnic Institute and State University, Forest Department, Corozal Sustainable Future Initiative and Ya'axche Conservation Trust also scored highly. Being plotted in the 'collaborate' cell indicates that these stakeholders have the capacity to collaborate alongside Panthera in project implementation.

Communities identified under Component 1 scored relatively lowly despite their high scores in interest. Unless capacity is developed within communities to perform Component 1-related activities, communities lack adequate resources and expertise to score high in power.

FIGURE 7: STAKEHOLDER MAP FOR COMPONENT 1



3.3 Component 2 - Promote a more Wildlife-friendly Economy

Under component 2, the project aims to strengthen response systems to jaguar–livestock conflict and to encourage sustainable ecotourism, with targeted application in Belize’s Northeast forest landscape totaling 125,000 ha. Approximately sixteen (16) stakeholders were identified under component 2. Communities composed 37.5%, and Non-government Organizations composed 31.3%, of all stakeholders. Academia, government agencies and social groups composed the remaining 31.2% of stakeholders.

Communities

Six (6) communities were identified within the project area for component 2, including:

1. **Fireburn** is a remote village within the Fireburn Nature Reserve located in the Orange Walk District. It is inhabited by approximately 103 people. Livelihoods are supported by subsistence farming, fishing and livestock production and commercial agricultural production - mainly plantains and other produce. The current chairman of Fireburn Village is Juan Robles.
2. **Gallon Jug** is a village located in the Orange Walk District. The main source of livelihood in this village is farming. Gallon Jug Estate has also generated economic opportunity for local villagers through the production of coffee and sauces.
3. **Little Belize** is a Mennonite community located in Corozal District, inhabited by a population of 2,650. Livelihoods in this community mainly involve agriculture, livestock production and carpentry. Agricultural products includes vegetation, rice and corn.
4. **Neuland** is a newly established Mennonite community located in the Corozal District. Livelihoods in this community include agricultural and livestock production.
5. **Sarteneja** is a coastal village located within Corozal District. It is the second largest village in Belize, inhabited by approximately 3,500 (2016). It is mainly a fishing community, with a handful of fishermen transitioning slowly to farming. The current village chairman is Paulino Lucio Guerrero.

Table 8 (below) presents community populations potentially impacted under Component 2.

TABLE 8: COMMUNITY DEMOGRAPHICS - COMPONENT 2⁵³

Community	Total	Male	Female	Household	Average Household Size
Fireburn	103	56	47	24	4.3
Gallon Jug	na	na	na	na	na
Little Belize (Mennonite)	2650	1345	1304	0	na
Neuland	na	na	na	na	na
Sarteneja	1824	919	905	431	4.2
Total	4577	2320	2256	455	4.3

The following lists and provides a brief description for the remaining ten (10) stakeholder operating within the project area for Component 2.

Academia

1. **Panthera:** See description for Panthera under Component 1 - Stakeholder 10.
2. **Virginia Polytechnic Institute and State University:** See description for Virginia Polytechnic Institute and State University under Component 1 - Stakeholder 11.

Government Agency

1. **Department of Agriculture** is a government agency under the Government of Belize established to provide an environment that is conducive to increase production, productivity and sustainability in the agribusiness. The department is responsible to serve as a key pillar in ensuring food and nutrition security which directly contributes to the achievement of the socio-economic development goals of Belize.
2. **Forest Department** is a government agency under the Government of Belize that was established in 1935. This agency is responsible for the oversight and management of forest and biological resources in Belize.

Non-government Organization

1. **Corozal Sustainable Future Initiative** is a non-government organization based in Shipstern Nature Reserve in the Corozal District. CSFS was created in 2012. CSFS aims to protect and conserve key representative ecosystems of northeastern Belize. CSFI maintains a strong partnership with the International Tropical Conservation Fund, which serves as its main funding organization. CSFS works alongside Belizean authorities such as the Forest Department, Belize Police Department and the Belize Defense Force.
2. **The Belize Zoo** is a non-governmental organization created in 1983 to provide a home for wild animals. It was realized that the Belizean visitors were unfamiliar with different species of wildlife and as a result, the zoo was developed into a wildlife education center. The organization is focused on wildlife conservation through wildlife rehabilitation and environmental education.
3. **Veterinary Surgeons Board of Belize:** The board is established in Part II of the Veterinary Surgeons Act (VSA) as the legal entity registering veterinarians, veterinary specialists and animal health assistants in

⁵³ Statistical Institute of Belize (2010)

Belize. The Board is responsible to ensure the maintenance of acceptable standards, entertain complaints against registered veterinarians and conduct investigations for the purpose of discovering violations against the act.

4. **Belize Livestock Production Association** is a private (not for profit) organization established in the 1970s. BLPA is based in the City of Belmopan in Cayo District. The organization serves as the main oversight entity of livestock producers and the implementing body of the Meat and Livestock Act in Belize.
5. **Sarteneja Alliance for Conservation and Development** is a non-government organization officially established in 2008. SADC is based in Sarteneja Village in Corozal District. The SADC aims to effectively manage the Corozal Bay Wildlife Sanctuary in the larger seascape by promoting conservation and sustainable use of marine resources in partnership with its stakeholder communities.

Social Group

1. **El Sartenjenas Cooperative** is a legally registered women's social group based in Sarteneja Village. The group aims to promote women's development by creating economic and empowerment opportunities for women in Sarteneja. The group is currently made up of 10 members and headed by their president, Yanci Durantes. The group provides livelihood economic opportunity through the commercial production of seamed goods.

Power/Interest Rankings

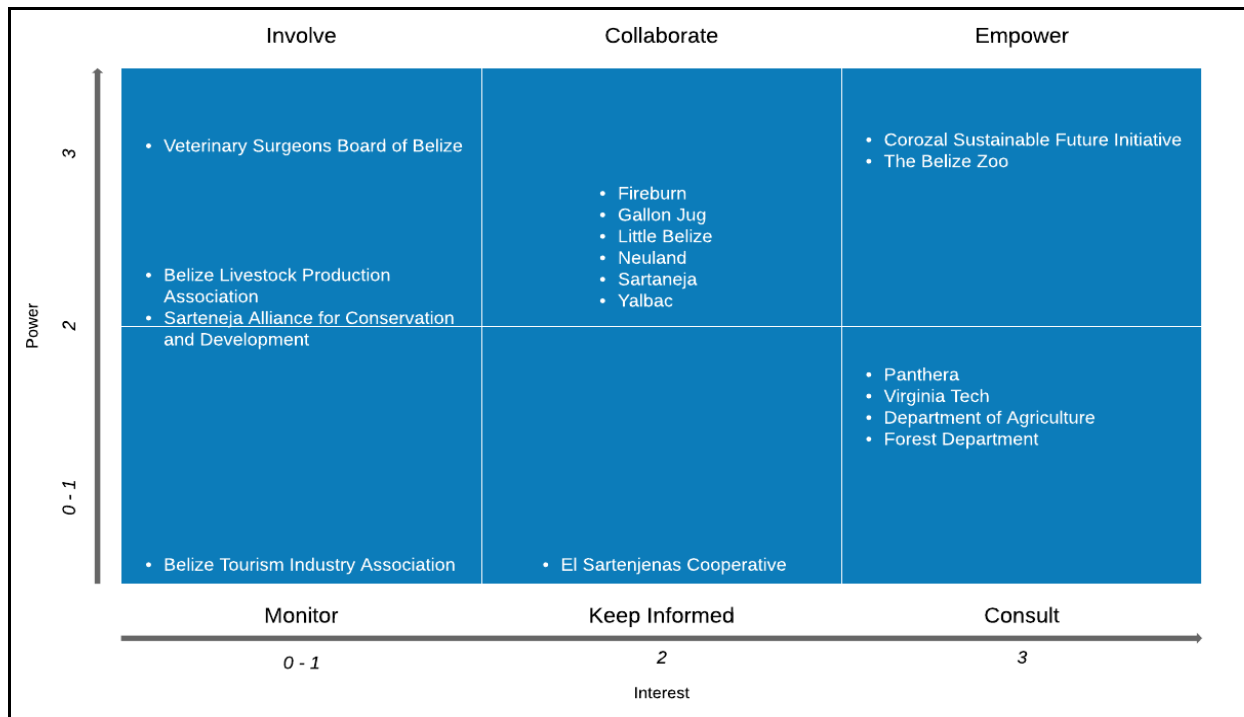
Results of the Power/Interest Matrix for Component 2 show Corozal Sustainable Future Initiative and The Belize Zoo as priority stakeholders to engage in project implementation. Given CSFI's jurisdiction within the project area for Component 2, authority and capacity to perform related activities, it scored highly in power and interest. The Belize Zoo was also identified as a key stakeholder due to its resources and experience performing relevant activities, e.g. jaguar capture, jaguar captivity and experience handling problem jaguars⁵⁴.

Results also show communities—including Fireburn, Gallon Jug, Little Belize, Neuland and Sarteneja—scoring highly. Farmers and livestock producers within these communities are impacted greatly by human-jaguar and livestock-jaguar interactions. These communities will play a critical role in implementation of component 2, as potential first-responders to livestock-jaguar conflicts.

Other stakeholders to involve or consult during project development and implementation include: Veterinary Surgeons Board of Belize, Panthera, Virginia Tech, Department of Agriculture and Forest Department. The project area is mostly out of their jurisdiction, but these stakeholders have the experiences and capacities to inform Component 2 related activities.

⁵⁴ Problem-jaguars are considered jaguars with a consistent trend of creating livestock-jaguar conflicts.

FIGURE 8: STAKEHOLDER MAP FOR COMPONENT 2



3.4 Component 3 - Combat Wildlife Crime and Unsustainable Hunting

Component 3 of the project aims to enhance knowledge of the current status of the jaguar/prey/game species and hunting activities in 49,475 ha of the Maya Golden Landscape. This will assist in informing regulations for threat reduction and sustainable population management. A total of eighteen (18) stakeholders were identified under Component 3. Communities composed the majority of all stakeholders at 44.4% whilst non-government organizations composed of 27.8%. Other remaining stakeholders—academia, government agency and social groups—composed the remaining 27.8%.

Community

The following eight (8) communities have been identified under Component 3:

1. **Big Falls** is a small village located in Belize's Southern Toledo District. The village is home to a population of around 845 people. The village has a number of cultural and adventure attractions and its Mayan community serves to educate travellers on traditional customs and promote authentic interactions between cultures. The main source of livelihood for the population is farming, which includes crop, livestock and forest. There are four large citrus farms in the Big Falls area. Pedro Che is the current Chairperson for the Big Falls community.
2. **Bladen** is a village located in Belize's Southern Toledo District with a total population of 466. Bladen forms a significant portion of the key biodiversity area. The main source of livelihood for the population are growing crops, raising livestock and the forest sector. The current chairperson for the Bladen area is Jose Coc.
3. **Golden Stream/Tambran** is a village located in Belize's Southern Toledo District with a total population of 349. The region makes up one of the last stretches of rare lowland tropical broadleaf forest and serves as a valuable conservation corridor linking the extensive protected areas in the Maya Mountains to the north (Maya Mountain Forest Reserve, Bladen Nature Reserve and Chiquibul National Park) with the Port

Honduras Marine Reserve. The community has one of the most dynamic women's groups; its members sell embroidery and slate carvings. The Chairperson responsible for this area is Louis Pop.

4. **Indian Creek** is a village located in the Toledo District, along the Hummingbird Highway inhabited by a population of 722. Most community members rely on subsistence agriculture and hunting. The village chairperson is currently Sebastian Shol.
5. **Medina Bank** is a village located in the Toledo District, which is easy to access and offers delightful walks in the high canopy rainforest and a hike to a waterfall. The village was founded in 1990, and the population of about 237 is mainly Kek'chi. The current village chairperson is Romano Cal.
6. **San Miguel** is a small Kek'chi⁵⁵ village located in the Toledo District with a population of 537. The Rio Grande River serves as a subsistent water and food source (fishing) for the community. Members in the community depend on subsistence farming as livelihood. The current village chairperson is Sebastian Pop.
7. **Silver Creek** is a small village located in the Toledo District. The village is home to a total population of 476 people. Near the village of Silver Creek is an ancient Mayan site. Farming provides a main source of livelihood for the community which includes corn, rice, beans and ground foods. The current village chairperson is Reinaldo Ico.
8. **Trio** is a village located in the Toledo District inhabited by a population of 899. Agricultural production provides a source of livelihood for this community including citrus, cacao, banana and pineapple productions. The current village chairperson is Rodolfo Morales.

Table 9 (below) previews community populations potentially impacted under Component 3.

TABLE 9: COMMUNITY DEMOGRAPHICS - COMPONENT 3⁵⁶

Community	Total	Male	Female	Household	Average Household Size
Big Falls/Hicatee	845	412	433	169	5.0
Bladen	466	248	219	110	4.2
Golden Stream/Tambran	349	176	173	52	6.7
Indian Creek	722	377	344	134	5.4
Medina Bank	237	109	128	34	7.0
San Miguel	537	267	270	96	5.6
Silver Creek	476	245	231	83	5.7
Trio	899	481	418	188	4.8
Total	4531	2315	2216	866	5.6

The following lists and provides a brief description for the remaining ten (10) stakeholder operating within the project area for Component 2.

Academia

3. **Panthera**: See description for Panthera under Component 1 - Stakeholder 10.

⁵⁵ Kek'chi is an ethnic subgroup within the Mayan ethnicity in Belize.

⁵⁶ Statistical Institute of Belize (2010)

4. **Virginia Polytechnic Institute and State University:** See description for Virginia Polytechnic Institute and State University under Component 1 - Stakeholder 11.

Government Agency

1. **Belize Fisheries Department:** was established in 1987 as a department under the Ministry of Agriculture, Forestry, Fisheries, The Environment, Sustainable Development and Immigration. The Fisheries Department is enforcing agent of the Fisheries Act (2003) responsible for conservation and sustainable use of fishery resources, registration and licenses, fisheries research, education, liaise with fishing cooperatives, management of marine reserves, fisheries law enforcement, export and research permits.
2. **Forest Department:** See description for Forest Department under Component 1 - Stakeholder 12.

Non-government Organization

1. **Belize Audubon Society:** See description for Belize Audubon Society under Component 1 - Stakeholder 13.
2. **Corozal Sustainable Future Initiative:** See description for Corozal Sustainable Future Initiative under Component 1 - Stakeholder 15.
3. **Friends for Conservation and Development:** See description for Friends for Conservation and Development under Component 1 - Stakeholder 16.
4. **Programme for Belize:** See description for Programme for Belize under Component 1 - Stakeholder 17.
5. **Ya'axche Conservation Trust:** See description for Ya'axche Conservation Trust under Component 1 - Stakeholder 18.

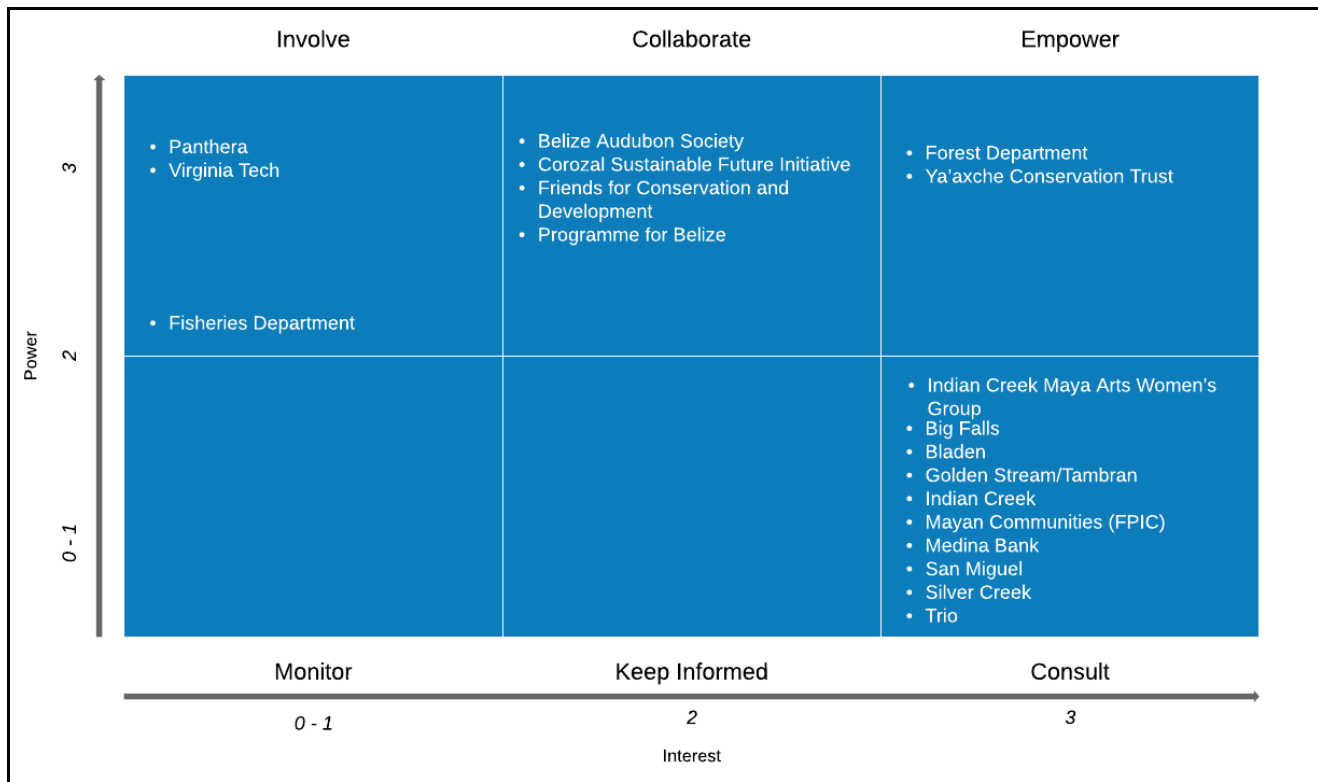
Social Group

1. **Indian Creek Maya Arts Women's Group** is a women's social group based in Indian Creek Village in Toledo District. The group focuses on providing livelihoods for its members through cultural Mayan tours and producing small-scale arts and craft items for sale. The women's group has notable partnerships with EcoTourism Belize and Ya'axché Conservation Trust.

Power/Interest Ranking

Ya'axche Conservation Trust and Forest Department scored highest in the power/interest assessment under Component 4. These stakeholders possess the experience to inform project development, and the authority and jurisdiction to lead the work under Component 3. Other stakeholders, such as Belize Audubon Society, Corozal Sustainable Future Initiative, Friends for Conservation and Development and Programme for Belize, would play supporting roles in Component 3. The remaining stakeholders, Panthera, Virginia Tech, Fisheries Department and the identified communities scored lower in the power/interest matrix and would be minimally-involved or consulted as to the design and implementation of Component 3 (see Figure 9).

FIGURE 9: STAKEHOLDER MAP FOR COMPONENT 3



3.5 Component 4 - Coordinating and Enhancing Knowledge

Component 4 aims to enhance national/transboundary/jaguar range collaboration, knowledge management and communication amongst key stakeholders of jaguar and wildlife data management. There are a total of nine (9) identified stakeholders under Component 4. There were no communities identified as stakeholders. The majority (55.6%) of stakeholders are classified as non-government organizations. The remaining stakeholders are classified as either academia (33.3%) or government agency (11.1%).

The nine (9) identified stakeholders are described below.

Academia

1. **Environmental Research Institute:** See description for Environmental Research Institute under Component 1 - Stakeholder 9.
2. **Panthera:** See description for Panthera under Component 1 - Stakeholder 10.
3. **Virginia Polytechnic Institute and State University:** See description for Virginia Polytechnic Institute and State University under Component 1 - Stakeholder 11.

Government Agency

1. **Forest Department:** See description for Forest Department under Component 1 - Stakeholder 12.

Non-government Organization

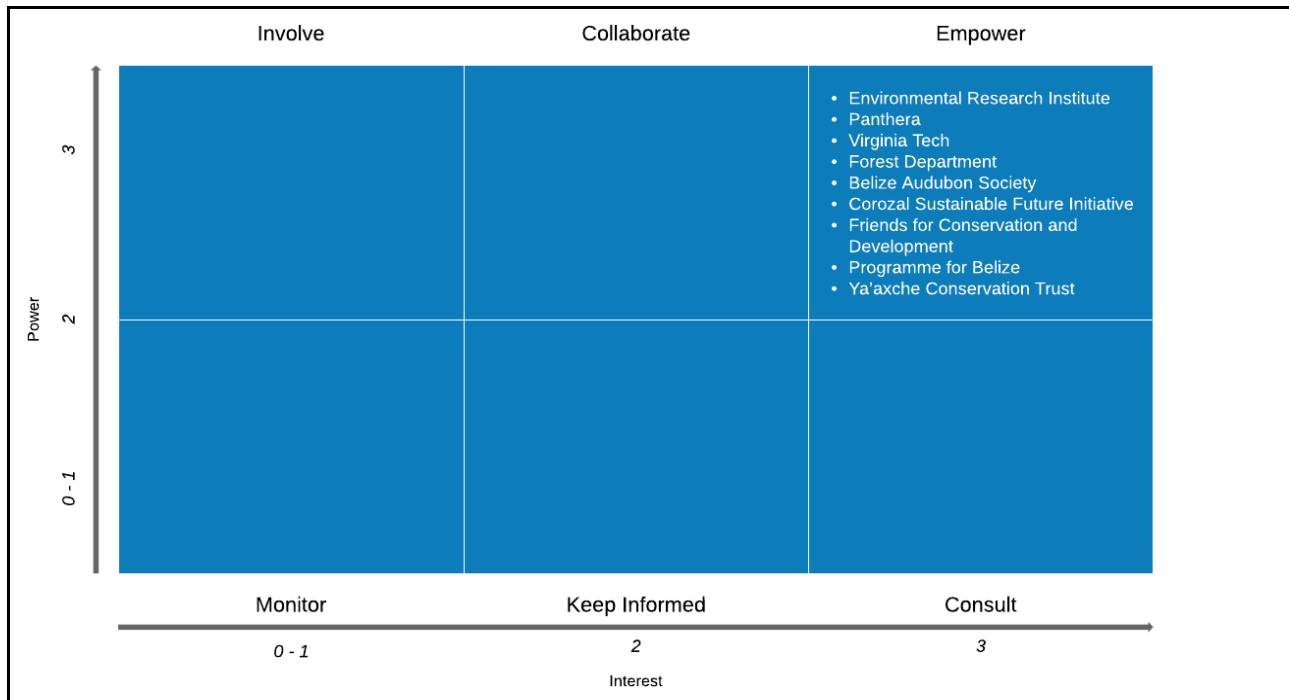
1. **Belize Audubon Society:** See description for Belize Audubon Society under Component 1 - Stakeholder 13.
2. **Corozal Sustainable Future Initiative:** See description for Corozal Sustainable Future Initiative under Component 1 - Stakeholder 15.

3. **Friends for Conservation and Development:** See description for Friends for Conservation and Development under Component 1 - Stakeholder 16.
4. **Programme for Belize:** See description for Programme for Belize under Component 1 - Stakeholder 17.
5. **Ya'axche Conservation Trust:** See description for Ya'axche Conservation Trust under Component 1 - Stakeholder 18.

Power/Interest Ranking

Results show all identified stakeholders are capable to engage in informing and implementing project outputs for Component 4. These stakeholders are already responsible for the collection and management of jaguar-related data within their respective jurisdictions. Their respective bodies possess the adequate experience and capacity to inform project design and perform related-activities under Component 4 (see Figure 10 for priority stakeholders).

FIGURE 10: STAKEHOLDER MAP FOR COMPONENT 4



4. Summary of Stakeholder Activities during Project Preparation

The project preparation process utilized a number of methods to convey information to stakeholders including face-to-face meetings, presentations, electronic meetings, emails and town-hall style meetings. Consultations were conducted with a wide cross-section of stakeholders including affected communities, indigenous communities, women's groups, government agencies, non-government organizations as well as academic and research institutions. These meetings and discussions helped to inform project design and possible stakeholder engagement strategies. Table 10 (below) provides a summary of the consultations carried out during the project preparation process.

TABLE 10: SUMMARY OF STAKEHOLDER CONSULTATIONS

Date	Time	Organization/ Community	Stakeholder	Venue	Purpose
1/15/2020	14:00	Corozal Sustainable Future Initiative (CSFI)	Heron Moreno (Executive Director)	UNDP Country Office, Belmopan	Provide project overview and finalize logistics for Shipstern Nature Reserve site visit
1/20/2020	13:30	Corozal Sustainable Future Initiative	Heron Moreno (Executive Director), CSFI field rangers	CSFI Headquarters, Shipstern Nature Reserve	Detailed discussion of CSFI mandate and jurisdiction in relation to project objectives to identify the potential engagement of CSFI within project components. Discussions also included the organization of community consultations in Sarteneja, Fireburn and Little Belize
1/20/2020	16:00	El Sartenjenas Women's Group	Yanci Durantes (President), Tomasa Cruz (Secretary), Adaly Perez, Olga Agustin	Sarteneja Community Library, Sarteneja Village	Discuss engagement strategies for women within the scope of the project
1/20/2020	17:30	Sarteneja	Cristino Mora, Nathaniel Verde, Justino Quintana, Julio Salazar (Farmers/Part-time Fishermen)	Farmer Residence, Sarteneja Village	Discuss engagement strategies for fishermen/farmers within the scope of the project
1/21/2020	10:00	Fireburn	Lincon Sealy (Farmers)	Farmer Residence, Fireburn Village	Discuss engagement strategies for farmers within the scope of the project
1/21/2020	12:00	Little Belize	Bernard Peters	Farmer Residence, Little Belize Village	Discuss engagement strategies for farmers within the scope of the project
1/27/2020	10:00	Ministry of Agriculture	Denzel Castilo	PPF Capital Belize Ltd., Belize City (via Skype)	Discuss the overall mandate of the Ministry of Agriculture including issues related to the project and engagement strategies for the Ministry of Agriculture and farmers within the scope of the project
1/28/2020	11:00	Belize Livestock Producers Association	Maxemilion Ortega	Belize Livestock Producers Association, Belmopan	Discuss the overall mandate of the Belize Livestock Producers Association including issues related to the project and engagement strategies for the Belize Livestock

Date	Time	Organization/ Community	Stakeholder	Venue	Purpose
					Producers Association within the scope of the project
1/28/2020	13:30	Forestry Department	Wilber Sabido (Chief Forest Officer), Hannah St-Luce Martinez (Forest Officer), Shanelle Carillo (Wildlife Officer)	Forest Department, Belmopan	Discuss engagement strategies for the Forest Department and farmers within the scope of the project
1/31/2020	13:30	Panthera	Chia-Yu Chang, Rebecca Louise Wooldridge	UNDP Country Office, Belmopan	Discuss the overall mandate of the Panthera including issues related to the project and engagement strategies for Panthera within the scope of the project
1/31/20	15:00	Ya'axche Conservation Trust	Said Gutierrez (Protected Areas Program Director)	Skype Meeting	Discuss the overall mandate of the Ya'ache Conservation Trust including issues related to the project and engagement strategies for Ya'axche Conservation Trust within the scope of the project
2/6/2020	10:00	Environmental Research Institute (ERI)	Dr. Elma Kay	ERI, Belmopan	Discuss the overall mandate of the Environmental Research Institute including issues related to the project and engagement strategies for the Environmental Research Institute within the scope of the project
2/14/2020	15:00	Ya'axche Conservation Trust (YCT)	Christina Garcia (Executive Director) Said Gutierrez (Protected Areas Program Director)	Ya'axche, Toledo	Clarification of project pillars and YCT role in project implementation
2/27/2020	9:00	Animal Medical Center	Dr. Philip DeShield (Veterinarian)	PPF Capital Belize Ltd., Belize City	Provide project briefing and discuss the potential of including veterinarians within the project.
29/2/2020	16:00	Indigenous Community Members	Indigenous Community Members from the villages of: Bladen, Trio, Golden Stream and Indian Creek YCT Staff	Golden Stream Ranger Station, Toledo District	Town-hall meeting with community members to provide a project overview, discuss the pertinent component and obtain verbal no objection to Ya'axche working in communities as an implementation partner.
3/3/2020	13:00	Belize Wildlife and Referral Clinic	Dr. Isabelle Paquet-Durand (Founder and Director)	Skype Meeting	Provide project briefing and discuss the potential of including veterinarians within the project.

4.1 Meetings with Key Stakeholders (Implementation Partners)

Component 1

Panthera and Forest Department - meetings were conducted with the Forest Department and Panthera Belize (whose office is embedded within the Forest Department in Belmopan).

The **Forest Department** indicated that they were very supportive of the project and noted its timeliness and importance. Constraints regarding personnel and resources available to respond to wildlife conflict calls was cited as an ongoing challenge. The possibility of collaboration and capacity building with the Ministry and Department of Agriculture (Agricultural Extension Officers) was discussed as the Department has a wider geographic footprint and a greater level of interaction with farmers in rural communities.

Panthera Belize - is currently engaged in extensive camera trapping work and associated data analysis. They indicated a willingness to assist in the roll-out of the expansion of the camera trapping network, selection and setup of a data management system and capacity development for community members and other personnel in the management and operation of the camera traps.

Component 2

Corozal Sustainable Future Initiative (CSFI) - meetings were held with CSFI management and staff as well as members of surrounding communities (notably a women's group, farmers and members of a traditional Creole village i.e. Fireburn). CSFI is engaged in the management of the recently created North-Eastern Biological Corridor. CSFI indicated a strong willingness to support/act as an implementing partner in the development of a jaguar conflict response protocol. In addition, CSFI was able to facilitate consultative discussions with members of surrounding communities where discussions on sustainable/alternative livelihoods were had. Alternative livelihood programs with the potential for development include:

- Development, marketing and sales of jaguar related handicraft and clothing/apparel items - El Sartenjenas Women's Group
- Development of cultural/historical and jungle related tour packages and capacity building in the form of tour guide training - Neuland Community (traditional Menonoite village), Sarteneja community
- Development of forest beekeeping program, development of a honey production plant and the export of jungle and mangrove honey - surrounding communities and CSFI

Component 3

Ya'axche Conservation Trust (YCT) - meetings were held with Ya'axche management and staff. YCT has a significant project execution and conservation footprint within the selected communities which are mainly indigenous Mayan communities. YCT indicated a strong willingness to participate in the project and to carry out data collection exercises within the communities with a view to provide data to assist in policy development and drafting notes for modification/updating of the Wildlife Act.

5. Stakeholder Engagement Program

The Stakeholder Engagement Plan (SEP) aims guide the United Nations Development Programme, partnering entities and stakeholders on the necessary consultations and exchanges/transfers of information and/or responsibility throughout project implementation. The Stakeholder Engagement is built-off the Stakeholder Analysis Report which aimed to identify key stakeholders to help inform project development and prospectively engage in project implementation. Based on the findings of the Stakeholder Analysis, the Stakeholder Engagement Plan proposes a set of engagement strategies (per respective stakeholder/stakeholder groups) to implement during project life. The correspondence presents the detailed Stakeholder Engagement Programme which provides engagement activities per project component.

5.1 Engagement Strategies

Engagement programmes were developed as per the four (4) project components: 1) conserve wildlife and habitats (C1), promote a more wildlife-friendly economy (C2), Combat wildlife crime and unsustainable hunting (C3), coordinating and enhancing knowledge (C4). The engagement programme provides an itinerary of activities to fulfill project outputs along with the stakeholders to engage during the activity. It also defines the level of engagement per stakeholder and the required action (engagement strategy) per stakeholder.

Six (6) levels of stakeholder types of engagement were used to develop the engagement strategy namely, 1) monitor, 2) keep informed, 3) consult, 4) involve, 5) collaborate, 6) empower (see definitions in Table 11).

TABLE 11: LEVELS OF STAKEHOLDER ENGAGEMENT⁵⁷

Level	Definition
Monitor	Oversee stakeholder activity within the project scope.
Keep informed	Provide stakeholders with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.
Consult	Obtain stakeholder feedback on project analysis and design, alternatives and/or decisions and consider stakeholder concerns and aspirations.
Involve	Include stakeholders in reaching all key project decisions and ensure stakeholder input incorporated.
Collaborate	Partner with stakeholders in reaching all key project decisions and ensure stakeholder input incorporated to maximum extent possible.
Empower	Transfer control over decision-making, resources and activities to stakeholders.

Table 12 presents the engagement programme for Component 1 (conserve wildlife and habitats).

⁵⁷ Guidance Note - UNDP Social and Environmental Standards: Stakeholder Engagement

TABLE 12: COMPONENT 1 - ENGAGEMENT PROGRAMME

<p>C1: Conserve wildlife and habitats - This component aims to improve the conservation of 200,000 Hectares (ha) of the Sibun River watershed landscape for jaguar protection through enhanced monitoring and management. It will implement a national-level data collection and data management system (based on extended camera trap deployment) to support and enhance conservation management.</p> <p>Outcome - Improved conservation of 200,000 Hectares of Sibun River watershed landscape for jaguar through enhanced monitoring and management. National-level data collection/management system, based on extended camera trap deployment, supports enhanced conservation management.</p>				
Output	Activity	Level of Engagement	Stakeholder	Required Action
(1.1) Develop a standardized and integrated national database for wildlife and human presence monitoring, with emphasis on underpinning conservation of jaguars and associated (prey) species.	Inception and scoping activities with project team and key stakeholders.			
	(A) Convene working group session(s) with key stakeholders to identify all existing camera trap systems and owners of such systems	Empower	Panthera* and Project Team	Preparation of preliminary catalogue and map, Participation in working session(s)
		Collaborate	Virginia Polytechnic Institute and State University	Participation in working session(s)
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development (FCD)	
			Corozal Sustainable Future Initiative (CSFI)	
			Programme for Belize (PFB)	

			Ya'axche Conservation Trust	
	(B) Catalogue and map baseline camera trap systems	Empower	Panthera*	Lead working session(s) to develop catalogue and map
		Collaborate	Virginia Polytechnic Institute and State University	Participation in working session(s) to develop catalogue and map
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development (FCD)	
			Corozal Sustainable Future Initiative (CSFI)	
			Programme for Belize (PFB)	
			Ya'axche Conservation Trust	
	(C) Develop selection criteria for cloud-based camera trap data management platform	Empower	Panthera*	Lead working session(s)/interview(s) to define criteria
		Collaborate	Central Information Technology Office	Participation in working session(s)/interview(s) to define criteria
			Virginia Polytechnic Institute and State University	
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development (FCD)	
			Corozal Sustainable Future Initiative (CSFI)	

			Programme for Belize (PFB)	
			Ya'axche Conservation Trust	
	Set-up of Data Management framework			
	(D) In conjunction with key partner/stakeholders, establish a data-sharing protocol/framework (MOU/ToR Format)	Empower	Panthera*	Lead session(s)/interview(s) to define and develop the protocol
		Collaborate	Corozal Sustainable Future Initiative (CSFI)	Participation in working session(s)/interview(s) to define protocol
			Ya'axche Conservation Trust	
			Forest Department	
		Involve	Virginia Polytechnic Institute and State University	Participation in session(s)/interview(s) to validate protocol
			Belize Audubon Society	
			Friends for Conservation and Development (FCD)	
			Programme for Belize (PFB)	
	(E) Procure and install data management platform	Involve	Panthera* and Project Team	Oversee the installation process
			Central Information Technology Office*	
			Corozal Sustainable Future Initiative (CSFI)	
			Forest Department	
Ya'axche Conservation Trust				
Keep informed		Friends for Conservation and Development (FCD)		

			Programme for Belize (PFB)	Receive updates on installment progress via email/teleconferencing
			Belize Audubon Society	
			Virginia Polytechnic Institute and State University	
	(F) Provide training (capacity building) in the use and management of database for key personnel and stakeholders	Empower	Panthera*	Lead and coordinate training session(s)
		Collaborate	Central Information Technology Office (CITO)	Collaborate with lead to perform training session(s)
		Involve	Corozal Sustainable Future Initiative (CSFI)	Participate in the training sessions provided
			Forest Department	
			Ya'axche Conservation Trust	
			Friends for Conservation and Development (FCD)	
			Programme for Belize (PFB)	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
	(G) Use existing and newly collected data to create a robust national monitoring database and interface covering, inter alia, jaguars, prey and game species as well as a	Empower	Panthera* and Project Team	Lead development of national monitoring database and interface
		Collaborate	Central Information Technology Office (CITO)	Participation in working sessions to develop monitoring database and interface
			MFFESD (including Forest Department)	

	human presence/threat overlay		Corozal Sustainable Future Initiative (CSFI)	
			Ya'axche Conservation Trust	
		Consult	Belize Audubon Society	Provide insight and recommendations as to the development of the national database and interface via interview(s)/validation session(s)
			Programme for Belize (PFB)	
			Virginia Polytechnic Institute and State University	
			Friends for Conservation and Development (FCD)	
	(H) Provide periodic reports to stakeholders	Empower	Panthera*	Prepare reports and disseminate
		Keep Informed	MFFESD (including Forest Department)	Receive reports and review
			Corozal Sustainable Future Initiative (CSFI)	
			Ya'axche Conservation Trust	
			Belize Audubon Society	
			Programme for Belize (PFB)	
			Virginia Polytechnic Institute and State University	
			Friends for Conservation and Development (FCD)	

(1.2) Install approximately 700-900 camera traps, complementing, improving and extending existing installations, with additional effective coverage of 350,000 ha.	Preparatory Activities			
	(A) Identify areas and partners for camera trap deployment	Empower	Panthera* and Project Team	Lead working group session(s) to identify deployment areas
		Collaborate	MFFESD (including Forest Department)	Participation in working session(s) to identify deployment areas
			Friends for Conservation and Development (FCD)	
		Involve	Belize Audubon Society	Participate in consultation(s)/interview(s) to validate or recommend deployment areas
			Virginia Polytechnic Institute and State University	
			Tour Guides	
			Farmers	
	(B) Create a professional field-team under guidance of the Forest Department for monitoring the three forest reserves and surrounding areas, taking advantage of available local knowledge of the area	Empower	Panthera* and Project Team	Lead the development of a professional field team
			Forest Department	
		Consult	Virginia Polytechnic Institute and State University	Participation in interview(s) to provide validation and recommendations to the development of the professional field team
			Belize Audubon Society	
			Friends for Conservation and Development	
			Farmers	

			Tour guides	
	(C) Develop selection criteria for camera traps	Empower	Panthera*	Lead and draft criteria
		Collaborate	Forest Department	Participate in consultation session(s) to develop criteria
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
	(D) Procure camera traps	Empower	Project Team	Initiate and close procurement transaction
		Keep Informed	Panthera*	Receive updates on the procurement of the camera traps via email or teleconferencing
			Forest Department	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
		Deployment and Operations		
	(E) Scout and assessing appropriate infrastructure routes for deploying camera traps throughout the project area, assuring detailed reporting on general state of reserve, level of incursions,	Empower	Panthera*	Lead the scouting, assessing and selecting of infrastructure routes.
		Collaborate	Virginia Polytechnic Institute and State University	Participate in working session(s) along with Panthera to scout, assess and select infrastructure routes.
Forest Department				

	sightings of species of concern, requiring direct sightings (e.g. scarlet macaw, spider monkey)		Belize Audubon Society	
			Friends for Conservation and Development	
		Consult	Farmers	Participate in consultation session(s) to identify infrastructure routes
			Tour guides	
	(F) Conduct training in the deployment and manipulation of camera traps	Empower	Panthera*	Convene training session(s) to develop capacity to deploy and manipulate camera traps
		Keep Informed	Virginia Polytechnic Institute and State University	Participate in training session(s) to develop capacity to deploy and manipulate camera traps
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Farmers	
			Tour guides	
	(G) Deploy traps and collect data ensuring efficient integration of data into database platform (Output 1.1)	Empower	Panthera* and Project Team	Lead and coordinate trap deployment and coordinate data collection
		Collaborate	Virginia Polytechnic Institute and State University	Deploy respective traps
			Forest Department	
			Belize Audubon Society	

			Friends for Conservation and Development	
			Farmers	
			Tour guides	
3) Develop a model of population dynamics and movement ecology of jaguars and wide-ranging prey species based on enhanced monitoring data.	(A) Prepare model of population dynamics and movement ecology of jaguars	Empower	Panthera* and Project Team	Lead the development of the model
		Collaborate	Virginia Polytechnic Institute and State University	Participate in working session(s) and data and analysis sharing to develop the model
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
	(B) Hold stakeholder consultations to validate the model.	Empower	Panthera* and Project Team	Convene consultation session(s) with stakeholders to validate model
		Consult	Virginia Polytechnic Institute and State University	Participate in consultation session(s) to validate models.
			Forest Department	
			Belize Audubon Society	

			Friends for Conservation and Development	
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
	(C) Disseminate the model to key stakeholders.	Empower	Panthera* and Project Team	Disseminate model with stakeholders via email and stakeholder forum
		Keep Informed	Virginia Polytechnic Institute and State University	Receive model and attend stakeholder forum
			Forest Department	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
(1.4) Develop three new management protocols and regulatory measures, including a National Jaguar and Prey Policy, Strategy and Management Plan.	(A) Convene inception meeting along with component-lead and key stakeholders to discuss management plan.	Empower	Panthera*and Project Team	Coordinate inception meeting
		Collaborate	Forest Department	Attend in inception meeting
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	

			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
			Programme for Belize	
	(B) Develop new management protocols and plan.	Empower	Panthera* and Project Team	Develop management protocols and plan
		Collaborate	Forest Department	Provide strategic support to Panthera in the development of management protocols and plan
		Consult	Virginia Polytechnic Institute and State University	Participate in consultation session(s) to develop and validate management protocols and plan
			Belize Audubon Society	
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
			Programme for Belize	
	(C) Disseminate new management protocols, regulatory measures and National Jaguar and Prey Policy, Strategy and Management Plan.	Empower	Panthera* and Project Team	Disseminate management protocol and plan to key stakeholders via email and stakeholder forum
		Keep Informed	Forest Department	Receive management protocol and plan
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Corozal Sustainable Future Initiative	

			Ya'axche Conservation Trust	
			Programme for Belize	
(1.5) Enhanced data and information systems applied to design and initiate implementation of a landscape management plan within the 178,000-ha target area.	(A) Kick-off and preparatory work	Empower	Panthera* and Project Team	Convene kick-off meeting with stakeholder and develop preparatory work
		Collaborate	Forest Department	Provide support as to the development of preparatory work
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
		Consult	University of Belize Environmental Research Institute	Participate in consultation session(s) to provide guidance and recommendations as to the application of the management plan.
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	
	(B) Identify high priority conservation areas for jaguar/wildlife conservation;	Empower	Panthera* and Project Team	Lead the identification of priority areas
		Consult	Forest Department	Participate in consultation session(s) to identify priority areas and validate work
			Corozal Sustainable Future Initiative	

			Ya'axche Conservation Trust	
			University of Belize Environmental Research Institute	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	
	(C) Designate sustainable use areas and activities	Empower	Panthera* and Project Team	Lead the designation of sustainable-use areas
		Consult	Forest Department	Participate in consultation session(s) to designate sustainable-use areas and validate work
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
			University of Belize Environmental Research Institute	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	

	(D) Identify areas for road barrier management (need for wildlife road crossings, etc.)	Empower	Panthera* and Project Team	Lead the identification of areas for road barrier management
		Consult	Forest Department	Participate in consultation session(s) to identify areas for road barrier management
			Corozal Sustainable Future Initiative	
			Ya'axche Conservation Trust	
			University of Belize Environmental Research Institute	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	
	(E) Develop proposals for site monitoring and protection	Empower	Panthera* and Project Team	Develop proposals
		Collaborate	Forest Department	Provide guidance and validation of proposals
		Consult	Corozal Sustainable Future Initiative	Participate in consultation session(s) to advise on the development of proposals
			Ya'axche Conservation Trust	
			Friends for Conservation and Development	
	(F) Prepare management plan/report	Empower	Panthera* and Project Team	Prepare report
		Consult	Forest Department	

			Corozal Sustainable Future Initiative	Participate in consultation session(s) to validate the report
			Ya'axche Conservation Trust	
			University of Belize Environmental Research Institute	
			Virginia Polytechnic Institute and State University	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	

Table 13 presents the engagement programme for Component 2 (promote a more wildlife-friendly economy).

TABLE 13: COMPONENT 2 - ENGAGEMENT PROGRAMME

C2: Promote a more wildlife-friendly economy - This component aims to strengthen the systems for responding to jaguar/livestock conflict and encourage sustainable ecotourism, with targeted application in Belize's Northeast forest landscape (area totaling 180,000 ha.).				
Outcome - Strengthened systems for responding to jaguar–livestock conflict and for encouraging sustainable ecotourism, with targeted application in Belize's Northeast forest landscape.				
Output	Activity	Level of Engagement	Stakeholder	Required Action
(2.1) Develop an enhanced rapid response protocol and capacities for responding to jaguar-livestock conflict and	(A) Create a district-level conflict resolution team;	Empower	Corozal Sustainable Future Initiative* and Project Team	Create a district-level conflict resolution team
		Collaborate	Forest Department	Provide support to the resolution team
			The Belize Zoo	

applied in the target landscape		Consult	Ministry of Agriculture (Extension Officers/Service)	Participate in stakeholder consultations and promote to farmers protocol and jaguar preservation
	(B) Develop a system for detailed logging of incidents and a database of national occurrences of conflict;	Empower	Corozal Sustainable Future Initiative* and Project Team	Develop logging system
		Consult	Forest Department	Participate in consultation session(s) to develop and advise on logging system
			Ministry of Agriculture (Extension Officers/Service)	
	(C) Develop the capacity to provide technical support in specific situations identified in the protocol	Empower	Corozal Sustainable Future Initiative*	Convene training session(s) to develop capacity
		Collaborate	Forest Department	Provide support, awareness and also participate in training session(s)
			The Belize Zoo	
			Ministry of Agriculture (Extension Officers/Service)	
	(D) Provide farmer outreach in support of a jaguar-conscious agro-sector practices	Empower	Corozal Sustainable Future Initiative*	Convene field visitations with farmers to build capacity and awareness on best practices
			Forest Department	
			Ministry of Agriculture (Extension Officers/Service)	
(2.2) Develop a training and outreach program for sustainable ecotourism	(A) Inception/kickoff activities with stakeholders	Empower	Corozal Sustainable Future Initiative* and Project Team	Develop outreach program and training
		Collaborate	Belize Tourism Board	Participate in working session(s)/interview(s) to develop outreach program and provide training
			Ministry of Tourism	
		Consult	Tour Guides	Participate in consultation session(s) to advise

			Sarteneja Community Members	on development of outreach program and training
			Little Belize Community Members	
			Fire Burn Community Members	
	(B) Provide technical support to guides and landowners participating as contributors to the national camera trap network, based on best practices and quality control guidelines certification and license through Belize Tourist Board	Empower	Corozal Sustainable Future Initiative*	Provide technical support to trap operators
		Collaborate	Belize Tourism Board	Support by overseeing quality control guidelines
			Ministry of Tourism	
		Keep Informed	Tour Guides	Receive information on best practices and quality control guidelines
			Sarteneja Community Members	
			Little Belize Community Members	
			Fire Burn Community Members	
	(C) Provide ecotourism stakeholders with access to relevant information generated through the national camera trap database	Empower	Corozal Sustainable Future Initiative*	Facilitate access of information to stakeholders through catalogues and report circulation
		Collaborate	Belize Tourism Board	Provide support in the dissemination of data to stakeholders
			Ministry of Tourism	
		Involve	Tour Guides	Receive information generated
			Sarteneja Community Members	
			Little Belize Community Members	

			Fire Burn Community Members	
	(D) Engage the Belize Tourism Board in the development of a specialist tourism certification programme to support educationally oriented eco and cultural tourism	Empower	Corozal Sustainable Future Initiative* and Project Team	Develop and propose specialist tourism certification programme
		Collaborate	Belize Tourism Board	Provide guidance during working session(s) to the inform development of the specialist tourism certification programme
			Ministry of Tourism	
		Consult	Tour Guides	Participate in consultation session(s) to inform on the development of the specialist tourism certification programme
			Sarteneja Community Members	
			Little Belize Community Members	
			Fire Burn Community Members	
(2.3) Support selected alternative livelihoods activities to reduce jaguar/livestock interaction and promote sustainable management practices in the Northern Corridor and surrounding communities	(A) Provide support for development/expansion of jaguar related craft products with Sarteneja Women's Group	Empower	Project Team	Provide support for development
		Collaboration	Sarteneja Women's Group	Participate in consultation session(s) and produce craft products
			Sarteneja Community Members	
			Fire Burn Community Members	
	(B) Establish/develop forest beekeeping/apiculture program with a view to produce honey to serve local and selected export markets	Empower	Corozal Sustainable Future Initiative	Develop program, coordinate and support participants
		Collaboration	Sarteneja Women's Group	Participate in the program and produce honey
			Sarteneja Community Members	
			Fire Burn Community Members	

Table 14 presents the engagement programme for Component 3 (combat wildlife crime and unsustainable hunting).

TABLE 14: COMPONENT 3 - ENGAGEMENT PROGRAMME

C3: Combat wildlife crime and unsustainable hunting - This component aims to enhance the knowledge of the current status of the jaguar/prey/game species and hunting activities in the Maya Golden Landscape informing regulations for threat reduction and sustainable population management (ha to be determined). Outcome - Enhanced knowledge of the current status of the jaguar / prey / game species and hunting activities in xxx ha Maya Golden Landscape informing regulations for threat reduction and sustainable population management.				
Output	Activity	Level of Engagement	Stakeholder	Required Action
(3.1) Develop a model estimating sustainable game species offtake, including jaguar prey offtake by viable predator populations.	(A) Inception activities with villages and stakeholder groups	Empower	Ya'axche Conservation Trust* and Project Team	Convene inception meeting(s)/field visit(s)
		Consult	Forest Department	Receive updates on field visits and provide guidance to project team
			Trio Village (Farmers Cacao Growers Ltd.)	Participation in inception activities to advise and recommend
			Bladen Village (farmers)	
			Golden Stream/Tambran Village (farmers)	
			Medina Bank Village (farmers)	
			Indian Creek Village (farmers and women's group)	
			Big Falls/Hicatee Village (farmers)	
			Silver Creek Village (farmers)	
			San Miguel Village (farmers)	
			San Jose Village (Green Creek Farmers Cooperative)	

			Aguacate Village (Aguacate Conservation & Development Group)	
	(B) Develop hunting and extractive activities questionnaire/survey instrument	Empower	Project Team	Develop questionnaire/survey instrument
		Collaborate	Ya'axche Conservation Trust*	Provide support in the development of the instrument
	(C) Collect data from communities engaged in hunting activities (knowledge, attitudes, practices, etc.)	Empower	Ya'axche Conservation Trust*	Perform data collection
		Involve	Forest Department	Participate in survey
			Trio Village (Farmers Cacao Growers Ltd.)	
			Bladen Village (farmers)	
			Golden Stream/Tambran Village (farmers)	
			Medina Bank Village (farmers)	
			Indian Creek Village (farmers and women's group)	
			Big Falls/Hicatee Village (farmers)	
			Silver Creek Village (farmers)	
			San Miguel Village (farmers)	
			San Jose Village (Green Creek Farmers Cooperative)	
			Aguacate Village (Aguacate Conservation & Development Group)	
		Empower	Ya'axche Conservation Trust*	Develop report

	(D) Analyze the results and develop results report	Keep Informed	Forest Department	Receive technical reports
			Trio Village (Farmers Cacao Growers Ltd.)	Receive brochures and abridged reports to be informed on results
			Bladen Village (farmers)	
			Golden Stream/Tambran Village (farmers)	
			Medina Bank Village (farmers)	
			Indian Creek Village (farmers and women's group)	
			Big Falls/Hicatee Village (farmers)	
			Silver Creek Village (farmers)	
			San Miguel Village (farmers)	
			San Jose Village (Green Creek Farmers Cooperative)	
			Aguacate Village (Aguacate Conservation & Development Group)	
(3.2) Develop a strategy and action plan for the monitoring, sustainable management and use of game species, including a pilot sustainable hunting quota system, developed and implemented in identified communities.	(A) Use data collected to develop baselines and models for	Empower	Ya'axche Conservation Trust*	Develop model
		Collaborate	Forest Department	Provide support and guidance in the development of the model through participation in working session(s)
			Ministry to Agriculture	
		Consult	Belize Audubon Society	Participation in consultation session(s) to validate and further develop model
			Programme for Belize	

			Friends for Conservation and Development	
	(B) Implement a pilot program using a quota system sustainable species off-take	Empower	Ya'axche Conservation Trust*	Implement quota system and coordinate with key stakeholders
			Forest Department	
		Collaborate	Ministry to Agriculture	Support and promote quota system within jurisdiction through informative mediums and monitoring and reporting
			Belize Audubon Society	
			Programme for Belize	
			Friends for Conservation and Development	
	(C) Consult with other key stakeholders to obtain complementary data	Empower	Ya'axche Conservation Trust*	Hold stakeholder group session(s) to discuss findings and coordinate and distribute the disbursement of data
		Collaborate	Forest Department	Participation in stakeholder group session(s)
			Ministry to Agriculture	
			Belize Audubon Society	
			Programme for Belize	
			Friends for Conservation and Development	
	(D) Develop regional and national models	Empower	Project Team	Oversee the development of the regional and national models
			Ya'axche Conservation Trust*	Develop models
		Consults	Forest Department	

			Ministry to Agriculture	Participation in consultation session(s)/interview(s) to develop models and provide validation and recommendations
			Belize Audubon Society	
			Programme for Belize	
			Friends for Conservation and Development	
	(E) Develop a national strategy for the sustainable use of game species	Empower	Project Team	Oversee the development of the national strategy
			Ya'axche Conservation Trust*	Develop the national strategy
		Consults	Forest Department	Participation in consultation session(s))/interview(s) to validate and make recommendations to the national strategy
			Ministry to Agriculture	
			Belize Audubon Society	
			Programme for Belize	
			Panthera	
			Corozal Sustainable Future Initiative	
			Friends for Conservation and Development	
(3.3) Prepare drafting-notes for Wildlife Protection Act of 1982 (revised 2000) amendment and associated hunting and illegal wildlife trade	(A) Develop drafting notes based on national strategy	Empower	Forest Department	Develop drafting notes
		Consult	Conservation NGOs	Participation in working session(s)/interview(s) support the development of drafting notes
			Academia	
			Impacted communities	

regulations, based on consultations.	(B) Conduct consultation/validation sessions	Empower	Forest Department	Convene stakeholder consultation session(s) with key stakeholders
		Consult	Conservation NGOs	participation in stakeholder consultation session(s)
			Academia	
			Impacted communities	
	(C) Circulate drafting notes to the Ministry and subsequently to the Cabinet and Attorney General Ministry	Empower	Forest Department	Circulate drafting notes
		Keep Informed	Conservation NGOs	Receive updates as to the status of the drafting notes via email ro teleconferencing
			Academia	
			Impacted communities	

The following presents the engagement programme for Component 4 (coordinating and enhancing knowledge).

TABLE 15: COMPONENT 4 - ENGAGEMENT PROGRAMME

C4: Coordinating and enhancing knowledge - This component aims to enhance the national/transboundary/jaguar range collaboration, knowledge management and communication.				
Outcome - Enhanced national/transboundary/ jaguar range collaboration, knowledge management and communication.				
Output	Activity	Level of Engagement	Stakeholder	Required Action
(4.1) Document lessons learned/case studies from the three (3) target landscapes are captured and disseminated.	(A) Convene working sessions with component-leads and key stakeholders to present respective case studies	Empower	Project Team	Convene working session(s)
		Collaborate	Ya'axche Conservation Trust	Develop case study presentations and reports to inform key stakeholders
			Corozal Sustainable Future Initiative	
			Panthera	

	(B) Hold project forum to present findings to stakeholders	Empower	Project Team	Convene project forum(s)
		Collaborate	Ya'axche Conservation Trust	Present respective case studies
			Corozal Sustainable Future Initiative	
			Panthera	
		Involve	Forestry Department	Attend project forum(s)
			Belize Audubon Society	
			Friends for Conservation and Development	
			Academia	
			Other conservation NGOs	
(4.2) Develop a reinforced national multi-stakeholder mechanism for sustained jaguar communication and coordination.	(A) Reconstitute jaguar working group	Empower	Project Team	Reach out to key stakeholders and select members to reconstitute jaguar working group via email, interview(s) or teleconferencing
		Involve	Ya'axche Conservation Trust	Support the reconstitution of the jaguar working group through the acceptance of membership or recommendation of potential members
			Forestry Department	
			Corozal Sustainable Future Initiative	
			Panthera	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	

			Other conservation NGOs	
	(B) Conduct periodic meetings to share updates and discuss findings, lessons learned, best practices, etc.	Empower	Project Team	Convene periodic stakeholder meetings
		Collaborate	Ya'axche Conservation Trust	Participation in periodic meetings
			Forestry Department	
			Corozal Sustainable Future Initiative	
			Panthera	
			Belize Audubon Society	
			Friends for Conservation and Development	
			Programme for Belize	
			Other conservation NGOs	
(4.3) Strengthen transboundary cooperation and knowledge sharing strengthened via bilateral and/or trilateral exchanges (Belize, Mexico, Guatemala) with a focus on key transboundary landscapes.	(A) Hold meetings within government agencies from Mexico and Guatemala to propose trilateral exchanges.	Empower	Forest Department	Reach out and convene meeting(s) with international stakeholders
(4.4) In cooperation with the GEF Global Wildlife Programme, a forum of experts organized to exchange lessons learnt	(A) Convene forum of experts to facilitate information sharing	Empower	Project Team	Plan, coordinate and convene forum
		Collaborate	Ya'axche Conservation Trust	Participation/attendance in the forum
			Ministry of Agriculture	

regarding key topics such as landscape management of jaguars and wildlife crime/trafficking.			Forest Department	
			Conservation NGOs	
			Academia	
			UNDP	
			Regional and International NGOs	
			Regional and International Government Partners	

5.2 Resources and Responsibilities

Resources

Resources needed to implement the stakeholder engagement plan have been distributed within the project budget. To some extent, given that stakeholder engagement is mainstreamed throughout the project, every project activity involves stakeholder engagement to some degree (see Tables 12-15 above). With that caveat, key activities that place significant emphasis on engagement and participation, together with associated financial allocations, are summarized in Table 16 below.

TABLE 16: MAIN ENGAGEMENT / PARTICIPATION-FOCUSED ACTIVITIES AND ASSOCIATED BUDGETARY RESOURCES

Project level (outcome, output, activity)	Budget item description	Indicative costs (US\$)
Activity 1.2.1	Stipend for community camera trap monitors	25,700
Outcome 1	Workshops for Outcome 1, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	4,713
Activity 2.1.4	Support to community consultative process related to conflict, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	22,500
Activity 2.2.2	Community participation in wildlife-friendly economy (community outreach and engagement, 30 sessions)	22,500
Outcome 2	Workshops for Outcome 2, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	5,713
Activity 3.1.1	Support to community engagement/ training	15,000
Activity 3.2.1	Support to community outreach and consultations	9,000
Activity 3.2.2	Support to Community Advocacy	12,000
Activity 3.2.3	Training of community volunteers in data collection and use of camera trapping	12,000
Activity 3.1.2	Support to the application of community survey instrument	18,000
Activity 3.2.1	Development of Community resource use management plans	30,000
Outcome 3	Workshops for Outcome 2, including consultations needed to implement IPP, stakeholder and gender plan requirements associated with this outcome.	4,713
Outcome 4	Project monitoring, participation and safeguards specialist	12,000
TOTAL indicative COST		193,839

Responsibilities

The Ministry of Fisheries, Forestry, the Environment and Sustainable Development will serve as the project management/executing agency and UNDP will provide oversight of the activities stated in the Engagement Programme. Component leads have been identified amongst project stakeholders to provide support in the piloting and execution of the activities per component. Below states the responsibilities assigned to UNDP and/or component lead(s).

TABLE 17: STAKEHOLDER RESPONSIBILITY BY PROJECT OUTPUT

Output	Stakeholder	Responsibility
C1: Conserve wildlife and habitats		

Outcome: Information and data management systems contribute to improved conservation of jaguar and other wildlife at country level, with targeted application in 177,914 ha of Sibun River watershed landscape.		
(1.1) Develop a standardized and integrated national database for wildlife and human presence monitoring, with emphasis on underpinning conservation of jaguars and associated (prey) species.	Panthera*, Forest Department	With project oversight from Forest Department, Panthera will lead activities under this output.
(1.2) Install approximately 700-900 camera traps, complementing, improving and extending existing installations, with additional effective coverage of 350,000 ha.	Panthera*, Forest Department	Forest Department will lead activities herein with technical guidance from Panthera.
(1.3) Develop a model of population dynamics and movement ecology of jaguars and wide-ranging prey species based on enhanced monitoring data.	Panthera*, Forest Department	With project oversight from Forest Department, Panthera will lead activities under this output.
(1.4) Develop three new management protocols and regulatory measures, including a National Jaguar and Prey Policy, Strategy and Management Plan.	Panthera*, Forest Department	Forest Department will lead activities herein with technical guidance from Panthera.
(1.5) Enhanced data and information systems applied to design and initiate implementation of a landscape management plan within the 178,000-ha target area.	Panthera*, Forest Department	With project oversight from Forest Department, Panthera will lead activities under this output.
C2: Promote a more wildlife-friendly economy		
Strengthened systems for responding to jaguar–livestock conflict and for encouraging sustainable ecotourism, with targeted application in Belize’s Northeast forest landscape totaling 125,000 ha.		
(2.1) Develop an enhanced rapid response protocol and capacities for responding to jaguar-livestock conflict and applied in the target landscape	Corozal Sustainable Future Initiative*, Forest Department	CSFI will lead activities herein with support from the Forest Department.
(2.2) Develop a training and outreach program for sustainable ecotourism	Corozal Sustainable Future Initiative*, Forest Department	CSFI will lead activities herein with support from the Forest Department.
(2.3) Support selected alternative livelihoods activities to reduce jaguar/livestock interaction and promote sustainable management practices in the Northern Corridor and surrounding communities	Corozal Sustainable Future Initiative*, Forest Department	CSFI will lead activities herein with support from the Forest Department.
C3: Combat wildlife crime and unsustainable hunting		
Enhanced knowledge of the current status of the jaguar/prey/game species and hunting activities in 49,475 ha of the Maya Golden Landscape informs regulations for threat reduction and sustainable population management.		
(3.1) Develop a model estimating sustainable game species offtake, including jaguar prey offtake by viable predator populations.	Ya’axche Conservation Trust*, Forest Department	Forest Department will lead activities herein and engage other stakeholders with technical guidance from Ya’axche Conservation Trust.
(3.2) Develop a strategy and action plan for the monitoring, sustainable management and use of game species, including a pilot sustainable hunting quota system, developed and implemented in identified communities.	Ya’axche Conservation Trust*, Forest Department	Forest Department will lead activities herein and engage other stakeholders with technical guidance from Ya’axche Conservation Trust.

(3.3) Prepare drafting-notes for Wildlife Protection Act of 1982 (revised 2000) amendment and associated hunting and illegal wildlife trade regulations, based on consultations.	Forest Department	The Forest Department will lead activities herein.
C4: Coordinating and enhancing knowledge		
Enhanced national/transboundary/jaguar range collaboration, knowledge management and communication		
(4.1) Document lessons learned/case studies from the three (3) target landscapes are captured and disseminated.	Forest Department	The Forest Department will facilitate activities herein along with component leads: Panthera, CSFI and Ya'axche Conservation Trust.
(4.2) Develop a reinforced national multi-stakeholder mechanism for sustained jaguar communication and coordination.	Forest Department	The Forest Department will facilitate activities herein along with component leads: Panthera, CSFI and Ya'axche Conservation Trust.
(4.3) Strengthen transboundary cooperation and knowledge sharing strengthened via bilateral and/or trilateral exchanges (Belize, Mexico, Guatemala) with a focus on key transboundary landscapes.	Forest Department	The Forest Department will be responsible for activities herein with support from the UNDP.
(4.4) In cooperation with the GEF Global Wildlife Programme, a forum of experts organized to exchange lessons learnt regarding key topics such as landscape management of jaguars and wildlife crime/trafficking.	Forest Department	The Forest Department will facilitate activities herein.

5.3 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.

The Social and Environmental Screening Procedure assesses this project as moderate-risk, however, should grievances and conflicts arise, they should be submitted to the Project Board. Registered grievances will be reviewed and managed by the project execution group/project board.

To do so, the project will at inception: (1) Identify appropriate staff who will aid with responses to conflicts and grievance that may arise from stakeholder; (2) 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 (3) 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 inception of the four (4) project components for the detection of stakeholder grievances. SoP's for recording and addressing community and other stakeholder grievances at the sub-grantee project level. SoP's will describe further specifics of the grievance mechanism, as necessary, to suit whatever local-specific circumstances.

Grievance Protocol

The following presents the grievance protocol which will guide project operations in the event of grievance. The protocol consists of the following four (4) steps:

1. **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.
2. **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.
3. **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. 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.
4. **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.

5.4 Monitoring and Reporting

The Project Executing Agency (MFFESD) will be engaged in monitoring project implementation in accordance with responsibilities assigned. Implementation partners (component leads) will be responsible for reporting on progress and milestones for their respective components. The Project Executing Agency will assess output progress and remain responsive to any delays or potential conflicts or grievances.

Project outputs and indicators from the Project Results Framework will facilitate the assessment of stakeholder engagement and intervention effectiveness. These indicators may be disaggregated further by stakeholder type, gender, etc., as needed and appropriate. The findings of the application of the indicators will be shared with the activities convening in Component 4 of this project.

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Appendix 8.1: List of Stakeholders

Table 18 (below) illustrates the forty-three (43) stakeholders identified throughout the stakeholder analysis. These stakeholders have been classified under one of five (5) main categories: 1) academia, 2) community, 3) government agency, 4) non-government or 5) social group. Stakeholders were also identified by one or more related-component as well.

TABLE 18: LIST OF STAKEHOLDERS BY COMPONENT

Stakeholder	Type	C1	C2	C3	C4
Environmental Research Institute	Academia	●			●
Panthera	Academia	●	●	●	●
Virginia Polytechnic Institute and State University (Virginia Tech)	Academia	●	●	●	●
Big Falls/Hicatee	Community			●	
Bladen	Community			●	
Democracia	Community	●			
Fireburn	Community		●		
Gallon Jug	Community		●		
Golden Stream/Tambran	Community			●	
Gracie Rock	Community	●			
Indian Creek	Community			●	
Little Belize (Mennonite)	Community		●		
Mahogany Heights	Community	●			
Mayan Communities (FPIC)	Community			●	
Medina Bank	Community			●	
Middlesex	Community	●			
Neuland	Community		●		
San Miguel	Community			●	
Santa Martha	Community	●			
Sartaneja	Community		●		
Silver Creek	Community			●	
St. Matthews/ Frank's Eddy	Community	●			
Steadfast	Community	●			
Taiwanese Village	Community	●			
Tour guides	Community	●			
Trio	Community			●	

Department of Agriculture	Government Agency		●		
Fisheries Department (Advisory Board)	Government Agency			●	
Forest Department	Government Agency	●	●	●	●
Belize Audubon Society (Cockscomb Basin)	NGO	●		●	●
Belize Livestock Production Association	NGO		●		
Belize Tourism Industry Association (Corozal and Orange Walk)	NGO	●	●		
Corozal Sustainable Future Initiative	NGO	●	●	●	●
Friends for Conservation and Development	NGO	●		●	●
Programme for Belize	NGO	●		●	●
Sarteneja Alliance for Conservation and Development	NGO		●		●
The Belize Zoo	NGO		●		
Veterinary Surgeons Board of Belize	NGO		●		
Ya'axche Conservation Trust	NGO	●		●	●
El Sartenjenas Cooperative	Social Group		●		
Indian Creek Maya Arts Women's Group	Social Group			●	

Appendix 8.2: Power/Interest Matrix

Prioritization Criteria

Prioritization criteria were developed to objectively identify, propose and define the level of engagement in each component per stakeholder. A variation of the Power/Interest Framework was used to develop criteria within the project context. Two (2) different sets of criteria were developed for two (2) broader groups of stakeholders: 1) Institutions and 2) community. Institutions (which follow Criteria A) are comprised of the following stakeholder categories: Government Agencies, NGO and Academia. Communities (which follow Criteria B) are comprised of the following stakeholder categories: Social Groups and Communities (see Table 19 for Criteria).

TABLE 19: PRIORITIZATION CRITERIA PER COMPONENT

Component	Type	Criteria (1 point per question. Maximum score attainable for Interest or Power is 3)	
		Interest	Power
C1 - Improve the conservation of 200,000 Hectares (ha) of the Sibun River watershed landscape for jaguar protection through enhanced monitoring and management. It will implement a national-level data collection and data management system (based on extended camera trap deployment) to support and enhanced conservation management?	Criteria A - Institutions (Government, NGO/ Academia)	<ol style="list-style-type: none"> 1. Is the stakeholder involved in conservation or environmental protection and management? 2. If yes, does the stakeholder conserve, protect or manage ecosystems with the jaguar-population present? 3. If yes, are you involved in jaguar-protection/management? 	<ol style="list-style-type: none"> 1. Does the stakeholder possess the authority to C1-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C1-related activities? 3. Does the stakeholder have jurisdiction in the proximity of the project area for C1?
	Criteria B - Community (Social Group/ Community)	<ol style="list-style-type: none"> 1. Is the stakeholder affected by human-jaguar interaction? 2. If yes, are these interactions as a result of geographic location? 3. If yes, are these interactions as a result of economic activity/livelihood? 	<ol style="list-style-type: none"> 1. Is the stakeholder knowledgeable or experienced in dealing with C1-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C1-related activities? 3. Does the stakeholder manage land within the project area for C1?
C2 - To strengthen the systems for responding to jaguar/livestock conflict and encourage sustainable ecotourism, with targeted application in Belize's Northeast	Criteria A - Institutions (Government, NGO/ Academia)	<ol style="list-style-type: none"> 1. Is the stakeholder involved in conservation or environmental protection and management? 2. If yes, does the stakeholder conserve, protect or manage ecosystems with the jaguar-population present? 3. If yes, are you involved in jaguar-protection/management? 	<ol style="list-style-type: none"> 1. Does the stakeholder possess the authority to C2-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C2-related activities? 3. Does the stakeholder have jurisdiction in the

forest landscape (area totalling 180,000 ha.)?			proximity of the project area for C2?
	Criteria B - Community (Social Group/ Community)	<ol style="list-style-type: none"> 1. Is the stakeholder affected by human-jaguar interaction? 2. If yes, are these interactions as a result of geographic location? 3. If yes, are these interactions as a result of economic activity/livelihood? 	<ol style="list-style-type: none"> 1. Is the stakeholder knowledgeable or experienced in dealing with C2-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C2-related activities? 3. Is the stakeholder manage land within the project area for C2?
C3 - To enhance the knowledge of the current status of the jaguar/prey/game species and hunting activities in the Maya Golden Landscape informing regulations for threat reduction and sustainable population management (ha to be determined)?	Criteria A - Institutions (Government, NGO/ Academia)	<ol style="list-style-type: none"> 1. Is the stakeholder involved in conservation or environmental protection and management? 2. If yes, does the stakeholder conserve, protect or manage ecosystems with the jaguar-population present? 3. If yes, are you involved in jaguar-protection/management? 	<ol style="list-style-type: none"> 1. Does the stakeholder possess the authority to C3-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C3-related activities? 3. Does the stakeholder have jurisdiction in the proximity of the project area for C3?
	Criteria B - Community (Social Group/ Community)	<ol style="list-style-type: none"> 1. Is the stakeholder affected by human-jaguar interaction? 2. If yes, are these interactions as a result of geographic location? 3. If yes, are these interactions as a result of economic activity/livelihood? 	<ol style="list-style-type: none"> 1. Is the stakeholder knowledgeable or experienced in dealing with C3-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C3-related activities? 3. Is the stakeholder manage land within the project area for C3?
C4 - To enhance the national/transboundary/jaguar range collaboration, knowledge management and communication?	Criteria A - Institutions (Government, NGO/ Academia)	<ol style="list-style-type: none"> 1. Is the stakeholder involved in conservation or environmental protection and management? 2. If yes, does the stakeholder conserve, protect or manage ecosystems with the jaguar-population present? 3. If yes, are you involved in jaguar-protection/management? 	<ol style="list-style-type: none"> 1. Does the stakeholder possess the authority to C4-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C4-related activities? 3. Does the stakeholder have jurisdiction in the proximity of the project area for C4?

	Criteria B - Community (Social Group/ Community)	1. Is the stakeholder affected by human-jaguar interaction? 2. If yes, are these interactions as a result of geographic location? 3. If yes, are these interactions as a result of economic activity/livelihood?	1. Is the stakeholder knowledgeable or experienced in dealing with C4-related activities? 2. Does the stakeholder possess the capacity to assist or engage in C4-related activities? 3. Is the stakeholder manage data within the project scope for C4?
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Power/Interest Scores

Table 20-23 present the Power/Interest scores for stakeholders by project component.

TABLE 20: STAKEHOLDERS SCORES FOR COMPONENT 1

Stakeholder	Criteria	Interest	Power
Democracia	Community	3	0
Gracie Rock	Community	3	0
Mahogany Heights	Community	3	0
Middlesex	Community	3	0
Santa Martha	Community	3	0
St. Matthews/ Frank's Eddy	Community	3	0
Steadfast	Community	3	0
Taiwanese Village	Community	3	0
Tour guides	Community	3	0
Belize Tourism Industry Association (Corozal and Orange Walk)	NGO	0	1
Environmental Research Institute	Academia	2	2
Panthera	Academia	3	3
Virginia Polytechnic Institute and State University (Virginia Tech)	Academia	3	3
Forest Department	Government Agency	3	3
Belize Audubon Society (Cockscomb Basin)	NGO	3	3
Corozal Sustainable Future Initiative	NGO	3	3
Friends for Conservation and Development	NGO	3	3
Programme for Belize	NGO	3	3
Ya'axche Conservation Trust	NGO	3	3

TABLE 21: STAKEHOLDERS SCORES FOR COMPONENT 2

Stakeholder	Criteria	Interest	Power
Corozal Sustainable Future Initiative	NGO	3	3
The Belize Zoo	NGO	3	3
Veterinary Surgeons Board of Belize	NGO	1	3
Fireburn	Community	3	2
Gallon Jug	Community	3	2
Little Belize (Mennonite)	Community	3	2
Neuland	Community	3	2
Belize Livestock Production Association	NGO	1	2
Sarteneja Alliance for Conservation and Development	NGO	1	2
Panthera	Academia	3	1
Virginia Polytechnic Institute and State University (Virginia Tech)	Academia	3	1
Sartaneja	Community	3	1
Department of Agriculture	Government Agency	3	1
Forest Department	Government Agency	3	1
El Sartenjenas Cooperative	Social Group	2	0

TABLE 22: STAKEHOLDERS SCORES FOR COMPONENT 3

Stakeholder	Criteria	Interest	Power
Forest Department	Government Agency	3	3
Belize Audubon Society (Cockscomb Basin)	NGO	3	3
Corozal Sustainable Future Initiative	NGO	3	3
Friends for Conservation and Development	NGO	3	3
Programme for Belize	NGO	3	3
Ya'axche Conservation Trust	NGO	3	3
Panthera	Academia	3	2
Virginia Polytechnic Institute and State University (Virginia Tech)	Academia	3	2
Fisheries Department (Advisory Board)	Government Agency	1	2
Indian Creek Maya Arts Women's Group	Social Group	3	2
Big Falls/Hicatee	Community	3	0
Bladen	Community	3	0
Golden Stream/Tambran	Community	3	0
Indian Creek	Community	3	0
Mayan Communities (FPIC)	Community	3	0

Medina Bank	Community	3	0
San Miguel	Community	3	0
Silver Creek	Community	3	0
Trio	Community	3	0

TABLE 23: STAKEHOLDER SCORES FOR COMPONENT 4

Stakeholder	Criteria	Interest	Power
Environmental Research Institute	Academia	3	3
Panthera	Academia	3	3
Virginia Polytechnic Institute and State University (Virginia Tech)	Academia	3	3
Forest Department	Government Agency	3	3
Belize Audubon Society (Cockscomb Basin)	NGO	3	3
Corozal Sustainable Future Initiative	NGO	3	3
Friends for Conservation and Development	NGO	3	3
Programme for Belize	NGO	3	3
Ya'axche Conservation Trust	NGO	3	3
Sarteneja Alliance for Conservation and Development	NGO	1	2

ANNEX 9: INDIGENOUS PEOPLES' PLANNING FRAMEWORK (IPPF)

Indigenous Peoples' Planning Framework (IPPF)

Enhancing jaguar corridors and strongholds through improved management and threat reduction

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LIST OF ACRONYMS

GEF	The Global Environment Facility
IPP	Indigenous People Plan
IPPF	Indigenous People Planning Framework
NIM	National Implementation
PPG	Project Preparation Grant
SoPs	Standard Operating Procedures
UNDP	United Nations Development Program
YCT	Ya'axche Conservation Trust

EXECUTIVE SUMMARY

This Indigenous Peoples' Planning Framework (IPPF) has been prepared for the project: "Enhancing jaguar corridors and strongholds through improved management and threat reduction." It lays the foundation for a more in-depth Indigenous Peoples' Plan (IPP) which, together with a process of Free Prior and Informed Consent (FPIC), will be undertaken during the first year of full project implementation.

Belize has a culturally-diverse population of 408,000 mainly composed of Mestizo/Spanish or Creole (88.8%) (see Figure 1). These groups are followed by the Mayan population at 11.3%, along with the Garifuna at 6.1%, who represent the two indigenous groups in Belize⁵⁸. The Mayan populations are the first inhabitants of Belize and are the direct descendants of the indigenous inhabitants of the Yucatán peninsula.

There are three (3) Mayan groups present in Belize: Yucatec Maya (56.0%), Mopan Maya (35.6%), and Q'eqchi' Maya (7.8%)⁵⁹. The southern region of Belize hosts the majority (71.9%)⁶⁰ of the Mayan population (Toledo District and Stann Creek District) - who reside in small villages or communities. Western Belize hosts another 16.4% of the Mayan population in Belize whilst Northern and Central Belize (Corozal, Orange Walk and Belize District) host the remaining 11.7% of the Mayan population. In recent years, Mayan communities in Belize have established village councils, primary education institutions and community centers as adaptations to modern society. Many of these communities also maintain language, cultural traditions and livelihood practices.

Throughout most of Belize, members of indigenous minorities are integrated within multi-ethnic communities. The exception is in the south of Belize, which includes a number of predominantly indigenous communities of Kechi Mayans. Components 1-3 of the project are each focused on a specific landscape. Within the Component 3 landscape, a total of nine Mayan indigenous communities were identified, with a total estimated population of 4,531.

None of the seven communities located in Landscape 1, nor any of the five villages located in Landscape 2, may be considered indigenous communities⁶¹. Nevertheless, there have been redistributions of people of original Mayan ethnicity (usually defined as parents speaking a Mayan language), moving from Southern traditional communities to other parts of the country and becoming part of a modern integrated Belize. Thus, some members of indigenous minorities are integrated within multi-ethnic communities.

In this context, there remains some uncertainty regarding the existence of Indigenous Peoples, following UNDP's definition of IP under its SES procedures, within Landscapes 1 and 2. While stakeholder consultations have taken place under the design phase (PPG), further social analysis will need to be conducted during the inception phase in order to determine whether indigenous groups are present in Landscapes 1 and 2 and, if so, whether they may be affected by project activities in those areas.

The Ya'axche Conservation Trust (YCT) will be empowered as an implementing partner in the project. They will lead the implementation of Component 3, executing project activities defined under this component while ensuring the avoidance and mitigation of adverse impacts on the indigenous population. YCT was found to possess the expertise, experience and support to perform project activities in collaboration with the Mayan indigenous population. The organization maintains an extensive presence within the area covered by component 3 and has implemented similar projects/programmes within the area, while establishing and maintaining strong relationships with the indigenous communities.

⁵⁸ 2010 Population and Housing Census. Statistical Institute of Belize

⁵⁹ (Ibid)

⁶⁰ (Ibid)

⁶¹ This is not to say that there are no individuals in these landscapes who are of Mayan descent, as per the above population distribution data. As is the case throughout Belize, there have been redistributions of people of original Mayan ethnicity (usually defined as parents speaking a Mayan language), moving from Southern traditional communities to other parts of the country and becoming part of a modern integrated Belize.

An important and first task of YCT will be to complete the Free, Prior and Informed Consent (FPIC) process begun during the formulation stage of the project. As a key first step in obtaining the (FPIC) of Indigenous Peoples in the context of the present project, representatives of nearby Mayan indigenous communities within the project area for component 3 participated in a community town hall-style meeting to discuss a preliminary draft of the project concept. The purpose of the meeting was to receive initial validation and obtain feedback from the indigenous communities to inform project design. Participants of the meeting did not make any objections to the draft of the child project concept. YCT will also be responsible for implementation of FPIC. It will guide the development of the IPP, which will build on the present framework and guide the project's work with indigenous peoples throughout its implementation.

No activities under Component 3 will be carried out until the FPIC has been secured, in line with the subsequent IPP. In addition, consultations and assessments conducted during preparation of the IPP will determine whether any indigenous groups are indeed present in Component 1 and 2 areas and, if so, which project activities under these components require FPIC based on their potential impacts on such groups. Activities identified as such would not be initiated until FPIC has been completed.

In all of its consultations with indigenous peoples, including the obtaining of FPIC, YCT will act in accordance with UNDP Social and Environmental Standards (SES), and the procedures defined by Mayan leaders and articulated in their "Consultation Framework for the Maya People of Southern Belize".

1. PURPOSE OF THE FRAMEWORK

The objective of this Indigenous Peoples Planning Framework (IPPF) is to outline a process and approach within the project which can avoid, minimize or mitigate potentially adverse impacts on, and/or increase the benefits of the project for, indigenous populations (stakeholders) within the project.

2. PROJECT OBJECTIVE

To secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation.

3. PROJECT COMPONENTS

The project objective is to secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation.

The project is composed of four (4) components:

Component 1: Conserving wildlife and habitats

Outcome 1: Information and Data Management Systems Contribute To Improved Conservation Of Jaguar And Other Wildlife At Country Level, With Targeted Application In 177,914 Ha Of Sibun River Watershed Landscape
The project will help to ensure Belize's ability to monitor jaguars and their prey throughout the country. This outcome will be significantly enhanced via the consolidation of a wildlife monitoring network, based largely on camera trap data, and of a means of bringing data together within a single database. This will require key stakeholders to work together to populate the database and to assure the systematic upkeep of its constituent elements. Outstanding gaps in existing monitoring have been identified and will be filled, thus providing the added data needed to ensure a significantly enhanced understanding of jaguar distribution and presence across a contiguous core area of the jaguar landscape. Understanding will be further enhanced through the development and application of a population dynamics and movement ecology model.

In addition to its national-level aspects, the project will demonstrate its gap-filling and information-using approach in a contiguous area of central Belize, the Sibun River watershed (see Annex 1, Map 1). The area consists of a variable landscape in terms of habitat, with majority broadleaf forest and some pine savannah habitat at the edges. The more accessible areas in the Northern (flatter) portions of Manatee Forest Reserve have been selectively logged through several logging concessions. The Southern forest reserves of Sibun and Sittee River are extremely rugged and stream rich and as such difficult to traverse with heavy machinery. Here the vegetation is more intact. Manatee Reserve has considerable hunter presence and as such could be depleted of larger ungulate species (white lipped peccary extinct).

Component 2: Promoting a wildlife-friendly economy

Outcome 2: Strengthened systems for responding to jaguar–livestock conflict and for encouraging sustainable ecotourism, with targeted application in Belize's Northeast forest landscape totaling 125,000 ha.

This outcome aims to assure the capacity of Belizean authorities to safely and professionally capture individual jaguars that may be threatening lives or livelihoods of people in the human dominated landscape. This team needs to be able to capture jaguars, using the latest techniques with the least possible harm to jaguars, or possible harm to team members or public. The team need to be well versed in jaguar ecology in human dominated landscapes and able to make expert assessments of whether trapping is necessary or not in any given situation. In this way, the project will contribute to a more harmonious relationship with the livestock sector in particular.

In broader economic terms, the project will aim to stimulate jaguar-themed tourism outside of protected areas in conflict areas, as a remedy against negative perception of jaguars. Several initiatives for creating economic activity around tourism and citizen science projects will be tested.

Component 3: Combatting wildlife crime and unsustainable hunting

Outcome 3: Enhanced knowledge of the current status of the jaguar / prey / game species and hunting activities in 49,475 ha of the Maya Golden Landscape informs regulations for threat reduction and sustainable population management

Under the GEF alternative, six communities will be empowered to manage wildlife sustainably on community lands in Toledo District, within an area known as the Mayan Golden Landscape. The habitat here is edge habitat, meaning logged, recovering and fragmented. Hurricane Iris in 2001 caused considerable damage in this area. The area is water rich and this southern region is the wettest part of the country. This area is the transition zone from the higher elevation Maya Mountain Massive to the coastal plain with changing into Pine-savannah habitat and literal forest. All this habitat is at the edge of large stretches of intact protected broadleaf forest habitat and as such, wildlife spillover can be considerable. Hunting is traditional and widespread. Species assemblages are still complete.

Sustainable offtake—including that associated with hunting by the area’s jaguar population—will be estimated through a combination of camera trap data, community surveys and modeling. A quota system will be designed and tested. Information derived from surveys and a community-based monitoring system will be instrumental in establishing an early warning system for overhunting of prey species, as well as for any signs of emerging commercial trade in wildlife, including jaguar parts. Results will be captured and will be made available for use in ongoing efforts to update the Wildlife Law and for potential adaptation to other areas of the country.

Component 4: Coordinating and enhancing knowledge

Outcome 4: Enhanced national / transboundary / jaguar range collaboration, knowledge management and communication

The project will pay close attention to knowledge management, which will take place at multiple geographic and thematic levels:

Within the Global Wildlife Program: As a child project under the Global Wildlife Program (GWP), the present project will maintain especially close ties with other child projects under the GWP. It will support the diffusion of knowledge, know-how and ingenuity: (i) across the Jaguar Corridor, which extends across 16 countries and 6,000 km², and (ii) with other projects and regions that may be addressing the conservation of big cats or other umbrella species.

Within Belize: Throughout its implementation, the project will develop knowledge sharing products such as: report of lessons learned and good practices, south-south cooperation, triangular cooperation, as well as tools and methodologies that can be applicable to the jaguar as well as other species, at different levels, both locally and nationally. Additionally, the obtained results will be shared with countries in the region (LAC), in a way that contributes to the strengthening of the Jaguar Roadmap 2020-2030 as well as the implementation of the Agenda 2030, mainly associated with SDG 15.

Within GEF: The project will liaise and exchange knowledge with relevant GEF-7 Impact Programs, particularly the Food Systems, Land Use and Restoration Impact Program (FOLUR), which will support transformational shifts in large landscapes by taking into account competing demands for production of staple foods and major agricultural commodities, while harnessing opportunities to protect natural environments and restore degraded landscapes. Given the importance of expanding production of agricultural commodities as a threat to jaguars and a driver of habitat loss within the Jaguar Corridor, the FOLUR programme—both its methodological approaches and the on-the-ground support afforded—will be a target for knowledge sharing by the project.

4. OVERVIEW OF INDIGENOUS PEOPLES IN BELIZE

Belize has a culturally-diverse population of 408,000⁶² mainly composed of Mestizo/Spanish or Creole (88.8%) (see Figure 11). These groups are followed by the Mayan population at 11.3%, along with the Garifuna at 6.1%, who

⁶² Statistical Institute of Belize (2019 mid-year estimate)

represent the two indigenous groups in Belize⁶³. The Mayan populations are the first inhabitants of Belize and are the direct descendants of the indigenous inhabitants of the Yucatán peninsula.

There are three (3) Mayan groups present in Belize: Yucatec Maya (56.0%), Mopan Maya (35.6%), and Q'eqchi' Maya (7.8%)⁶⁴. The southern region of Belize hosts the majority (71.9%)⁶⁵ of the Mayan population (Toledo District and Stann Creek District) - who reside in small villages or communities. Western Belize hosts another 16.4% of the Mayan population in Belize whilst Northern and Central Belize (Corozal, Orange Walk and Belize District) host the remaining 11.7% of the Mayan Population.

Historic Mayan communities were largely autonomous and self-sufficient. Today, Mayan communities face pressure from the pace of change, especially with the emergence/dominance of economic, political, educational, transportation and communication systems. In recent years, Mayan communities in Belize have established village councils, primary education institutions and community centers as adaptations to modern society. Many of these communities also maintain language, cultural traditions and livelihood practices.

FIGURE 11: PERCENTAGE DISTRIBUTION OF TOTAL POPULATION BY ETHNIC GROUP⁶⁶

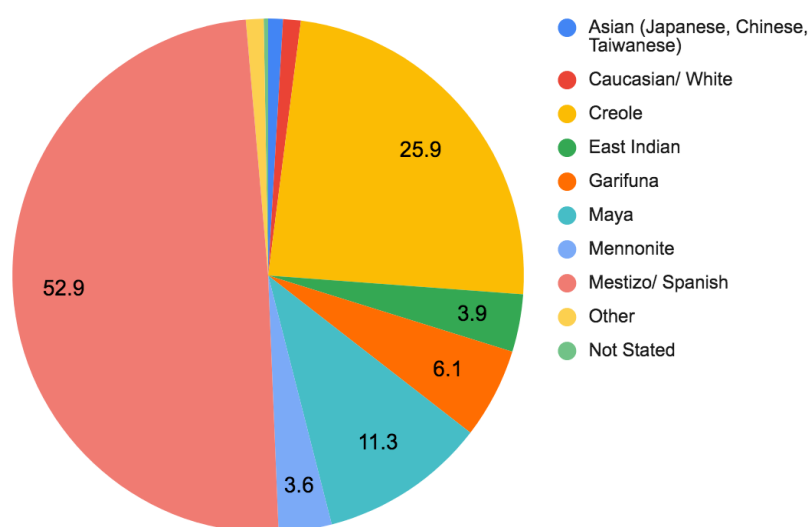


TABLE 24: DEMOGRAPHICS OF MAYA POPULATION IN BELIZE⁶⁷

Total Population	366,304
Indigenous Mayan Population	45,257
% of Total Population	11.3%
Male : Female Ratio	12:13

Indigenous Mayan communities have traditionally been organized around agriculture and other extractive activities (e.g. fishing, hunting and logging). These communities typically consisted of farmers engaged in

⁶³ 2010 Population and Housing Census. Statistical Institute of Belize

⁶⁴ (Ibid)

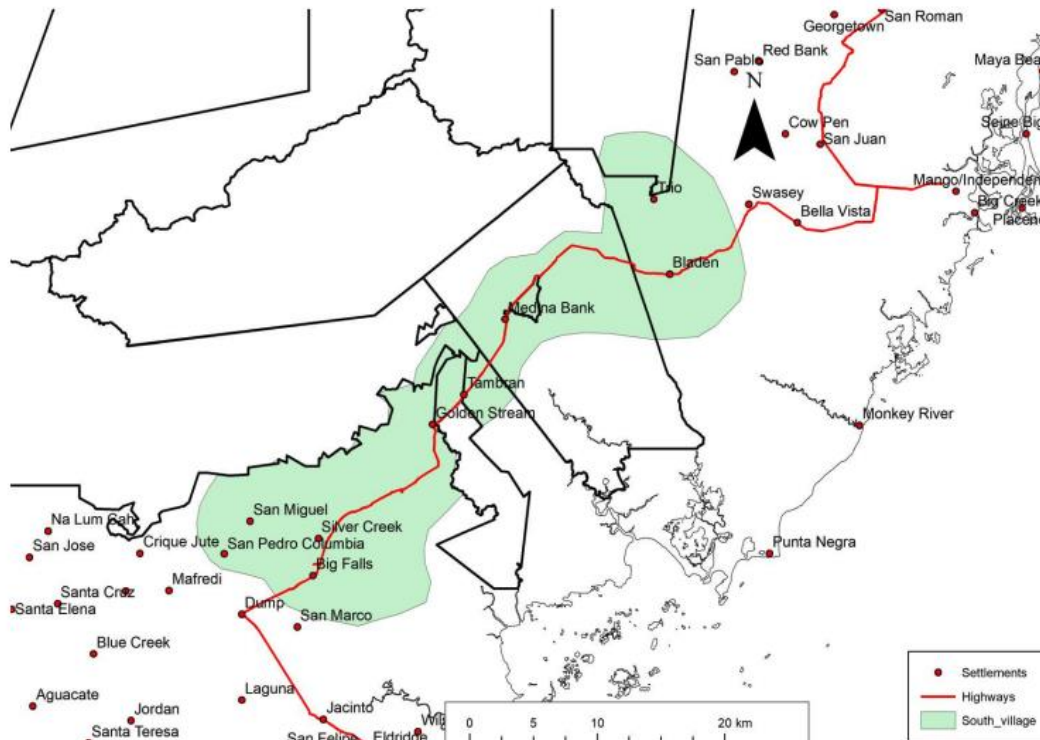
⁶⁵ (Ibid)

⁶⁶ 2010 Population and Housing Census. Statistical Institute of Belize

⁶⁷ 2015 Compendium of statistics. Statistical Institute of Belize website: <http://sib.org.bz/>

subsistence farming and/or small-scale commercial farming and hunting. In northern Belize, the (Yucatecan) Maya communities rely on agriculture (growing sugarcane) as a source of livelihood, while in southern Belize the indigenous Maya people practice subsistence farming using traditional methods⁶⁸.

FIGURE 12: PROJECT AREA FOR COMPONENT 3



Throughout most of Belize, some members of indigenous minorities are integrated within multi-ethnic communities. The seven communities located in Landscape 1 and the five villages located in Landscape 2 have an approximate ethnic breakdown as follows:

Landscape 1 villages

1. **La Democracia:** creole village, with recent influx of Central American immigrants (mainly Guatemala, Honduras, El Salvador).
2. **Gracie Rock:** Creole village
3. **Mahogany Heights** Creole village with people relocated from Belize City. Some recent Central American immigrants (mainly Guatemala, Honduras, El Salvador)
4. **Middlesex:** Central American immigrants (mainly Guatemala, Honduras, El Salvador). Mainly a community build around large scale citrus company housing seasonal workers. Families remaining, bringing family over (language mainly Spanish)
5. **Santa Martha** Central American immigrants (mainly Guatemala, Honduras, El Salvador). Mainly a community build around large-scale citrus company housing seasonal workers. Families remaining, bringing family over (language mainly Spanish)

⁶⁸ Source: IFAD- Centre for Indigenous Peoples' Autonomy and Development

6. **St. Matthews** Original creole village but changing into a majority immigrant community (mainly Guatemala, Honduras, El Salvador).
7. **Steadfast** is a very small population located in a citrus production area that includes immigrant communities and is close to the coast having creole communities.

Landscape 2 villages

1. **Fireburn** Traditional creole village
2. **Gallon Jug** Industry village outside of component 2 area. Likely included as example of production. Village occupied by whoever is employed by company.
3. **Little Belize** Mennonites only
4. **Neuland** Mennonites only
5. **Sarteneja** Mexican fishery community

There have been redistributions of people of original Mayan ethnicity (usually defined as parents speaking a Mayan language), moving from Southern traditional communities to other parts of the country and becoming part of a modern integrated Belize. Thus, some members of indigenous minorities are integrated within multi-ethnic communities.

In this context, there remains some uncertainty regarding the existence of Indigenous Peoples, following UNDP's definition of IP under its SES procedures, within Landscapes 1 and 2. While stakeholder consultations have taken place under the design phase (PPG), further social analysis will need to be conducted during the inception phase in order to determine whether indigenous groups are present in Landscapes 1 and 2 and, if so, whether they may be affected by project activities in those areas.

A different situation is found in the south of Belize, which includes a number of predominantly indigenous communities of Kechi Mayans that were identified and consulted during the PPG stakeholder engagement process. These communities live in the landscapes pertaining to component 3, namely the Toledo District in southern Belize. A total of nine Mayan indigenous communities were identified, with a total estimated population of 4,531. (see Table 24). Communities such as Trio Village, Big Falls, and Indian Creek Village host relatively larger populations, composing 54.4% of the identified communities. There is very low disparity between gender populations in the nine (9) identified communities. See Table 25 (below) for other demographic statistics on these communities.

TABLE 25: LIST OF IDENTIFIED INDIGENOUS COMMUNITIES AND DEMOGRAPHICS⁶⁹

Indigenous Communities	Population	Male/Female Ratio	No. of HH	Avg. HH size
Aguacate	NA	NA	NA	NA
Trio	899	1.2	188	4.8
Big Falls	845	1.0	169	5.0
Indian Creek	722	1.1	134	5.4
San Miguel	537	1.0	96	5.6

⁶⁹ Statistical Institute of Belize (2010)

Silver Creek	476	1.1	83	5.7
Bladen	466	1.1	110	4.2
Golden Stream	349	1.0	52	6.7
Medina Bank	237	0.9	34	7.0
Total	4531	--	866	5.6

The following provides a brief description of the indigenous communities identified under Component 3.

1. **Aguacate** is a small Qeqchi-Maya community with a population of 380 people located in the highland of Toledo. The community is governed by the traditional Alcalde System and a village council who are actively involved in the planning and improvement of the community. Its current inhabitants are mostly subsistence farmers.
2. **Big Falls** is a small village located in Belize's Southern Toledo District. The village is home to a population of around 845 people. The village has a number of cultural and adventure attractions and the present Mayan community serves to educate travelers on traditional customs and promote authentic interactions between cultures. The main source of livelihood for the population is farming which includes crop, livestock and forest. There are four large citrus farms in the Big Falls area. Pedro Che is the current Chairperson for the Big Falls community.
3. **Bladen** is a village located in Belize's Southern Toledo District with a total population of 466 people. Bladen forms a significant portion of the key biodiversity area. The main source of livelihood for the population is farming which includes crop, livestock and forest. The current Chairperson for the Bladen area is Jose Coc.
4. **Golden Stream/Tambran** is a village located in Belize's Southern Toledo District with a total population of 349 people. The region makes up one of the last stretches of rare lowland tropical broadleaf forest which serves as a valuable conservation corridor linking the extensive protected areas in the Maya Mountains to the north (Maya Mountain Forest Reserve, Bladen Nature Reserve and Chiquibul National Park) with the Port Honduras Marine Reserve. The community has one of the most dynamic women's groups; its members sell embroidery and carving made of river and slate. The Chairperson responsible for this area is Louis Pop.
5. **Indian Creek** is a village located, in the Toledo District, along the Hummingbird Highway inhabited by a population of 722. Most community members still rely on subsistence agriculture and hunting. The village chairperson is currently Sebastian Shol.
6. **Medina Bank** is a village located in the Toledo District, which is easy to access and offers delightful walks in the high canopy rain- forest and a hike to a waterfall. The village was founded in 1990, and the population of about 237 is mainly Kek'chi. The current village chairperson Romano Cal.
7. **San Miguel** is a small Kek'chi⁷⁰ village located in the Toledo District with a population of 537. The Rio Grande River serves as a subsistent water and food source (fishing) for the community. Members in the community depend on subsistence farming as livelihood. The current village chairperson is Sebastian Pop.
8. **Silver Creek** is a small village located in the Toledo District. The village is home to a total population of 476 people. Near the village of Silver Creek is an ancient Mayan site. Farming provides a main source of livelihood for the community which includes corn, rice, beans and ground foods. The current village chairperson is Reinaldo Ico.

⁷⁰ Kek'chi is an ethnic subgroup within the Mayan ethnicity in Belize.

9. **Trio** is a village located in the Toledo District inhabited by a population of 899. Agricultural production provides a source of livelihood for this community including citrus, cacao, banana and pineapple productions. The current village chairperson is Rodolfo Morales.

In summary, communities located in all project landscapes, including indigenous communities living in Landscape 3, as well as predominantly mixed, Creole and Mennonite communities, will be consulted and the situation will be further assessed during the inception phase as per the project's stakeholder participation plan and as indicated in the present IPPF. While FPIC will clearly be required for all Component 3 activities, the above consultations and any assessments will ensure that, if indigenous groups are indeed present in Component 1 and 2 areas, an FPIC process will also be conducted before any project activities that may affect these groups take place under these components.

5. RELEVANT LEGAL FRAMEWORK AND REGULATIONS

Policies, Laws, Rules and Regulations Applicable to IPs

Following its amendment in 2001, the preamble to the Belize Constitution mentions the need for the State to protect the cultural identity and values of Belizeans, including those of indigenous peoples.⁷¹ The Constitution thus recognizes the cultural diversity of the country's territories, although it does not recognize customary rights or indigenous jurisdiction.

The Government of Belize has undertaken a commitment to reactivate initiatives promoting respect for the rights of indigenous peoples, in accordance with the provisions of the United Nations Declaration on the Rights of Indigenous Peoples, which the government adopted in 2007.⁷²

In 2007, the Supreme Court of Belize recognized the property rights of the Q'eqchi' and Mopan Maya communities to the ancestral lands they occupied.⁷³

Relevant International Agreements Belize Entered

Belize has not ratified International Labour Organization (ILO) Convention No. 169.

UNDP's Social and Environmental Standards (SES)

Social and environmental sustainability are fundamental to the achievement of development outcomes and are systematically mainstreamed into UNDP's Programme and Project Management Cycles. UNDP's Social and Environmental Standards (SES) underpin and demonstrate this commitment. The SES require that all UNDP Programmes and Projects enhance positive social and environmental opportunities and benefits as well as ensure that adverse social and environmental risks and impacts are avoided, minimized, and mitigated.

UNDP Programmes and Projects adhere to the objectives and requirements of the SES, which are to: (i) strengthen the social and environmental outcomes of Programmes and Projects; (ii) avoid adverse impacts to people and the environment; (iii) minimize, mitigate, and manage adverse impacts where avoidance is not possible; (iv) strengthen UNDP and partner capacities for managing social and environmental risks; and (v) ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people.

During project formulation, UNDP Projects are required to complete a Social and Environmental Screening Procedure (SESP, see Annex 4 above). Standard 6 of the SESP specifically addresses the rights and concerns of

⁷¹ Díaz-Couder, Ernesto (2010). Atlas sociolingüístico de Pueblos Indígenas de América Latina; country data, pp. 2-3.

⁷² Report of the Working Group on the Universal Periodic Review, Belize. Human Rights Council. Twelfth session, June 2009

⁷³ IFAD. 2017. Country Technical Note on indigenous Peoples' Issues: Belize.

indigenous peoples. Completion of the SESP (see Appendix 1 below) provides an initial screening of potential impacts on Indigenous Peoples.

Initial Gap Analysis

As noted above, Belize has not ratified International Labour Organization (ILO) Convention No. 169. Belize's constitution does not recognize customary rights or indigenous jurisdiction.⁷⁴ A full analysis will be conducted as part of the preparation of the project's Indigenous Peoples Plan (IPP).

6. IMPLEMENTATION PROCEDURES, ARRANGEMENT, MONITORING, GRIEVANCE MECHANISM

Implementation Arrangements and Monitoring

The Ya'axche Conservation Trust (YCT) will be empowered as an implementing and monitoring partner in the project. They will lead the implementation of Component 3 (as defined in the Stakeholder Engagement Plan), executing project activities (defined under this component) while ensuring through effective monitoring the avoidance and mitigation of adverse impacts on the indigenous population.

YCT was found to possess the expertise, experience and support to perform project activities in collaboration with the Mayan indigenous population. YCT maintains a high presence within the project area for component 3, having implemented similar projects/programmes within the area while establishing and maintaining strong relationships with the indigenous communities.

A Capacity Assessment was also conducted which measured the in-house capacity of the implementing partners within the project to lead and perform respective project activities. Table 26 (below) presents the results of the Capacity Assessment for YCT, as one of the executing partners for component 3.

TABLE 26: CAPACITY ASSESSMENT RESULTS FOR YA'AXCHE CONSERVATION TRUST⁷⁵

Stakeholder/ Partner	Institutional Arrangement	Leadership	Knowledge	Accountability
Ya'axche Conservation Trust	3	3	3	3
Rationale	YCT is an established NGO in Belize. They 3 co-manage protected areas in southern Belize.	YCT maintains a high presence in their protected areas and maintains strong relationships with surrounding communities.	YCT is an experienced NGO. They patrol protected landscapes, protect biodiversity and perform biodiversity data monitoring and collection.	YCT is fully accountable for its actions through the public disclosure of its annual organizational and financial reports.

A description of the procedures available to address grievances brought by the affected indigenous peoples arising from Project implementation, including the remedies available, how the grievance mechanisms take into account indigenous peoples' customary laws and dispute resolution processes, as well as the effective capacity of

⁷⁴ IFAD. 2017. Country Technical Note on indigenous Peoples' Issues: Belize.

⁷⁵ UNDP GEF7 - Capacity Assessment (2020) for PPG: Enhancing jaguar corridors and strongholds through improved management and threat reduction.

indigenous peoples under national laws to denounce violations and secure remedies for the same in domestic courts and administrative processes, will be included in the IPP.

Capacity Building

Given the capacities of the execution partners, Ya'axche Conservation Trust, no capacity building needs have been identified for the purposes of completing FPIC or other safeguards. This conclusion may be reviewed during preparation of the IPP.

Required Procedures & Schedule for Assessment and Management

The project's Indigenous Peoples Plan (IPP) will be prepared during the first six months of full project implementation, based on the necessary and proportionate level of risk assessment, in line with the UNDP SES. No relevant project activities will begin until the IPP has been drafted, disclosed (in line with UNDP's policy on public disclosure), approved by the Project Board, and its measures put in place. Implementation of the IPP will be assessed within the MTR and final evaluation, as well as on an ad-hoc basis at the discretion of the UNDP Belize project manager.

Budget

Resources needed to implement the IPP are mainly distributed within Component 3. All activities under this component will be conducted in line with this IPPF, and the subsequent IPP. Specific activities that place significant emphasis on engagement, participation of, and reducing risks of adverse effects on, indigenous peoples, together with associated financial allocations, are summarized in Table 27 below.

TABLE 27: MAIN IPP-FOCUSED ACTIVITIES AND ASSOCIATED BUDGETARY RESOURCES

Project level (outcome, output, activity)	Budget item description	Indicative costs (US\$)
Activity 3.1.1	Support to community engagement/ training	15,000
Activity 3.1.4	Drafting of National Bush Meat/ Game Meat Policy	16,000
Activity 3.2.1	Support to community outreach and consultations	9,000
Activity 3.2.2	Support to Community Advocacy	12,000
Activity 3.2.3	Training of community volunteers in data collection and use of camera trapping	12,000
Activity 3.1.2	Support to the application of community survey instrument	18,000
Activity 3.2.1	Development of community resource use management plans	30,000
Outcome 3 misc.	Workshops for Outcome 3, including consultancy and consultations needed to develop and implement IPP and to implement stakeholder and gender plan requirements associated with this outcome.	14,713
Activity 4.3.1	Inception workshop and associated consultations (including FPIC)	8,000
Outcome 4	Project monitoring, participation and safeguards specialist	12,000
TOTAL indicative COST		146,713

7. FREE, PRIOR, AND INFORMED CONSENT

Since one of the three project landscapes--the Maya Golden Landscape--is located on lands and territories claimed by indigenous peoples and is currently the home of a number of indigenous communities, the need to obtain the FPIC of local communities for activities under component 3 has always been clear. As a key first step in obtaining the Free, Prior and Informed Consent (FPIC) of Indigenous Peoples in the context of the present project, representatives of nearby Mayan indigenous communities within the project area for component 3 participated in a community town hall-style meeting to discuss a preliminary draft of the project concept in January 2020. The purpose of the meeting was to receive initial validation and obtain feedback from the indigenous communities to inform project design. Participants of the meeting did not make any objections to the draft of the child project concept.

Feedback obtained from this initial meeting assisted in formulating a project that is designed to have substantial positive impacts on the indigenous population living within this landscape. These include:

- Benefits from more sustainable hunting systems: In the context of increased human population and hunting pressure, the project aims to ensure that communities are empowered to use wildlife sustainably by providing them with instruments to self-check the status of available wildlife for offtake. The project design ensures that communities are fully engaged and participating in all processes of wildlife population and hunting assessments and that they have direct responsibility for designing and overseeing implementation of, regulatory systems designed to ensure the sustainability of harvests.
- Community empowerment: The project ensures long-term livelihood opportunities through the institution of systems to maintain wildlife populations. The implementation of instruments of feedback loops on the sustainability of the activities under their own control means that this can be regarded as an empowering instrument, assuring long-term management of wildlife presence in the area. FPIC will help make this clear to communities, and in doing so will reduce the risk that they may see any eventual hunting limitations as somehow externally driven or imposed.
- Cultural benefits: Jaguars are a celebrated, and in some ways revered, animal in Mayan traditional culture. Efforts to elevate jaguars' status and ensure that they thrive in Belize will have a potentially powerful positive impact on indigenous peoples.

The following possible negative impact of the project on indigenous communities has been identified (and mitigating measures designed) as part of the SESP.

- Communities in the project region rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations.

The above potential positive and negative impacts of the project will be discussed in detail as part of the FPIC process, along with measures needed to enable the former and minimize / avoid the latter.



FIGURE 13: CONSULTATION OF INDIGENOUS POPULATION DURING PROJECT DEVELOPMENT PHASE

During the project's inception phase, this consultation process will continue using the Project Document signed with the Government of Belize. As discussed in Section 6 above, Ya'axche Conservation Trust (YCT) will be empowered as an implementing partner for component 3. They will lead the implementation of the component (as defined in the Stakeholder Engagement Plan), executing project activities (defined under this component) while ensuring the avoidance and mitigation of adverse impacts on the indigenous population.

An important and first task of YCT will be to continue the FPIC process begun during the formulation stage of the project. No activities under Component 3 will be carried out until the FPIC has been secured for the relevant activities. In addition, consultations and assessments conducted during preparation of the IPP will determine whether any indigenous groups are indeed present in Component 1 and 2 areas and, if so, which project activities under these components require FPIC based on their potential impacts on such groups. Activities identified as such would not be initiated until FPIC has been completed.

In all of its consultations with indigenous peoples, including the obtaining of FPIC, YCT will act in accordance with UNDP SES requirements and the procedures defined by Maya leaders and articulated in their "Consultation Framework for the Maya People of Southern Belize".⁷⁶ Relevant principles and activities of the consultations will include the following:

- "It is the objective of this framework that all processes of consultation with the Maya people be culturally appropriate, timely, meaningful, in good faith and meet international normative standards, particularly the requirement of free, prior, and informed consent..."
- "The Executive Committee convenes an Alcaldes assembly with the Alcaldes from all of the Maya villages..."
- "The entire consultation process must be in accordance with Maya customary practices, respect Maya traditional methods of decision-making, and must be guided by the principle of free prior and informed consent..."
- "Prior to the commencement of consultation or negotiation, the proponent must communicate to the TAA [Toledo Alcaldes Association] in writing the particulars of any official or representative designated to consult or negotiate with the Maya people, as well as indicate the nature of the official's or representative's authority to make decisions on behalf of the proponent..."
- "Decisions made on behalf of the Maya people shall be taken at the village meeting convened by the Alcalde in accordance with the following procedures: (i) The quorum for a village meeting to make decisions is one half of the villagers in the district who are sixteen years of age or over. A village meeting

⁷⁶ Toledo Alcaldes Association Maya Leaders Alliance. 13 June 2014. Consultation Framework; Roxloq'oninkileb' aj Maay Tzajaana Ko ut yanil aj Maya. Maya People of Southern Belize. During preparation of the IPP, these procedures will be assessed for consistency with the SES.

may convene with fewer participants than the quorum, but no decisions can be made unless the quorum is met. (ii) All decisions taken at a village meeting shall be arrived at by a majority of the villagers who are present and voting. (iii) Villagers who are below the age of sixteen shall not be able to vote at village meetings. (iv) Notwithstanding subsections (i) and (ii), any decision to alienate lands held by customary title shall require the affirmative vote of at least three quarters of all villagers in the district sixteen years of age or over.”⁷⁷

⁷⁷ Toledo Alcaldes Association, Maya Leaders Alliance. 2014. Consultation Framework.

ANNEX 1- TECHNICAL GUIDELINES FOR PREPARATION OF IPP

A full IPP will be prepared during the first year of project implementation. This annex provides an overview and outline of the IPP.

The IPP is to be elaborated and implemented in a manner consistent with the UNDP Social and Environmental Standards and have a level of detail proportional to the complexity of the nature and scale of the (proposed) Project and its potential impacts on indigenous peoples and their lands, resources and territories. With the effective and meaningful participation of the affected peoples, the IPP shall be elaborated and contain provisions addressing, at a minimum, the substantive aspects of the following outline.

A. Executive Summary of the Indigenous Peoples Plan

Concisely describes the critical facts, significant findings, and recommended actions

B. Description of the Project

General description of the project, the project area, and components/activities that may lead to impacts on indigenous peoples

C. Description of Indigenous Peoples

A description of affected indigenous people(s) and their locations, including:

- i. description of the community or communities constituting the affected peoples (e.g. names, ethnicities, dialects, estimated numbers, etc.);
- ii. description of the resources, lands and territories to be affected and the affected peoples' connections/relationship with those resources, lands, and territories; and
- iii. an identification of any vulnerable groups within the affected peoples (e.g. uncontacted and voluntary isolated peoples, women and girls, the disabled and elderly, others).

D. Summary of Substantive Rights and Legal Framework

A full description of the substantive rights of indigenous peoples and the applicable legal framework, including:

- i. An analysis of applicable domestic and international laws affirming and protecting the rights of indigenous peoples (include general assessment of government implementation of the same).
- ii. Analysis as to whether the Project involves activities that are contingent on establishing legally recognized rights to lands, resources, or territories that indigenous peoples have traditionally owned, occupied or otherwise used or acquired. Where such contingency exists (see Standard 6 Guidance Note, sections 6 & 7), include:
 - a. identification of the steps and associated timetable for achieving legal recognition of such ownership, occupation, or usage with the support of the relevant authority, including the manner in which delimitation, demarcation, and titling shall respect the customs, traditions, norms, values, land tenure systems and effective and meaningful participation of the affected peoples, with legal

recognition granted to titles with the full, free prior and informed consent of the affected peoples;
and

b. list of the activities that are prohibited until the delimitation, demarcation and titling is completed.

iii. Analysis whether the Project involves activities that are contingent on the recognition of the juridical personality of the affected Indigenous Peoples. Where such contingency exists (see Standard 6 Guidance Note, section 7):

a. identification of the steps and associated timetables for achieving such recognition with the support of the relevant authority, with the full and effective participation and consent of affected indigenous peoples; and

b. list of the activities that are prohibited until the recognition is achieved.

E. Summary of Social and Environmental Assessment and Mitigation Measures

i. A summary of the findings and recommendations of the required prior social and environmental impact studies (e.g. limited assessment, ESIA, SESA, as applicable) – specifically those related to indigenous peoples, their rights, lands, resources and territories. This should include the manner in which the affected indigenous peoples participated in such study and their views on the participation mechanisms, the findings and recommendations.

ii. Where potential risks and adverse impacts to indigenous peoples, their lands, resources and territories are identified, the details and associated timelines for the planned measures to avoid, minimize, mitigate, or compensate for these adverse effects. Identification of special measures to promote and protect the rights and interests of the indigenous peoples including compliance with the affected peoples' internal norms and customs.

iii. If the Project will result in the relocation of indigenous peoples from their lands and territories, a description of the consultation and FPIC process leading to the resulting agreement on relocation and just and fair compensation, including the possibility of return.

iv. A description of measures to protect traditional knowledge and cultural heritage in the event that the Project will result in the documentation and/or use and appropriation of such knowledge and heritage of the indigenous peoples and the steps to ensure FPIC before doing so.

F. Participation, Consultation, and FPIC Processes

i. A summary of results of the culturally appropriate consultations and, in the case of Component 3, FPIC processes undertaken with the affected peoples' which led to the indigenous peoples' support for the Project.

ii. A description of the mechanisms to conduct iterative consultation and consent processes throughout implementation of the Project. Identify particular Project activities and circumstances that shall require consultation and FPIC (consistent with section 4 of the Standard 6 Guidance Note).

G. Appropriate Benefits

An identification of the measures to be taken to ensure that indigenous peoples receive equitable social and economic benefits that are culturally appropriate, including a description of the consultation and consent processes that lead to the determined benefit sharing arrangements.

H. Capacity support

- i. Description of Project activities aimed at increasing capacity within the government and/or the affected indigenous peoples, and facilitating exchanges, awareness, and cooperation between the two.
- ii. Description of measures to support social, legal, technical capabilities of indigenous peoples' organizations in the project area to enable them to better represent the affected indigenous peoples more effectively
- iii. Where appropriate and requested, description of steps to support technical and legal capabilities of relevant government institutions to strengthen compliance with the country's duties and obligations under international law with respect to the rights of indigenous peoples.

I. Grievance Redress

A description of the procedures available to address grievances brought by the affected indigenous peoples arising from Project implementation, including the remedies available, how the grievance mechanisms take into account indigenous peoples' customary laws and dispute resolution processes, as well as the effective capacity of indigenous peoples under national laws to denounce violations and secure remedies for the same in domestic courts and administrative processes.

J. Monitoring, Reporting, Evaluation

- i. Mechanisms and benchmarks appropriate to the Project for transparent, participatory joint monitoring, evaluating, and reporting, including a description of how the affected indigenous peoples are involved.
- ii. Define the mechanisms put in place to allow for periodic review and revision of the IPP in the event that new Project circumstances warrant modifications developed through consultation and consent processes with the affected indigenous peoples.

K. Institutional Arrangements

Describes institutional arrangement responsibilities and mechanisms for carrying out the measures contained in the IPP, including participatory mechanisms of affected indigenous peoples. Describes role of independent, impartial entities to audit, conduct social and environmental assessments as required, and/or to conduct oversight of the project.

L. Budget and Financing

An appropriately costed plan, with itemized budget sufficient to satisfactorily undertake the activities described.

Note: The IPP will be implemented as part of Project implementation. However, in no case shall Project activities that may adversely affect indigenous peoples – including the existence, value, use or enjoyment of their lands, resources or territories – take place before the corresponding activities in the IPP, i.e. Activities under Component 3, are implemented. The relationship between the implementation of specific IPP measures and the permitted commencement of distinct Project activities shall be detailed within the IPP to allow for transparent benchmarks and accountability.

Where other Project documents already develop and address issues listed in the above sections, citation to the relevant document(s) shall suffice.

APPENDIX 2- UNDP Social and Environmental Screening Procedure (SESP)

Project Information

Project Information	
4. Project Title	Enhancing jaguar corridors and strongholds through improved management and threat reduction
5. Project Number	6397
6. Location (Global/Region/Country)	Belize

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

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
<p>Briefly describe in the space below how the Project mainstreams the human-rights based approach</p> <p>The project as presented ensures the meaningful participation of communities in the effective management of environmental resources directly impacting/ influencing lives and livelihoods. The project design ensures social equity and equality through its targeting of marginalized populations who commonly interface with Belize's natural systems (includes community groups, indigenous groups, women and youth). The participatory approach considered in project design, development and implementation empowers community resource users as well as resource managers, ensuring the protection of the country's natural heritage. The project explores in its design the interaction between environment protection and human rights, asserting rights to access and use of resources, building on the principles of "sustainable development," which considers the needs of present and future generations. The inclusion of the human rights approach in environmental protection is important as it allows for the effective treatment of developmental and environmental conflicts through the management of human/ environment interfaces.</p> <p>The project interfaces with a cross section of Belize's most vulnerable, its rural dwellers, who depend heavily on the health of the environment and the effective management of natural resources for the meeting of basic needs, including shelter, food security and livelihoods. The targeted areas for intervention coincide with the country's poorest districts and areas which in some cases support substantial indigenous communities.</p>
<p>Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment</p> <p>The project through its design and implementation is expected to treat the differentiated roles of men and women in the management of the country's biodiversity, as the wellbeing and the livelihoods of both women and men in rural Belize depend on an effectively managed natural resource base. The utilization of Gender assessments during the project design phase has created a clearer understanding of these differentiated roles which allows for more effective and targeted project communications and engagement of women beneficiaries in project implementation. This is particularly important in Component 2 of the initiative which speaks to the "promotion of wildlife-based economy" which targets specifically women as beneficiaries of proposed interventions in an attempt to take women's needs and the needs of indigenous resource users into greater consideration. Because of the traditional close affiliation between women and indigenous groups and the environment, the project encourages the involvement of these groups in advising and participating in the management of the resources.</p>
<p>Briefly describe in the space below how the Project mainstreams environmental sustainability</p>

The project recognizes the importance of maintaining ecological functionality and connectivity as a critical success factor of Belize's sustainable development pathway. The project promotes the jaguar as a flagship species which supports the introduction of transformational changes to the national governance architecture supporting sustainable resource management in the country. Belize's long-term development strategy relies on the performance of key productive sectors such as agriculture and tourism linked to the country's fragile/ vulnerable natural resource base. The expansion of the agriculture frontier and investments supporting the tourism industry have resulted in negative environmental impacts and degradation / depletion of the supporting natural resource base due to increased acceptance among decision makers of trade-offs between economic and environmental goals. The project introduces tools, programmes and institutional and policy changes to address human/ wildlife conflicts and enable a long-term shift to a more sustainable growth path.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i>	QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>			QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
Risk 1: Government agencies / institutions may not effectively engage and coordinate the participation of the wider targeted critical population. (Principle 1: q4; Standard 6: 6.1, 6.2)	I = 4 P = 2	Moderate	The success of this project is closely tied to the ability of implementing entities to ensure communities' buy in and support as well as their ability to broker effective public/ private partnerships, as connectivity of systems and effective wildlife management is dependent on the inclusion of non-state lands within established networks and the engagement of communities and land owners in wildlife conflict resolution measures.	The project has included in its design a stakeholder (community, indigenous and private sector) engagement plan supporting project interventions to minimize this risk, along with an Indigenous Peoples Planning Framework (IPPF). The project has allocated significant budgetary resources (see Budget Notes #5, 8, 10, 11, 18 and 20) to ensure the full participation of key groups in project implementation.
Risk 2: Project implementation reproduces existing discrimination against women	I= 3 P= 2	Moderate	Within the national setting the role of women in community	The Gender Action Plan (GAP) of this project proposes empowerment and decision-making spaces, livelihood

(Principle 2: Standard 2)			level conservation efforts is not sufficiently valued or officially recognized.	opportunities and environmental education for women beneficiaries and stakeholders in response to this risk. Gender-specific activities and indicators strongly encourage positive impacts by the project.
<p>Risk 3: Any eventual limits on wildlife harvests might be interpreted by some as limiting customary rights to wildlife resources</p> <p>(Principle 3; Standard 5: 5.4; Standard 6: 6.1; 6.2)</p>	I = 3 P = 2	Moderate	This risk has been identified because the project, under Activity 3.2.1, will include the development of community resource use management plans to support efforts by indigenous communities to sustainably manage wildlife resources within their area. In the context of increased human population and hunting pressure, the project aims to ensure that communities are empowered to use wildlife sustainably by providing them with instruments to self-check the status of available wildlife for offtake. This requires setting up monitoring systems and help with analysis on potential level of sustainable offtake in relation to wildlife carrying capacity.	Under Component 3, the project seeks to establish processes and structures within which communities may exercise their customary rights within a broader context of sustainable development. The project design ensures that communities are fully engaged and participating in all processes of wildlife population and hunting assessments and that they have direct responsibility for designing and overseeing implementation of, regulatory systems designed to ensure the sustainability of harvests. In so doing, the project promotes a high level of community-level engagement and management of natural resources. Together, these measures will serve to address any concerns that potential limitations on harvests represent anything other than communities increasing their resource management capacities and exercising responsibilities for same. Per the project's Indigenous Peoples Planning Framework (IPPF), however, this risk and all other relevant risks will be further assessed and the necessary management measures (including FPIC protocols) will be included in the project's Indigenous Peoples Plan (IPP).
<p>Risk 4: Project support for conservation of wildlife as an economic resource for indigenous populations may lead communities to impose limitations on their hunting, via catch quotas or other measures, with short-term reductions in harvests (but probable long-term gains)</p> <p>(Principle 3: Standard 5: 5.4; Standard 6: 6.3, 6.5, 6.9)</p>	I = 3 P = 4	Moderate	Communities in the project region rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. The project ensures long-term livelihood opportunities through the institution of systems to maintain wildlife populations. The implementation of instruments of feedback loops on the sustainability of the	As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations. The project is designed to collect, share and disseminate data in collaboration with the communities. This data and information will be used jointly with the community to set quotas and/or seasonal access. Per the IPPF, procedures for doing so will be developed as part of the IPP, at which time this risk will be further assessed.

			activities under their own control means that this can be regarded as an empowering instrument, assuring long-term management of wildlife presence in the area.	
Risk 5 Capture of jaguars poses risk of bodily harm to personnel both trainees and trainer, and jaguars (Principle 3: Standard 3.7)	I = 4 P = 1	Moderate	The risk is real and almost completely related to the expertise of the trainer and capture expert. The trapping requires high expertise in terms of the physical capture mechanisms and control of timing of capture, knowledge of jaguar behavior when captured, high veterinary knowledge about jaguars, and ability to take charge and control the situation in terms of people trained around him.	Belize has a strong record of safe jaguar captures with several highly experienced trappers, having worked within Belize. The trapper tentatively identified for the project likely has the highest number of safe live release captures of jaguars in the world, has worked previously with CSFI in the North, and understands the landscape and culture of personnel. He has extremely rigid safety protocols that will be implemented with care, and with this we feel the project can place the risk of accidents as extremely low with confidence. These will be carefully chosen and will have a proven record of no harm to jaguars, themselves, and involved personnel.
Risk 6: Project activities and outcomes could be vulnerable to the potential impacts of climate change. (Principle 3; Standard 2: 2.2)	I=3 P=3	Moderate	Corridors (and increased landscape connectivity more generally) are the most frequently recommended conservation strategy to protect biodiversity as climate changes. Climate change, however, can influence natural corridors and connectivity of systems. Those managing corridors must consider range shifts, as well as alternative corridors which provide paths for individuals to recolonize habitats where populations have been lost.	This risk is managed within the project design by further bolstering corridor systems delineated formally through government decree and by supporting actions within productive landscapes to further benefit connectivity.
Risk 7: Trail cutting for camera trapping will increase the possibility of access by hunters to sensitive habitats and wildlife, including within and adjacent to protected areas (Principle 3; Standard 1: 1.1, 1.2)	I=3 P=2	Moderate	The project target landscapes are located within ecologically important areas and within, or adjacent to, formally protected areas. While the project design aims to improve the	Trail design will ensure minimal disturbance to the ecosystem, in line with conservation biology criteria. Project staff, who understand risks created by enhanced access, will take action to safeguard against this, e.g. minimize trail cutting to minimal requirements, assuring trails easily overgrow within

			effectiveness and value of this habitat for its constituent biodiversity, including jaguar and prey species, some activities, such as ecotourism and creation or expansion of trails to support camera trapping, may include <i>slight</i> risks of increased impacts associated with human presence.	short period. This has been captured in the design of output 1.2.2.
Risk 8: Project's approach to promoting cultural heritage, in the context of ecotourism, could result in unintended social and cultural consequences. (Principle 3: Standard 4: 4.2)	I= 2 P= 2	Low	<p>Belize promotes cultural tourism. In an effort to introduce opportunities for non-traditional livelihoods within the project area, and to further engage local, mainly Creole communities in conservation efforts, the project proposes to further develop and scale up the model being piloted under Output 2.2 which presents a hybrid cultural and ecosystem-based tourism.</p> <p>This risk is assessed as low, first because tourism activities will not take place in sites having indigenous communities. In addition, the project is not introducing a new avenue of activity, but helping communities participate better and benefit from existing tourism packages. Finally, Belize has significant existing safeguards, including a tourism board and industry association. Nevertheless, the project has been designed to monitor and maintain ongoing and close engagement with participating</p>	

			communities, ensuring that project-supported interventions serve their needs and that cultural practices are fully respected.	
Risk 9: Due to the COVID-19 pandemic, there may be risks to individuals participating in project activities, including consultations, until the crisis is under control (Principle 3: Standard 3: 3.6)	I = 3 P = 3	Moderate	The spread of the novel Coronavirus has created new risks to project implementation.	At the time of writing, reported cases in Belize are few. However, this will of course change and it is extremely difficult to predict the degree of future spread. Should future circumstances warrant, and in order to mitigate risk, travel by central office personnel in Belmopan to the project sites may be cancelled and meetings with local and strategic partners will be held using virtual platforms. The fact that the country has good internet connectivity makes it possible to implement these alternative forms of work with relative ease. Activities in the field that require the presence of project personnel or staff from partner organizations (especially activities involving travel for multiple staff) will be postponed if necessary. Instead, virtual communication will be promoted using mobile phone networks to exchange messages and images, and virtual forums will be held. Virtual meetings will be held with local beneficiaries' associations, using the proper prevention measures and only when necessary, at locations that have the required connectivity. This will ensure a reduced number of participants to those who are considered essential. On a quarterly basis, project progress will be assessed and activities will be rescheduled as needed.
Risk 10: The risks associated with the seed funding (output 2.2) are currently unknown because the specific alternative livelihoods will be selected and designed during the project's implementation. (Principles/Standards TBD)	I = 4 P = 2	Moderate		During the first year of implementation, the project will conduct livelihood analysis/ assessments to establish sustainable livelihood alternatives through a thorough stakeholder consultation process within the buffer communities of the northern "Jaguar Corridor". Once defined, such alternative livelihood activities will undergo the environmental and social risk screening process following the UNDP SES procedure. If risks are identified, the project will develop the appropriate management measures and plans, such as a Livelihood Action Plan to avoid, reduce or mitigate the impact of such risks.
QUESTION 4: What is the overall Project risk categorization?				
Select one (see <u>SESP</u> for guidance)			Comments	

	Low Risk	<input type="checkbox"/>	
	Moderate Risk	X	The project is assessed as “moderate” risk, as it involves the participation of indigenous peoples and other vulnerable or marginalized groups and has several additional moderately rated risks. It should be noted, however, that the concept builds on the lessons and the processes of recent similar actions undertaken by natural resource managers, including community consultation and participation in REDD+ programming, the development of a management strategy and plan for the central Belize Corridor System and the expansion of the North Eastern corridor system. Project development has been informed through consultations with a broad cross section of national stakeholders and thorough analysis of national and local circumstances. Project developers have also elaborated three action plans to manage and mitigate the cumulative nature of the risks and/or the complexity of assessing and managing the moderate risks identified in the SESP. These action plans are: (1) Stakeholder Engagement Plan, (2) Indigenous Peoples Planning Framework (IPPF) and (3) Gender Action Plan. The IPPF for example, outlines key activities designed to obtain the FPIC of local communities during the project’s inception phase. A full Indigenous Peoples Plan (IPP) will be prepared during project implementation.
	High Risk	<input type="checkbox"/>	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		Comments
	Principle 1: Human Rights	x	The project recognizes people as key actors in their own development; however, communities have traditionally been marginalized by a centralized system of environmental governance limiting their abilities to fully participate in decisions pertaining to the management of the natural resource base. The project design ensures that communities are fully informed as to processes pertaining to wildlife management and monitoring and allows them access to systems of decision making and power facilitating their possible influence on these processes.

	Principle 2: Gender Equality and Women's Empowerment	x	A gender analysis, action plan and gender-differentiated indicators have been prepared
	1. Biodiversity Conservation and Natural Resource Management	x	Despite the project's inclusion of critical habitats within its scope, the project is designed to enhance these features and is expected to have an overall benefit on biodiversity and natural resource management.
	2. Climate Change Mitigation and Adaptation	x	As noted above, climate change can influence natural corridors and connectivity of systems. Those managing corridors must consider range shifts, as well as alternative corridors which provide paths for individuals to recolonize habitats where populations have been lost.
	3. Community Health, Safety and Working Conditions	x	Issues related to COVID-19 and other risks.
	4. Cultural Heritage	x	Minimal impacts possible due to promotion of traditional cultural heritage of Creole people
	5. Displacement and Resettlement	x	Communities in the Component 3 landscape rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations.
	6. Indigenous Peoples	x	Communities in the component 3 landscape rely to some extent on game species for household food security and, to a significantly lesser extent, livelihoods. The growing population in the area means that offtake levels and long-term sustainable use are at risk. As with any intervention aimed at encouraging sustainable use, short-term limitations on consumption are designed to enable long-term maintenance of same, in this case via maintenance of viable wildlife populations.
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	

Final Sign Off

Signature	Date	Description
QA Assessor		Diane Wade-Moore
QA Approver		Ian King

PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.
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SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ⁷⁸	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	Yes
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No

⁷⁸ Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, 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 people and transsexuals.

4.	<p>Would the Project potentially limit 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?</p> <p><i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i></p>	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	<p>Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?</p> <p><i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i></p>	Yes
1.2	<p>Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?</p>	Yes
1.3	<p>Does the Project involve 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)</p>	No
1.4	<p>Would Project activities pose risks to endangered species?</p>	No
1.5	<p>Would the Project pose a risk of introducing invasive alien species?</p>	No
1.6	<p>Does the Project involve harvesting of natural forests, plantation development, or reforestation?</p>	No
1.7	<p>Does the Project involve the production and/or harvesting of fish populations or other aquatic species?</p>	No
1.8	<p>Does the Project involve significant extraction, diversion or containment of surface or ground water?</p> <p><i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i></p>	No
1.9	<p>Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)</p>	No
1.10	<p>Would the Project generate potential adverse transboundary or global environmental concerns?</p>	No
1.11	<p>Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?</p> <p><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered.</i></p>	No

Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.		
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant ⁷⁹ greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	Yes
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No

⁷⁹ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact 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
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	Yes
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in 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)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ⁸⁰	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	Yes
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	Yes
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	Yes
6.3	Would the proposed Project potentially affect 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 recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	Yes
6.4	Has there been an 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?	No

⁸⁰ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	Yes
6.6	Is there a potential for 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	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	Yes
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in 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?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

APPENDIX 3: MAYA PEOPLE OF THE TOLEDO DISTRICT IN SOUTHERN BELIZE CONSULTATION FRAMEWORK⁸¹

Preamble

Bearing in mind that the indigenous Maya (Q'eqchi and Mopan peoples, comprising 38 Maya villages, traditionally own, occupy and use lands, territories and resources in the Toledo district of southern Belize in accordance with customary practices and ways of life,

Bearing in mind also the unique relationship and traditional attachment between the Maya people and their lands, territories and environment,

Recognizing that the Maya people have a customary system of village governance, representation, consultation, and decision-making,

Recognizing also that the village Alcaldes are the traditional representatives of each Maya village, and are elected in accordance with Maya customary practices,

Emphasizing that according with Maya customary practices, decision-making authority does not rest unilaterally in the elected Alcaldes, but rather vests in the village collectively,

Emphasizing also that each Mayan village customarily makes decisions at village meetings, and that the village meeting is the fundamental authority and primary decision-making body of the village, whereas the Alcalde is only the appointed representative of the will of the villagers as expressed through village meetings,

Acknowledging that, the Toledo Alcaldes Association (TAA), composed of the elected Alcaldes, is the central authority and representative body of the Maya people as a whole and is also the arbiter and defender of Mayan customary law and practices,

Acknowledging also that, in order to fulfill the mandate given by the Maya people, the Maya Leaders Alliance (MLA) provides technical, legal and other strategic support to the TAA,

Recalling that the judgements of the Supreme Court of Belize of October 18, 2007 and June 28, 2010 affirm that the Maya people own the lands, territories and resources that they have traditionally used and occupied in accordance with Maya customary law; and that no actions that affect the existence, value, use or enjoyment of Maya property may be undertaken on those lands without the informed consent, on an ongoing basis, of the lands lands without the informed consent, on an ongoing basis, of the affected village or villages,

Recalling also that the judgment of the Court of Appeal of Belize of July 25, 2013 reaffirms the entitlement of the Maya people to lands, territories, and resources in Southern Belize which they customarily occupy and use,

⁸¹ Source: Toledo Alcaldes Association Maya Leaders Alliance. 13 June 2014. Consultation Framework; Roxloq'oninkileb' aj Maay Tzajaana Ko ut yanil aj Maya. Maya People of Southern Belize.

Recalling further that the Inter-American Commission on Human Rights, in 2004, recognized the rights of the Maya people to their lands, territories and resources, and prohibited the government of Belize or any third party from interfering with the territories of the Maya people in the absence of their consent,

Considering that Belize is a member of the United Nations and the Organization of American States, it is thus bound by its international obligations to recognize and protect the human rights of the indigenous Maya people,

Considering further that the United Nations Declaration on the Rights of Indigenous Peoples, the United Nations Convention on the Elimination of All Forms of Racial Discrimination, the American Declaration on the Rights and Duties of Man require that the Maya indigenous peoples be consulted in good faith through their own representatives or institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them or their territory.

Now therefore it is resolved by the Maya people as follows:

Section I

GUIDING PRINCIPLES

1. The present framework represents the resolution of the Maya people in the southern Toledo district of Belize, and is intended to serve as the consultation protocol to be followed by any Belizean government, its agencies and other non-state or private entities, whenever a policy initiative, legislative proposal, administrative measure, development t, economic project, or any other action that may affect the lands, territories or well-being of the Maya people is being considered.
2. It is the objective of this framework that all processes of consultation with the Maya people be culturally appropriate, timely, meaningful, in good faith and meet international normative standards, particularly the requirement of free, prior, and informed consent.
3. Where the interest of the Maya people may be affected by any proposed action or activity, consultation must begin at the planning stage and continue throughout the life cycle of the proposed action or activity.
4. Government representatives and non-state actors must respect Maya customary rules, including deliberative communication methods, when engaging Maya villages for any activity that will impact Maya territory. This includes, but is not limited to, seeking permission to enter village lands for the purpose of resource use or extraction, or to gain access to cultural sites. Preliminary information related to any of the foregoing must be provided at the earliest time possible.
5. Maya people reserve the right not to accept any policy initiative, legislative proposal, administrative measure, development, economic project or other action that contravenes this consultation framework.

Section II

INITIAL CONTACT AND PRE-CONSULTATION PROTOCOL

5. Prior to taking any action that could affect the well-being of the Maya people; the government of Belize, its agencies or non-state entities must inform the Executive Committee of the Toledo Alcaldes Association (TAA). The Executive Committee convenes an Alcaldes assembly with the Alcaldes from all of the Maya villages.
7. If the action of government or a non-state entity may only affect a particular Maya village, initial contact can be made through the Alcalde of that village. The Alcalde is empowered to convene a village meeting to pass on the information. The Alcalde will inform the TAA and the village Chairman.
8. Initial contact does not, in any manner, constitute consultation. It is only meant to inform the Maya people of an impending action likely to affect them and to seek their permission to formally engage in the process of meaningful consultation. Provision of information is a prerequisite to consultation, but is not in and of itself consultation.
9. All correspondence made to the TAA President or individual Alcaldes in appropriate cases, with respect to the initial request to consult, must be expressed in writing in the language directed by the TAA.
10. In order for the TAA to fully comprehend the purpose of the contact, the initial communication should include the following: a full description of the action or project being proposed, including its scope, timelines and duration; reports of environmental, social and cultural impacts; clear analysis of the risks and benefits to the affected Maya villages; a description of proponents of the action or project; and identification of the contact person who will liaise with the TAA.
11. After receipt of the request to consult, the TAA shall inform the proponent if the request is accepted and, together with the proponent, develop a mutually acceptable consultation schedule.
12. The Maya participants in the consultation process shall be reimbursed for their reasonable costs arising from the logistics of facilitating the decision to formally engage with the proponent in a consultation process.

Section III

NOTICE

13. Any notice of meetings relating to the request to consult, consultations, negotiations, or other material events, must be given at least 21 calendar days in advance. Longer notice periods are preferable, especially for major developments or initiatives. This is to allow the TAA or the Alcaldes time to plan for the meeting, manage the logistics of attendance, and seek their own independent technical or legal assistance where necessary.

Section IV

MEETING VENUES

14. Preliminary meetings or consultations must be held at the community center or where not available at a public place where transparency can be guaranteed and attendance and participation by members of the community is not inhibited by reason of the location of the venue.
15. The TAA may exercise its discretion to hold meetings, consultations, or negotiations at any other venue, as long as the interests of the Maya people are not in any way jeopardized by doing so.

Section V

CONSULTATION AND NEGOTIATION

16. The entire consultation process must be in accordance with Maya customary practices, respect Maya traditional methods of decisions-making, and must be guided by the principle of free and informed consent.

17. To ensure effective and informed participation in the consultation and negotiations process, the Maya people shall have an unqualified right to seek independent technical assistance and retain legal counsel of their choice. They shall have the right to have such freely chosen technical and legal advisers participate throughout the entire process of consultation or negotiation.

18. The proponent shall bear the costs incurred by the TAA for seeking independent technical assistance, legal advice or any other reasonable expenses necessary to facilitate and effective consultation process

19. Prior to the commencement of consultation or negotiation, the proponent must communicate to the TAA in writing the particulars of any official or representative designated to consult or negotiate with the Maya people, as well as to indicate the nature of the official's or representative's authority to make decisions on behalf of the proponent.

Section VI

"Se komonil"

MAYA DECISION-MAKING PROCESS

21. The entire consultation and negotiation process must incorporate sufficient time to accommodate Maya traditional decision-making practices.

22. The TAA or Alcaldes, in appropriate cases, shall not be expected to make a decision at the end of a consultation or negotiation meeting unless the outcome of such deliberations has gone through a village meeting, "se komonil".

24. Decisions made on behalf of the Maya people shall be taken at the village meeting convened by the Alcalde in accordance with the following procedures:

(i) The quorum for a village meeting to make decisions is one half of the villagers in the district who are sixteen years of age or over. A village meeting may convene with fewer participants than the quorum, but no decisions can be made unless the quorum is met.

(ii) All decisions taken at a village meeting shall be arrived at by a majority of the villagers who are present and voting.

(iii) Villagers who are below the age of sixteen shall not be able to vote at village meetings.

(iv) Notwithstanding subsections (i) and (ii), any decision to alienate lands held by customary title shall require the affirmative vote of at least three quarters of all villagers in the district sixteen years of age or over.

25. Where an action is likely to affect the interest and well-being of the Maya people as a whole, the General Assembly of the TAA is the bono fide authority for decision making. The individual Alcaldes will register their vote

on an issue based on the directive of the village meeting on that specific issue. Following deliberations, the TAA executive body will record the decision of the assembly in writing and communicate it to the proponent.

26. Where an action is likely to affect the interest or well-being of a particular Maya village, decisions are made through the procedure set out in paragraph 24, at a village meeting convened by the village Alcalde. The collective decision of the village will be recorded in writing. The Alcalde will inform the TAA of the outcome before communicating with the proponent so that the TAA may: respond to inquiries about the project from other villagers or third parties; inform the affected village of anything that may affect the proposal, including the rights of other villages; or advise other villages that may be affected by the project.

27. The right of the Maya people to make decisions in accordance with traditional decision making systems shall include the right to either grant or withhold consent, or otherwise withdraw their participation in the process of consultation or negotiation if it is determined that the process lacks good faith.

28. Informed consent, where given by the Maya people, shall be indicated in writing by a signed agreement between the TAA or the particular village, and the proponent, stating clearly all the conditions upon which the consent is based.

Section VII

ENVIRONMENTAL, SOCIAL, CULTURAL & ECONOMIC IMPACT ASSESSMENTS

29. To ensure that a proposed action does not deny the Maya people of their livelihood, traditional way of life, and customary practices, a detailed study and transparent analysis of the environmental, social, cultural, and economic impacts that a proposed action may have on affected Maya people must be conducted by an independent and technically competent professional.

30. The environmental, social, cultural, and economic impact (ESCEI) assessments should be integrated into a single detailed document, written in plain language in order to facilitate adequate understanding of the entire process by the Maya people.

31. The ESCEI assessments are to be presented in the language(s) understood by the affected Maya people.

32. The ESCEI assessments themselves should be prepared in consultation with, and with the effective participation of the Maya people.

33. The proponent shall be responsible for the technical and legal expenses, and other logistical costs incurred by the Maya people to ensure their effective participation at all stages of assessing the environmental, socio-economic and, cultural impacts of a proposed action or activity on their villages.

34. The consultation process must sufficiently address, amongst other things, effective measures necessary to mitigate any adverse impacts on the environmental, socio-economic, and cultural life of the affected Maya people, as well as determine the fair compensation for any damages that may result, including how payments of such damages will be made.

35. Where relocation or resettlement becomes absolutely necessary as part of a mitigation measure, the ESCEI assessment report must also include a clear Resettlement Action Plan (RAP) and Livelihood Restoration Plan (LRP) of the affected villages.

36. Maya people must be consulted with regard to any process for drawing up a RAP or LRP. A proposed RAP or LRP must indicate:

- i. Timelines for implementation of the plan; and
- ii. A written declaration signed by the proponent or by an entity designated by the proponent, accepting full responsibility for the cost of implementing the RAP or LRP; and
- iii. Determination of adequate compensation or replacement rates (whichever is greater), for damages resulting in the loss of livelihood, cultural and spiritual practices, traditional environmental attachments, crops and game, infrastructure, and social ways of life.

37. The ESCEI assessments shall include a plan for the establishment of an ESCEI management or monitoring team, which shall include Mayan representatives or any other proxy independently appointed by the Maya people.

Section VIII

BENEFIT SHARING

38. Maya people have the right to lands, territories and resources which they traditionally own, occupy and otherwise use, and shall be entitled to participate in the fair and equitable benefit sharing of such lands, territories and resources.

39. Where a proposed action involves, whether directly or by implication, any economic exploitation of Mayan lands, territories or resources, the consultation and negotiation process shall incorporate provision for the participation of the Maya people in the benefits derived from such ventures.

40. Proposals for benefit sharing plans should respect the Maya norm of economic equity and the collective stake villagers have in village resources. While provision may be made for particular hardships experienced by individual villagers or families as a result of the project, the general principle of all benefit sharing proposals should be collective or egalitarian distribution, including where benefits take the form of employment. No benefit sharing proposal may provide for any benefits accruing to village leaders (Alcaldes, Chairmen or council) by virtue of their office.

41. Any benefit sharing provision shall include a transparent mechanism for determining the benefits due, the recipients (some benefits may accrue to individuals, others to villages collectively) as well as the schedule for such disbursement.

Section IX AGREEMENT

42. The consultation and negotiation process regarding a proposed action shall not be taken as conclusive until all the concerns of the Maya people have been resolved, and an agreement with the proponent, based on mutually agreed terms, has been signed or the TAA or village has agreed to allow certain activities while consultation and negotiation on other or subsequent activities continues. In such cases, consent to such initial activities does not imply or give rise to expectations of consent to subsequent or other activities for which consent is still pending.

43. Under no circumstances shall it be presumed that the Maya people have given their informed consent with regard to any proposed action affecting their land, territories and resources, unless;

1. The procedure for issuing such consent has been subjected to traditional Maya decision making processes;

It. The consent is expressed in a written agreement signed by the proponent and TAA or Village Alcalde, in appropriate cases, stating clearly all the conditions upon which the consent is based.

Section X GENERAL NOTE

44. This framework constitutes the minimum requirements necessary. It does not in any way relieve the proponent from complying with all established domestic and international standards that protect the rights of the Maya indigenous people.

45. No clause contained in this framework shall be construed as diminishing, circumscribing or otherwise eliminating any rights and privileges that the Maya people currently have or may acquire in the future.

On this 13th day of June, 2014, by placing our signatures below and in our capacity as duly elected traditional leaders of our villages we affirm this document.

Witnessed by the Executive Board of the Toledo Alcaldes Association whose names and signatures are set forth below:

ANNEX 10: GENDER ANALYSIS AND ACTION PLAN**PIMS 6397: Enhancing Jaguar Corridors and Strongholds Through Improved Management and Threat Reduction****GEF7/UNDP-Belize Project Preparation Group (PPG)
Gender Analysis**

February 2020

WRITTEN BY DR JAY A. COOMBS, CENTRE FOR APPLIED DEVELOPMENT STUDIES (CADS)



1. Introduction

Belize's natural landscapes maintain a healthy and viable population of jaguars. It is the land bridge of the Mesoamerican region that connects species from Central and South America which includes 4,784 species of flora and fauna, of which 118 are globally threatened, 10 critically endangered, 30 endangered and 77 vulnerable; an additional 62 species of Near Threatened or of least concern can also be found in Belize.⁸² The country's National Protected Areas System (NPAS), as established under the Protected Areas Systems Act, boasts 40% of forested land in which the three (3) critical blocks are located that support both national and regional biodiversity. These three forested blocks that are critical for the maintenance of biodiversity include the Maya Mountains Massif, the Selva Maya Forest, and the Shipstern/ Fireburn forest. Fragmentation between the forest blocks impact species survival. A consolidated focus on the connectivity of jaguar habitats can drastically reduce and possibly stop species loss resulting from further deterioration.

2. The Project

Overall, forest cover in Belize is close to 60% of the country's land mass. Collectively, this area of forests provides for quality habitat for jaguars as is indicated by this area maintaining the highest jaguar population in Central America, and being one of the top habitats in South America. The forest blocks within the Selva Maya are well-connected through the Central Belize Jaguar Corridor Unit, but this is loosely connected to the Maya Mountain Massive and even more isolated from the Northern Biological Corridor. Hence, while the forest cover in Belize provides ample habitat for the jaguar, fragmentation of these habitats and isolation of the jaguars, threaten their long-term viability. Support for connectivity is also hindered by the existence of privately-owned lands which are also adjacent to the protected forest blocks that support the jaguar corridors.

The viability of the corridors is immensely impacted by the increase in agricultural production within close proximity to the block of forests. Here, agricultural production is driven by market forces and as such, farmers stand to yield significant and immediate returns on their products. This same pull of the market is also a factor for the sale of adjacent private lands. For instance, the owner of the private land adjacent to the Selva Maya is prepared to sell this land at an optimal price. Once sold, however, the Selva Maya on the Belize side would be significantly reduced, which would have a potentially dire impact on the viability of the jaguar in Belize. Maintaining and sustaining a healthy jaguar population through robust protection of their habitat is important for the jaguar as well as other species. At the same time, agricultural expansion has placed pressure on the jaguar. Most of this expansion has been cattle rearing and this has led to an increase in jaguar-livestock conflict with jaguars resorting to feeding on domestic animals when prey supply falls.

The Project Objective

The objective of this project is to secure jaguar corridors and strengthen the management of jaguar conservation units through reduction of current and emerging threats, development of sustainable wildlife economy and enhanced regional cooperation.

The Project Approach

Owing to Belize's relatively small size, the project will focus on precise and accurate documentation of the jaguar population across the country for its effective management. In order to do so, capacities within the relevant government bodies and across stakeholder entities will be built and strengthened to better consolidate and communicate data and information among these stakeholders. The focus will be on filling gaps in knowledge of wildlife distribution within protected area units and this will then enable and facilitate the high-level functionality of an integrated data management system. Currently, a data management system is being developed by the Forest Information System in the Belize Forest Department.

3. Gender and Wildlife

The Belizean Context

⁸² Belize GEF7 Child Project Concept Note, March 2019.

Demography

Belizeans tend to live and work predominantly in rural areas; the total rural population was recently estimated at 225,824, compared to the urban population of 182,663.⁸³ As of 2016, Belize's population stood at 408,487, of which 204,247 were male and 204,240 were female situating Belize's male and female population as almost even. While more males and females live in rural areas as compared to urban locales, there are still more females in rural areas (110,732) than in urban centers (93,508). A compilation of the intended project region indicates that the total population in the areas of intervention is 15,113 spread out across a total of 26 communities.⁸⁴ In this area, the combined female population (7,393) is less than the male population (7,720).⁸⁵ Typically, Belize's rural populations live near the country's natural resource base. Given that females are more likely to live in rural areas, they are also likely to live in close proximity to forest resources.

Landscape Changes

The rural economy is primarily based on agricultural production. Commercially, farms produce cash crops such as corn, beans, rice, and sugar cane, all of which contribute to Belize's export earnings. Cattle rearing is also a major source of income in rural communities. Some ranches are of a commercial size and contribute to Belize's export products.⁸⁶ The market demand for cattle and beef also bears heavily on land use across the country. Whereas commercial cattle ranchers are likely to use land principally for pasture, smallholders typically use land to produce a combination of food crops and small livestock for household and local consumption. Smallholders tend to work on their farms as a household unit. As such, women and men are likely to farm together even as there may be some differences in their on-farm roles and duties. Typically, men tend larger livestock, and plant and harvest crops, while women attend to the smaller animals, and harvest, sort and store the produce before it is sold or used in the home.

Invariably, as land is cleared for farming, the habitat of the jaguar in Belize is negatively affected. This loss of habitat and the corresponding increase in agricultural production areas, increase the likelihood of human and wildlife conflict, including with the jaguar. What is at stake then, is that the changes in landscape, principally for agricultural production purposes, affect the ability of the jaguar and the farming household to jointly use the land to sustain their survival and livelihood. This issue affects entire farming households, as both men and women are needed to support the conservation of wildlife habitats while their economic activities are sustainably safeguarded.

4. Key Issues⁸⁷

The presence of farms near forests and their inadequate security leaves them open to wildlife incursion and ensuing conflicts with farmers. The community consultations also indicate that both smallholders and large farm owners require knowledge, skills, and resources to protect their farms against problem jaguars or other wildlife that may destroy their crops and attack their livestock.

SUSTAINABLE LIVELIHOOD

Households in the project area of influence rely heavily on the adjacent natural resources to sustain their families. For instance, in the Mestizo communities of the northeastern corridor, men will typically engage in both fishing and farming to earn an income and maintain their families. As farmers, they produce vegetables and raise small livestock such as sheep, pigs and poultry on farms that are often in close proximity to the forest. Fishermen can be at sea for at least two weeks at a time, while their wives manage the household until they return. The men's long absences from home often result in their farms being left unattended, leaving food crops and livestock poorly secured and thus prone to attack by wildlife.

⁸³ Statistical Institute of Belize, Mid-year Estimates, 2019.

⁸⁴ This population data is based on data from the Statistical Institute of Belize (2016) Abstract of Statistics 2016.

⁸⁵ *Ibid.*

⁸⁶ Conversation with Belize Livestock Producers Association

⁸⁷ The Key Issues in this Gender Analysis are also guided by: FAO 2016, Collaborative Partnerships for Wildlife Management and Gender, CPW 5 Factsheet. www.fao.org/forestry/wildlife-partnership. Accessed: February, 2020.

In this same region, large farms also produce crops such as beans, corn, melons, sugarcane and plantains on a commercial scale. There are also large cattle ranches and chicken farms in the northeastern and central corridor regions. Unlike smallholdings, most commercial farms are likely to have farmhands on site, although there are no clear indications that the size of the farm directly influences the level of interaction between farmers and wildlife. What is important to note here, however, is that the location of the farms affects the level of contact with the wildlife in the area.

Male and female smallholders play an active role in the joint management of crop production and the tending of livestock. In the case of fishing, however, this is done mostly by the men who are usually at sea for long periods of time in a given month to catch fish for sale in the city and for household consumption. Farmers, who may be both men and women, mainly rear chicken, sheep and cattle for sale and for family subsistence. Most women have a home garden in which they cultivate herbs and some vegetables for their kitchens. While men leave the home for work and to earn income outside of the home, women keep the household in order, and tend the crops and livestock mostly around their home. On-farm activities, however often involve both men and women—usually as a husband and wife unit. Food production in the communities is typically a cooperative effort between men and women.

At the same time, the men are considered to be the owners of the family farm, as women are less likely to own titled land.⁸⁸ Despite their lack of land ownership, however, women like men also undertake other economic activities to increase and diversify their income. In the surrounding northeastern communities, there is a common practice among women to engage in small scale economic groups, which are often women's groups. These groups are social structures that help women pool their resources, skills and expertise to generate much needed income. Generally, women who are active in these groups use skills such as sewing, jewelry making, and cooking. They will also generate an income from sales in cosmetics, shoes, and telemarketing. In some instances, husbands who don't fish assist their wives with the production of local craft products.

In the project landscapes, there are five (5) women's groups in the northeastern region and one (1) in the Maya Golden region. These groups have micro-entrepreneurship experience which can be used to promote and scale Belize's ecotourism package with the jaguar brand. The joint and also different activities that men and women are engaged in illustrate that their roles and positions provide for different opportunities from which they can access environmental goods and services from the project.

HUMAN WILDLIFE CONFLICTS

Principally, wildlife conflicts occur because farms have expanded into the habitats of the jaguar and other wildlife. Few farms are effectively secured to keep wildlife at bay. Conflicts arise either when farmers see the jaguars on their land or when livestock are attacked or killed by wildlife.

In some communities, wildlife attacks appear to be on the decrease but this might be because farmers have not reported incidents. Still, in other communities such as Sarteneja, farmers have experienced more recent attacks. Farmers have indicated that they have lost large numbers of sheep (35 sheep according to one farmer), pigs, and chickens. Cattle including cows and calves have also been lost to recent wildlife attacks. In the absence of direct technical assistance that can aid farmers with technological know-how to prevent wildlife attacks, both male and female farmers have employed rudimentary efforts to ward off jaguars, pumas and coyotes. In doing so, some smallholders have resorted to keeping their farms lit with solar powered lamps, installing electrified wire fencing, conducting control burns, and placing animals in enclosed but basic shelters. In the Mestizo farming households, men and women rely on each other for immediate solutions to address problem cats.

On larger farms, including in the Mennonite villages, there have been at least three jaguar sightings in recent years. For example, in Little Belize, farmers reported that up until three (3) years or so ago, attacks on cattle or small horses were occurring on at least a weekly basis. Here, farmers, and other community members believe that their farms are exposed and this invites the jaguar and other cats to easy prey. In these communities, men take charge of the farms and any wildlife encounter.

⁸⁸ Caribbean Development Bank, Country Gender Assessment, 2016.

THE IMPACT

Loss of investments in livelihood

Wildlife attacks on farms directly affect the livelihood and earning capacities of male and female farmers. For smallholders, the impact is even greater as they are slower to recover following the loss of their livestock. The constant threat of wildlife attacks limits the options of farming households for income generation, especially if they must then spend more time in one place to protect their livestock. For women, the loss of smaller animals such as poultry directly impacts their ability to earn incomes from the sale of meat and eggs. Since women tend to support their husbands with the rearing of smaller animals, the predatory cats, including the jaguar, can more quickly destroy large hatches. Apart from the direct losses of livestock, the burden of care at farms often takes a toll on both men and women. Indeed, it is not uncommon to find women tending the farms when their spouses are away earning wages in other places.

Inadequate on-Farm Coping Capacities

Men and women alike look to informal ways to cope with, and respond to, wildlife conflicts. They do so by relying on their own internal knowledge and on traditional practices and experiences. Despite being farmers within close proximity of forests, men and women lack standardized knowledge and practice in dealing with wildlife conflicts.

Direct Threats to the Jaguar

Attacks on livestock at farms are not limited to just one of the big cats in Belize. More and more, community members have offered that other big cats have been sighted at the farms and in their villages. Slowly, men and women alike are becoming cognizant of the types of kills and attacks on their livestock which are not always consistent with the hunting habits of the jaguar.

DECISION-MAKING IN THE CONTEXT OF SUSTAINABLE WILDLIFE MANAGEMENT

Currently, there are no formal organizational structures at the community level to respond to wildlife conflicts. In the event of conflict, men take the lead in addressing this issue. While no organization exists at the local level to manage these disputes, farmers are somewhat aware that they should call a public body to attend to this issue. Management of wildlife conflicts is the responsibility of the Wildlife Unit at the Ministry of Forestry, Fisheries, Agriculture and Sustainable Development. However, since encounters with wildlife are more likely to be among farming households, male heads of households tend to seek the direct support of the Agriculture Department rather than from the Wildlife Unit of the Forestry Department.

Importantly, when responding to calls about wildlife attacks, Agriculture as well as Forestry Officers are likely to meet women at home and not male farmers. In this regard, women are effectively the frontline contact for wildlife conflicts response and mediation. They are the ones to get information first-hand from technical officers about what can be done to manage the conflicts. However, given their roles in the home, they are unlikely to directly implement the suggested actions. Women thus have an informal role as intermediaries in the existing system of response between the officials and the male farmers. Increased recognition of the role that women play can help to improve the currently inadequate response mechanism. Furthermore, building the capacities of women to manage the communication with farmers can build overall household capacities to resolve wildlife conflicts.

5. Challenges

Mitigating Human-Wildlife Conflicts

The jaguar is a keystone and protected species in Belize. The cat is a national treasure and the health of its population is a critical indicator of the health of the biodiversity. However, men and women alike in the regions of the jaguar habitat do not have basic knowledge about this cat and its survival. This lack of knowledge can contribute to dangerous interactions between humans and jaguars.

Conflict between predominantly farming households, large farmers and the jaguar as well as other livestock predators is further exacerbated by the lack of confidence in the national response system. Discussions with male and female smallholders living near the northeastern corridor point to the lack of emergency help and appropriate resources from public officials to help them deal with problem jaguars. The current response mechanism is neither clear nor straightforward to the men and women who are most likely to come into contact with a jaguar. On the whole, communities do not feel that their wildlife conflict mediation needs are addressed in a timely and responsive manner by the current response mechanism in the MFFESD.

Furthermore, neither men nor women in the project area of influence have had significant direct benefit from being in a region where the jaguar lives in a healthy, protected habitat. As a result, they see the jaguar's presence solely as a threat to their personal security and livelihood and not as an opportunity to increase livelihood options in their community. Women in particular have difficulty to conceive of how the presence of the jaguar can provide a value-added dimension to their local products and entrepreneurship activities. Likewise, men do not consider how their sightings of the jaguar can provide valuable data and information for further conservation and habitat protection and to help limit wildlife presence on their farms.

Regulating Game-meat Hunting

Hunting of game-meat for food is still a common practice in many households, but especially in rural ones. This meat usually provides a valuable source of protein to many families. In some of the project regions, this protein dependence is further increased due to traditional cultural practices. For example, in the Maya Golden Landscape region, where predominantly indigenous Mayans live, there is a significant reliance on game for subsistence.

In the absence of managed game-hunting, human pressure on some game species can significantly affect prey availability and jaguar feeding habits. In other words, the hunting of game by people directly affects the prey population on which the jaguar feeds. Men are likely to hunt for game and women cook the game meat for household consumption, although some of this meat is also sold in the communities. Even so, women are likely to buy since they prepare the food for the family. In the absence of community-wide knowledge of, as well as strict adherence to, any existing regulations for hunting activities, unabated game consumption practices, especially in the Maya Golden Landscape, will negatively affect jaguars. Community, education and awareness raising on game hunting regulations require the involvement of both men and women, since they are directly involved in this practice. Men and women play distinct roles, especially in relation to what game is captured, and when and how it is prepared for use in the household.

6. Opportunities

Increased human encounters with the jaguar strongly suggest that its habitat is changing. These encounters should then be considered by the community as a call to action to restore or improve upon habitat conservation efforts. The present project provides multiple opportunities for a gender-responsive approach to conserving jaguars in Belize.

Environmental Education

Component 1 - Conserve Wildlife and Habitats - allows for significant data to be generated on the jaguar in each of the intervention regions, covering the northern, central and southern regions of the country. This scientific data, primarily captured from camera traps, provides the basis for the formulation of environmental communication at the community level, which can accurately inform on-farm practices of men and women, leading to reduced negative implications on the jaguar. This means, for example, that farming and production practices can be better planned in these regions. This is an important consideration for food security and the conduct of traditional, cultural practices in a sustainable manner.

Livelihood Diversification

Component 2 - Promote Wildlife-Friendly Economy - offers an opportunity for communities to directly engage in sustainable practices. In particular, this component enables men and women alike to seize upon the brand of the jaguar and its healthy existence in well-preserved habitats. For women, there is a market for value-added production from habitat conservation, and the project can support and promote sustainable production activities. Men as well as women can generate incomes from the production of honey from the nearby mangrove forest, and produce jaguar-branded souvenirs and gift items in the growing tourism industry, especially in the northeastern region of Belize.⁸⁹

There are producer groups consisting of men and women in the project region that have experience with entrepreneurship. The project can support these groups to improve their institutional structures, business planning, marketing and specific trade skills, such as sewing, and painting.

Empowerment and Decision-making

Component 2 provides for the institutionalization of a rapid and effective response protocol that is easily understood and accessible by both men and women at the community level. At the same time, this intervention can enhance the acceptability of women's formal engagement in wildlife conflict mediation and decision-making in the communities. In doing so, the project can usher in a soft, inclusive approach to conflict with jaguars with more trained human resources at the community level. Such an approach can also gain community buy-in, ownership and cooperation in the management of problem jaguars and other wildlife.

Knowledge Production

Components 3 and 4 promote the generation of knowledge at the community and the institutional level. The production of knowledge products that investigate gendered practices in the region can help to inform how these impact the habitat of the jaguar. At the same time, knowledge can be generated from camera traps placed within proximity of the communities so that women can have easier access to them, interpret the data and use it. Knowledge generated, documented and reported can also support the interests and priorities of men as well as women.

7. Recommendations

Each component of the present project includes gender considerations that can influence the extent to which the expected benefits can be derived equitably for men and women. In this regard, the following recommendations are made for each of the components:

Component 1 and 3: *Develop and implement site specific environmental and wildlife education for farming households* in an effort to increase their knowledge and awareness of the jaguar, its habitat and the impact of human practices on its ability to survive in the forests near buffer communities. This education and outreach program should include smallholders as well as owners of commercial farms and cattle ranches. The training is focused on households in order to ensure that men as well as women participate in the training, and in doing so the wider community will have improved access to relevant information and skills for sustainable environmental practices.

Component 2: *Provide direct technical support and one-time critical inputs to women-led micro-enterprises in the project region:* Specifically, there are at least two women's groups that have previous experience with development assistance and whose products can be scaled in order to: (i) promote the brand of the jaguar and; and (ii) advance sustainable use of natural resources in the jaguar habitat system. The groups to be considered are the Sarteneja Sewing and Souvenir Group or Sartenejanas and the Sarteneja Honey Producers Group, which consists of both men and women. The former group should be supported to scale production, develop and manage its supply chain and finalize the design of core products to maximize the brand of the jaguar. The latter

⁸⁹ Notably, since 2013, BEST was awarded the implementation of a World Bank funded project entitled "Promoting Sustainable Natural Resource-based Livelihoods in Belize". This project promoted viable and sustainable natural resource based livelihoods adjacent to protected areas in Belize, thereby reducing pressures on the key natural resources.

group can be supported to revive and scale wildlife-friendly honey production for the national and international market.

Also, in **Component 2: Improve empowerment and governance spaces to include women in wildlife conflict response and mediation.** Women are at the frontline of the response to wildlife conflict. Owing principally to their domestic roles, they are often the first contact that officials meet as they respond to calls for assistance to deal with problem jaguars. Owing to this proximity in the existing response mechanism, women hold a unique position to inform and officially participate in conflict mediation efforts. The design of a new and consolidated response protocol and a community-based wildlife conflict mediation mechanism are two distinct spaces that should support women's direct inclusion and official representation. At a minimum, the project can specify the level of female participation in protocol formulation and their representation within the official response mechanism.

Component 4: Support the documentation of Belizean women's experience as partners in conservation and sustainable resource use for viable jaguar habitats. The knowledge products emanating from this effort should provide for the documentation of experiences in the northeastern and the Maya Golden regions. This research can be co-developed with women in the communities at the inception of the project.

THE GENDER ACTION PLAN

Component 1: Conserve Wildlife and Habitats

Component 3: Combat Wildlife Crime and Unsustainable Hunting

<p>Project Outcome 1: Improved conservation and connectivity in three landscapes, each consisting of Jaguar Conservation Units and corridors, totaling 1,099,374 ha. Indicated by: Improvements in biodiversity status (key species include jaguars, peccaries and tapirs) and threat reduction indexes for each landscape.</p> <p>Project Outcome 3: An early warning system and regulatory environment, designed to provide timely alerts and rapid response to any emerging signs of illegal wildlife trade, particularly of jaguar parts, indicated by: (i) the number of confiscations/ arrests and (ii) the improved level of knowledge about wildlife trafficking in the enforcement personnel and in the general public.</p>			
<p>Project Level Gender Outcome: Women and men are contributing to jaguar protection and the safeguarding of their habitats.</p>			
<p>Gender Indicators:⁹⁰</p> <ol style="list-style-type: none"> 1. Number and percentage of women/men involved in installing camera traps nationally. 2. Number of women/number of men who have knowledge of Jaguar/Prey/Game species and hunting activities and are actively participating in workshops and trainings on Jaguar Conservation. 			
Gender-related activity	Indicator	Target	Baseline
Develop and implement site specific Environmental and Wildlife Education for farming households.	# of gender-sensitive capacity building tools developed that emphasize knowledge and awareness that women and men can use based on camera trap data.	At least 30% of women from farming households in target areas access camera trapping or related capacity development training.	8 active women's groups exist in the project area of intervention. ⁹¹
Outputs: 1.Capacity-building tools, emphasizing the skills needs and priorities of women and men in the jaguar protection system developed.	Gender-sensitive training tools developed		Assumption: Capacity to develop appropriate/ responsive tools for communities.

⁹⁰ The indicators used in the GAP are taken from UNDP-GEF Gender Mainstreaming Guide FINAL, 2016. Some indicators have been added to reflect the specific circumstances and national context.

⁹¹ 8 Women's Groups are: Sarteneja Sewing and Souvenir Group, Sarteneja Honey Producers, Sarteneja Lionfish Jewelry Group, Sarteneja Tour Guide Association, Junalij K'anjel, Indian Creek Women's Group, Trio Women's Group, Golden Stream Women's Group.

2. Six (6) Wildlife Education and awareness training completed.	# of women and men who complete training.		
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Component 2: Promote Wildlife Economy⁹²

Project Outcome: 2.1 Strengthened systems for preventing and responding to conflicts between jaguar conservation and otherwise sustainable economic development, as indicated by: (i) a fifty-percent reduction in livestock-jaguar conflicts due to application of the jaguar-livestock conflict resolution protocol; (ii) increased number of men and women benefiting from alternative sustainable livelihoods.			
Project Level Gender Outcome: <i>Strengthened capacities of CBOs in surrounding communities to develop and benefit from sustainable eco-tourism that promotes protection of Jaguar habitats in the Northeastern Biological Corridor and Maya Golden Landscape.</i>			
Specific Output:			
<ol style="list-style-type: none"> At least 2 (two) women's led microenterprises in the jaguar protection system are fully operational and promoting the Jaguar Brand for the marketing of niche products. Men and women are trained in wildlife conflict prevention, mediation, and resolution. 			
Project Indicators:			
<ol style="list-style-type: none"> Effects of project in promoting formal and informal training/capacity development programs for women (extension programs, information dissemination through CBOs or NGOs, and information campaigns). 			
Gender-related activity	Indicator	Target	Baseline
1.1 Strengthen Capacity for CBOs in surrounding communities to benefit from sustainable eco-tourism that promotes protection of Jaguar habitats in the Northeastern Biological Corridor	e.g. # of capacity building activities developed integrating business priorities and needs of women.	At least two (2) women's groups are fully functional and producing sustainable products in the jaguar protection system.	Eight (8) Active women's groups exist in the area ⁹³
Outputs: 1. At least (5) training workshops on <i>Product Development and Marketing</i> completed annually. 2. A marketing strategy for products produced by women's' groups. 3. One production cycle per group (at least 2) supported annually	# of women and men trainees who participate in workshops Marketing Plan # of products/goods/ services sold annually		Assumptions: <i>Women remain committed to their groups and are motivated to grow their businesses.</i>

Component 2: Promote Wildlife Economy

Project Outcome 2.1: Strengthened systems for preventing and responding to conflicts between jaguar conservation and otherwise sustainable economic development, as indicated by: (i) a fifty-percent reduction in livestock-jaguar conflicts due to application of the jaguar-livestock conflict resolution protocol; (ii) increased number of men and women benefiting from alternative sustainable livelihoods
Project Level Gender Outcome: Women and men are contributing to jaguar protection and the safeguarding of their habitats.

⁹² The actions specified here are based on technical support by the Belize Enterprise for Sustainable Technology (BEST). BEST's goal is to create economic and social benefits for the poor, at the same time facilitating capacity building of community-based enterprises to sustain their own development. See Appendix 9.1 below.

⁹³ 8 Women's Groups are: Sarteneja Sewing and Souvenir Group, Sarteneja Honey Producers, Sarteneja Lionfish Jewelry Group, Sarteneja Tour Guide Association, Junalij K'anjel, Indian Creek Women's Group, Trio Women's Group, Golden Stream Women's Group.

Gender Indicators: Effects of project in promoting formal and informal training/capacity development programs for women (extension programs, information dissemination through CBOs or NGOs, and information campaigns). Number of women who have knowledge of laws related to Jaguar protection.			
Gender-related activity	Indicator	Target	Baseline
Strengthened capacity of women and men to improve community-based awareness on the protection of Jaguars.	Women and men dedicated to (employed for protected areas management) community awareness and jaguar sensitization	At least 3 women's groups and 1 community-based organization are supported to conduct community awareness and sensitization about Jaguars. At least 3 women's groups and 1 community-based organization are accessing training on Jaguar-Wildlife Conflicts	Eight (8) Active women's groups exist in the area.
Outputs: 1. Community-based wildlife focal points trained. 2. Community Wildlife focal points working group established.	# of women and men community-based wildlife focal points trained # of wildlife focal points meetings conducted per annum		Assumption: Community-based Wildlife Conflict resolution mechanisms are supportive of formally engaging women and ensures their participation.

Component 4: Coordinate and enhance knowledge

Project Outcome: Lessons learned and case studies from the target landscape documented and disseminated.			
Project Level Gender Outcome: The contributions and experiences of women and men for jaguar protection and the safeguarding of their habitats are documented for academic and practitioner references.			
Gender Indicators: Number of women/number of men who have knowledge of Jaguar/Prey/Game species and hunting activities and are actively participating in workshops and training on Jaguar Conservation.			
Gender-related activity	Indicator	Target	Baseline
Support the documentation of Belizean women and men experiences as partners and beneficiaries of conservation and sustainable resource use for viable jaguar habitats.	# of research projects by academics and practitioners funded	At least one research, project documenting women's experiences and practices in the jaguar protection system published and disseminated.	0
Output: 1. Jaguar Research training for Belizean Natural Resource Management scholars designed and implemented. 2. Publish research results and findings.	# of male and female researchers trained # of publications/articles produced	.	Assumption: Belizean Researchers, Academics and Practitioners are interested in the training.

Resources

Resources needed to implement the stakeholder engagement plan have been distributed within the project budget. To some extent, given that stakeholder engagement is mainstreamed throughout the project, every project activity involves stakeholder engagement to some degree (see Tables 12-15 above). With that caveat, key activities that place significant emphasis on engagement and participation, together with associated financial allocations, are summarized in Table 31 below.

TABLE 29: MAIN GENDER-RELATED ACTIVITIES AND ASSOCIATED BUDGETARY RESOURCES

Project level (outcome, output, activity)	Budget item description	Indicative costs (US\$)
Outcome 1	Workshops for Outcome 1, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	4,713
Activity 2.1.4	Support to community consultative process related to conflict, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	22,500
Activity 2.2.2	Community participation in wildlife-friendly economy (community outreach and engagement)	22,500
Outcome 2	Workshops for Outcome 2, including consultations needed to implement stakeholder and gender plan requirements associated with this outcome.	5,713
Activity 3.1.1	Support to community engagement/ training	15,000
Activity 3.2.1	Support to community outreach and consultations	9,000
Activity 3.2.2	Support to Community Advocacy	12,000
Activity 3.2.3	Training of community volunteers in data collection and use of camera trapping	12,000
Activity 3.1.2	Support to the application of community survey instrument	18,000
Activity 3.2.1	Development of Community resource use management plans	30,000
Outcome 3	Workshops for Outcome 3, including consultations needed to implement IPP, stakeholder and gender plan requirements associated with this outcome.	4,713
Outcome 4	Project monitoring, participation and safeguards specialist	12,000
TOTAL indicative COST		168,139

Appendix 10.1: BEST Organizational Overview

Chartered in 1985, BEST is a private non-government, not for profit organization with a mission of “dedication to poverty reduction and economic empowerment of the most vulnerable, low income individuals, families and groups”.

BEST’s goal is to create economic and social benefits for the poor, at the same time facilitating capacity building of community-based enterprises to sustain their own development.

During its thirty-five (35) years of operation, BEST has managed several projects. These have included the strengthening of community based groups country-wide. These have been mainly in income generation, such as corn mill and rice hulling operations and small farming enterprises.

BEST established a number of community banks, mainly for women, during the period 1990 and 1999. These banks were based on the Grameen Bank model. This program financed over six hundred and sixty (660) individual loans to thirteen (13) community banks across the six districts of Belize.

In 1994, with financing provided by the IDB, BEST established a credit program for individual borrowers. This was later expanded with new injections of capital from donors and later, through the acquisition of loans.

In 2005, BEST was awarded a five-year contract for the management of a Global Fund to fight AIDS, tuberculosis and malaria project entitled “Strengthening of Belize’s Multi-Sectoral response to HIV/AIDS. BEST was the principal recipient and there were seven sub-recipients working on this project.

In 2008, BEST was successful in a bid for a European Union funded project entitled Micro Enterprises for Poor Families. This was a two year project which provided financing for the establishment of micro enterprises for poor families in rural communities. Two hundred and seven micro enterprises were established under this program.

In 2013, BEST was awarded the implementation of a World Bank funded project entitled “Promoting Sustainable Natural Resource-based Livelihoods in Belize”. This project promoted viable and sustainable natural resource based livelihoods adjacent to protected areas in Belize, thereby reducing pressures on the key natural resources.

Presently, BEST is working with rural communities in northern Belize, assisting them in establishing income generating projects to reduce pressure on the environment. This is through the Belize Marine Conservation and Climate Adaptation Project.

BEST has substantial experience in community development and assisting groups in establishing sustainable income generating projects. Through the World Bank funded project, BEST worked with 22 communities in the establishment of such projects. These projects ranged from northern Belize to southern Belize. Four (4) groups were assisted in Sarteneja. Projects included honey production to jewelry making.

The sewing project involved six (6) women called the **Sarteneja Sewing and Souvenir Group**. BEST assisted the group in finding a venue for their operations. They were also provided with sewing machines and sewing material needed. A consultant was hired to provide training in sewing for the group. They learnt how to sew wedding gowns and uniforms.

A second group, the **Sarteneja Honey Producers** was assisted. They consisted of 5 males and 2 females. The group was provided with 81 bee colonies and beekeeping equipment. They were also provided with a building from which to operate. The group was trained in bee management and how to construct the bee boxes. The group successfully harvested honey starting in May 2016.. They sold 53 cases of honey during the period May to September 2016, generating \$7,040.00 in gross sales. During the period October 2016 to March 2017, the group had sales of \$11,348.00. In late 2017, the group begun experiencing problems with the weather (too much rain) and problems with beetles. The group lost several colonies from the beetles.

The third group assisted was the **Sarteneja Lionfish Jewelry Group**. This involved working with 16 women from the village. The women produce jewelry from the fins of the lionfish. The group benefited from a marketing and information visit to Washington, USA attended by the chairperson of the group in September 2016. They were also provided with training in business management and organizational strengthening. They were provided with material for jewelry making and small equipment.

The fourth group assisted was the **Sarteneja Tour Guides Association** for a Water Taxi endeavor. This group was provided with a boat and engine for the operation of a water taxi run from Sarteneja to Corozal town and for tourism purposes. They were also provided with an office to operate from. Water taxi operations commenced in February 2018.

A fifth group was assisted in San Miguel, Toledo called, **Junalij K'anjel** with a pig rearing project. This group consisted of six male and four female. They were provided assistance in the construction of six pig pens and six biodigesters, one per family. They were also provided with pigs and pig feed. The first set of pigs was sold by the group in July 2016. The group is now selling pigs on a monthly basis. Cumulative sales to December 2017 was \$31,296.35. The members give 10% of their sales back to the group for group ventures. The group had a total of \$5,205.80 deposited into their account from the sale of pigs. They also received training in pig rearing and basic record-keeping.

ANNEX 11: BIODIVERSITY OVERVIEW

Forest/land types and their respective cover and protected areas and corridor network (e.g. produce a map with overview of system and their status

Figure 14 presents a map of latest ecosystem and land use types for Belize from 2015. There have been some additional land use changes since then—mainly forests changed into agriculture—but the map provides a good overview and actual percentages have not changed dramatically. Table 29 provides the areas in km², along with percentage of total landmass.

TABLE 30: AREA SIZES OF DIFFERENT LAND-USE TYPES WITH ASSOCIATED PERCENTAGES.

Land-type	km ²	% of total
Broadleaf forest	11,299.0	49.2%
Agriculture	4,673.2	20.3%
Savannah	1,710.7	7.4%
Mangrove	1,531.7	6.7%
Shrub forest	1,430.1	6.2%
Freshwater	632.5	2.8%
Pine forest	631.1	2.7%
Urban	280.3	1.2%
Other	776.4	3.4%
Total	22,965.0	100.0%

The broadleaf forest land type hosts the most productive soil, especially around rivers with the highest soil accumulations. Belize's agricultural capacity is relatively limited, with top soil layers > 1 meter considered optimal. Many areas with sub-optimal agricultural potential according to King⁹⁴, are currently exploited, albeit with varying degrees of success.

⁹⁴ King et. al. 1993.

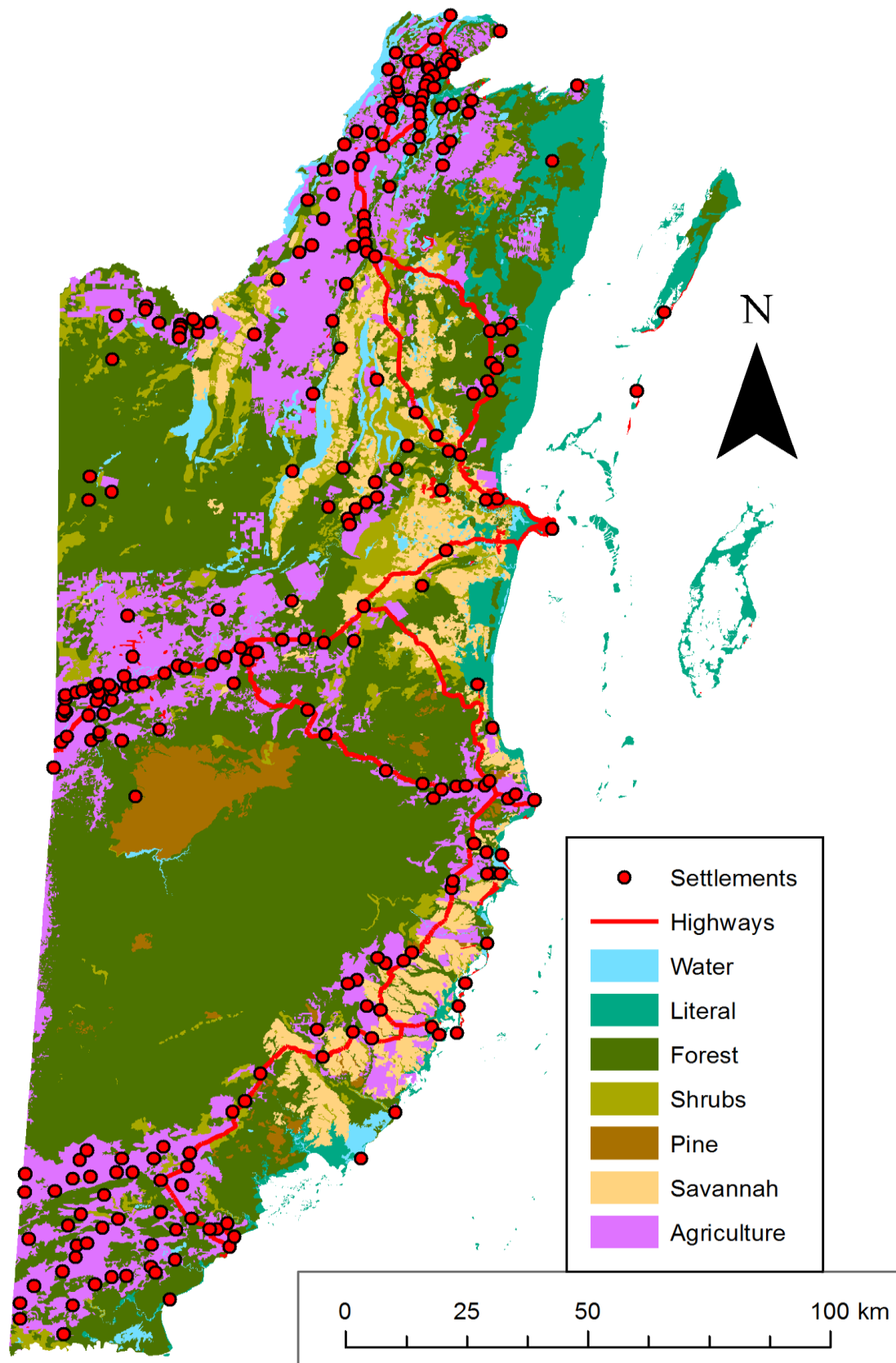


FIGURE 14. AVAILABILITY OF NATURAL ECOSYSTEMS IN RELATION TO HIGHWAYS AND HUMAN SETTLEMENTS.

Figure 14 clearly shows that broadleaf forest, here used as a broad category with varying fine-scale types, is the dominant land use type in Belize, followed by agriculture. In the future, the ratio of agriculture is expected to increase at the cost mainly of broadleaf forest and, to a lesser extent, shrub forest in riparian zones. Many of the riparian shrub forests consist of recovering broadleaf forest patches following agricultural clearing in the '60s and 70s, which were subsequently abandoned. Savannah and pine forest have generally not been converted, as these areas tend to have very poor soil. There is a level of free-range cattle ranching happening in such areas, but this is highly unsustainable, both economically and ecologically.

Figure 15 shows the protected area system with a considerable patchwork of different reserves and statuses. Especially the largest conglomerate of protected areas and broadleaf forests, the Maya Mountains in the centre of the country, has a highly diverse set of management structures. Table 23 provides the different types of reserves and the area sizes they represent within the system. Many areas are insignificant in terms of size and ecological importance. Some areas, particularly the bird sanctuaries along the coast, were established solely to protect bird colonies. Forest reserves, with logging extraction at their core, form the largest category in terms of area size (40%). This category is most at risk from incursions and illegal settlement at the edges. Private protected areas equally provide a large portion (14%), but this is mainly due to the single large-sized Rio Bravo in the north-west part of country (Selva Maya, Figure 14). Private protected areas are owned and managed by consortiums and can be considered well managed and safe in terms of future ownership. The newly established Northern Biological Corridor is going to be managed as a private protected area, with high security and excellent management standards. This is very recent and not officially gazetted, and therefore not shown in Table 30. Nature reserves, wildlife sanctuaries, and national parks, with highest level of government protected status, together form another 30% of the system. These are generally safe with varying levels of management, ranging from no presence to high involvement of NGOs in terms of co-management. The remaining largest category concerns candidate private protected areas, making up 14% of the system. It remains unclear which of these areas may become part of the system; some might be sold for agriculture and thus completely change status. The large block of candidate forest under the private protected area of Rio Bravo, Laguna Seca, and Gallon Jug make up the largest portion within this category, with Laguna Seca in particular having a highly uncertain futures.

TABLE 31. NUMBER AND AREA SIZES OF DIFFERENT TYPES OF TERRESTRIAL PROTECTED AREAS IN BELIZE.

STATUS	Number	Size (km ²)
Archaeological Reserve	15	118.3
Bird Sanctuary	7	0.1
Forest Reserve	17	3,688.6
National Park	17	1,615.5
Natural Monument	3	26.7
Nature Reserve	5	455.7
Private Reserve	9	1,281.0
Public Reserve	2	0.2
Wildlife Sanctuary	6	718.7
Candidate Private Reserve	28	1,298.5
Total:	109	9,203.2

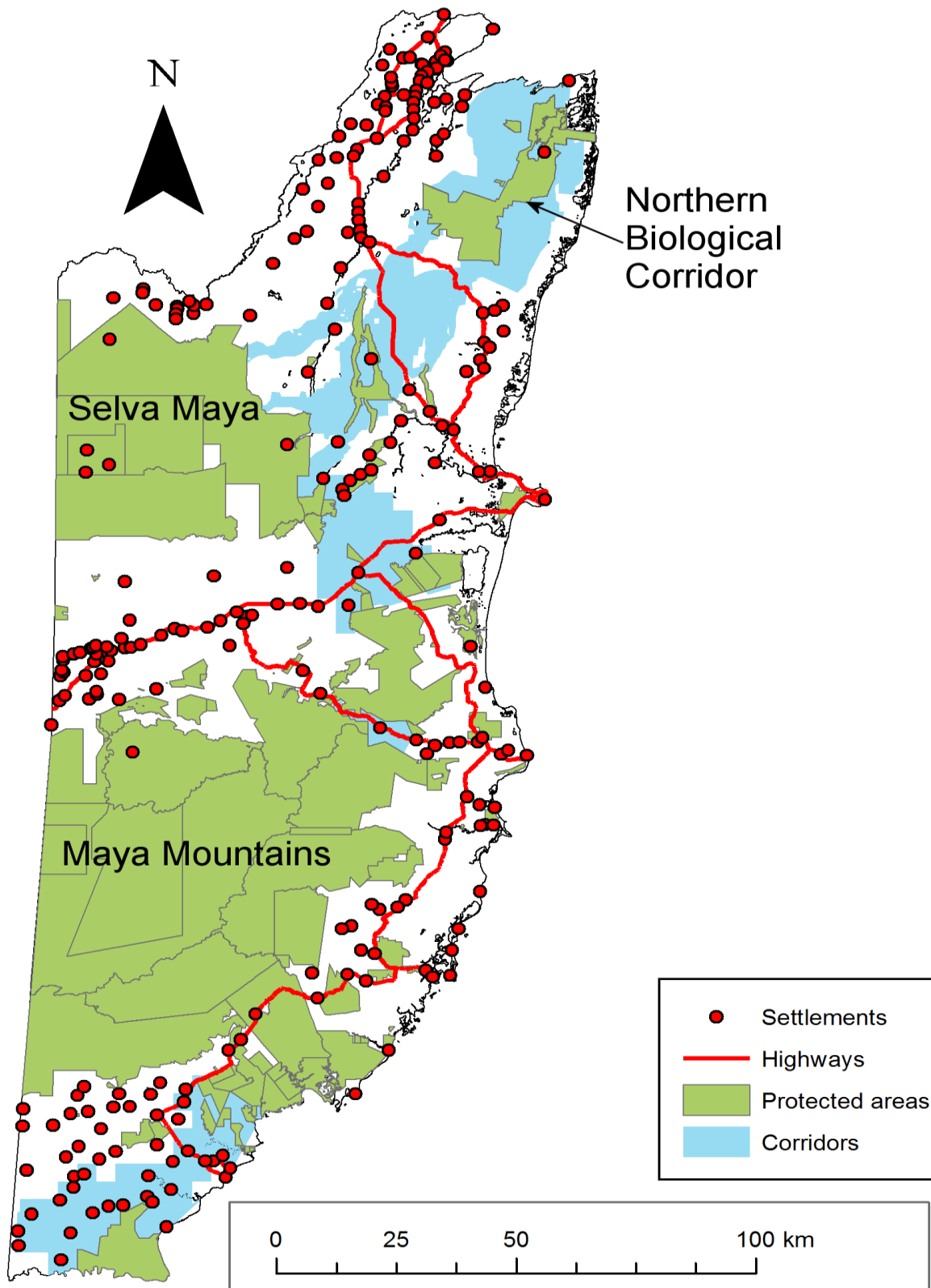


FIGURE 15. THREE BLOCKS OF PROTECTED AREA CONGLOMERATES WITH THE CONNECTING CORRIDORS TO ASSURE CONNECTIVITY

As indicated in Table 30, the list of protected and management areas is impressive, but there are some core areas, managed by a limited number of organisations, that form the basis for this network. Figure 16 shows the different protected areas, as managed by the 6 main responsible management entities. Table 31 shows the number of areas and the area sizes within these cores. Although, for example, Belize Audubon boasts a large number of protected areas, from an ecosystem perspective only two are significant in terms of size. The areas indicated in Figure 16, managed by the 6 entities, represent 78% of the total area, as indicated in Table 30. It is arguable that any national management system or operation should focus on these six areas.

The Forest Department manages the largest set of areas within this group (40% of the total of table 31). This category mainly includes areas with the least amount of management structure. It forms a 'rest' category, for which either infrastructure, ruggedness, or other issues created a situation where no capable co-manager indicated an interest in management. These are the areas with the highest chance of de-reservation, with communities occupying areas for farming or living space. The NGO areas have well developed management structures but equally manage areas that are extremely rugged with limited infrastructure. Lands managed by Ya'axche and Friends for Conservation and Development include substantial areas with limited presence and only some yearly, expeditionary patrols.

TABLE 32. NUMBER AND AREA SIZES OF TERRESTRIAL PROTECTED AREAS MANAGED BY THE 6 LARGEST WILDLIFE STAKEHOLDERS IN BELIZE.

Organisation	Number	Size (km ²)
Forest Department	14	2,817.5
Friends for Conservation and Development	2	1,666.0
Program for Belize	1	1,023.2
Ya'axche Conservation Trust	3	633.9
Belize Audubon Society	2	618.0
Corozal Sustainable Future Initiative	4	366.9
Total:	23	7,125.4

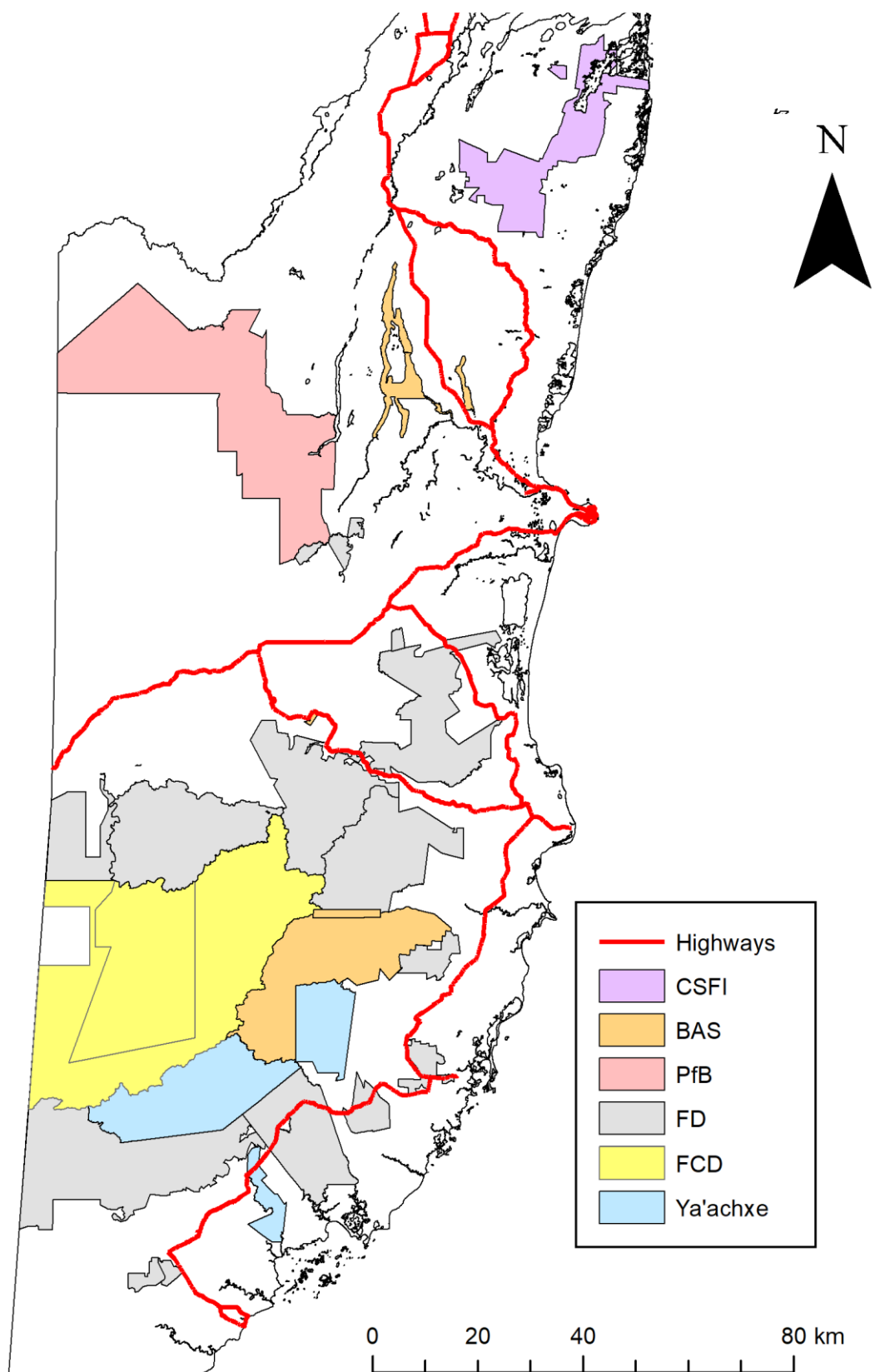


FIGURE 16. PROTECTED AREA AND FOREST RESERVES CLASSIFIED BY MANAGEMENT ENTITY

As seen in Figure 15, all three connecting corridor areas have begun to show considerable urban and agricultural expansion, with limited possible pathways of free-flowing wildlife through wilderness areas. In the North, the well-managed CSFI is working together with stakeholders, assessing the changing economy of this northern area in light of a dying sugar cane industry. The Central Belize Corridor, recently renamed the Maya Forest Corridor, has a considerable consortium of international NGOs seeking funds to purchase strategic areas from current landowners looking to convert. The area has recently been established as an area of special interest in cabinet, limiting possibilities of development when sold outside of conservation circles. Management entities will, however, remain problematic, as equally for the other surrounding forest reserves to the South. The road crossing of the hummingbird highway is also becoming built up, making the crossing from Manatee Forest Reserve to the Maya Mountains less straightforward in terms of landownership and future plans.

The Southern Corridor, connecting the Maya Mountains and Sarstoon Temash, appears to be the most precarious. The large numbers of mainly Mayan villages create an expanding agricultural frontier of small farms. The widespread nature and difficulty of disentangling landownership makes this an extremely challenging area to work in terms of guiding land use change. The most precarious section concerns the crossing of the Southern Highway towards Punta Gorda. Here, there are no parcels left with even limited possibilities of wilderness. High amounts of conflict indicate that the chain will be broken very soon. This corridor equally has the least interest of government and the larger national NGO community, despite the need to maintain connectivity with the most southern protected area of Sarstoon Temash, at the Southern border of the country, managed by Sarstoon Temash Institute for Indigenous Management (SATIIM). SATIIM has only a partial conservation mandate and has historically not focused on corridor functionality with the rest of the country, which should however be a priority for maintaining the ecological integrity of the protected area itself. Connectivity beyond the southern border is extremely precarious and seen by the wider Belizean conservation community as a dead end, not worth the national investment. The gap along Southern Guatemala to Honduras has been devoid of jaguars for extended period. Despite all of the difficulties noted above, the protected forest wilderness system is still fully intact and connected. Belize is likely the only Central American country (helped by its limited size) which can still boast a fully connected forest system.

Terrestrial biodiversity distribution, status, monitoring and protection

This project has a strong focus on jaguars (*Panthera onca*), as likely the only species requiring full landscape monitoring and management outside of the human constructed boundaries of the Belize Protected Area system. The species is extremely wide ranging, living at low densities, and thus no single protected area can sustain high enough numbers to assure long-term survival within its own boundaries. It is thus a national landscape species, which can be used to bring management and monitoring activity to the national level. Individual male jaguar ranges in Belize can vary between 120 – 600 km², assuring that single individuals are hardly ever confined within the boundaries of a protected area. Only the slightly smaller puma (*Puma concolor*) has ranges and density distribution within this realm. Jaguars are a charismatic species, disappearing from the Central American landscape. They are, however, still strongly represented across the Belizean landscape. Belize can be considered a jaguar stronghold for Northern Central American countries. It is therefore that a focus on jaguars and their prey, as a key species is justified (partially answering section e), providing the justification for this GEF7 allocation by the government of Belize.

Endangered IUCN Red list species

Belize is the most Northern part of the Neotropics with many wildlife species ranging all the way to the Amazon, meaning that many of them do not reach worldwide endangered status due to a large reservoir in the Amazon (IUCN red list status). Endemic Central American species are usually the only ones which can reach endangered status, as deforestation rates are so much higher in Central America compared to South America, due to high human population density.

The Belizean landscape has few endemic species of conservation concern. The only critically endangered species within the wider terrestrial landscape is the Central American river turtle or locally called hicatee (*Dermatemys mawii*). This freshwater turtle has its last stronghold within the Belizean landscape of lagoons in Central Belize, with some remnant populations in less suitable habitat in the South. Hicatee is considered a delicacy meat and large scale consumption caused a considerable drop in its Mexican, Guatemalan and Belizean distribution. The only reason the southern Belizean hicatee populations are still holding on, concerns the lack of tradition by local Mayan

in terms of consuming the species, which is certainly not the case in Central Belize, where hicatee are considered a delicacy. The Central Belize Corridor or Maya Forest Corridor lies in the heart of prime hicatee lagoon habitat and some of these lagoons are essential water areas for wildlife during the dry season. As this critically endangered species concerns a freshwater turtle species, conservation action is confined to these central and northern lagoon systems together with slow streaming river oxbows. Without persecution the species has few habitat requirements, feeding of detritus leaves. Adult turtles have few predators due to their large size and ability to stay submerged for extended periods. Humans are their only really predators. Conservation action is therefore only confined to regulating consumption of this large slow growing turtle species. It has been difficult to find baseline data on the species, while several national and regional monitoring surveys being carried out. These surveys were however with limited effort, not allowing replication or comparison. It does however seem that the species is decreasing and there is concern for its continued persistence. The lagoons of better protected Rio Bravo and Gallon Jug might be considered safe strongholds. It is important to create more of these safe lagoons and waterways. The species is potentially still present in the waters of the Sibun river in extremely low numbers (Area component 1).

The endangered yellow headed parrots (*Amazona oratrix*), with a natural highly restrictive range, is highly threatened by the pet trade, with poachers taking young out of nest cavities in mainly Caribbean pine trees (*Pinus caribaea*). This easily accessible and naturally rare habitat in Belize therefore provides few strongholds for the species. As pine savannahs are suboptimal habitat for most other wildlife species, action here is very species specific, needing high levels of enforcement at specific locations during the breeding season. This species does not function as an overarching national wildlife species. Special yellow headed parrot groups carry out yearly surveys, and they are working towards standardisation. There are still some scientific issues that need to be overcome. The species is present in the savannah edges of the component 1 area in Runaway Creek and Manatee Forest Reserve. The only two monkeys of Belize are equally endangered regional endemic species of high conservation value, the Yucatan Black howler monkey (*Alouatta pigra*), confined to Northern Central America (Yucatan Mexico, Guatemala and Belize), and the Central American, Geoffroy's Spider Monkey (*Ateles geoffroyi*). The main issue for the Yucatan black howler monkey concerns its limited species distribution, making it vulnerable to local extinction events. In Belize the species can be considered in good shape with strongholds showing signs of overcrowding in terms of mobility between social groups (young males not able to disperse, staying much longer within their natal groups). The species is present in all three component area, although mainly through introduction in component 2 area. The spider monkey does show signs of decline but has considerable strongholds with viable populations in the Maya Mountains. Even though population exchange is not possible at the countrywide scale, with population severed between road systems, the small range sizes of single social groups (< 1km²) create that viable populations remain within the large forest blocks of the Maya Mountains and Rio Bravo. The status of the species is unknown in the component 1 as limited information is available on current distribution. It is not present in component 2 and likely not in component 3.

The baird's tapir (*Tapirus bairdii*) is the only terrestrial ground mammal with endangered status. Its species distribution is confined to Central America, and Belize can be considered a stronghold with presence throughout the Belizean wilderness range. Individual ranges of tapirs are very small, especially compared to jaguars, ranging between 4-8 km². It is for this reason that high density populations can still be considered viable units, even in isolation. The species is associated with water and therefore the central Belizean lagoon system and the wet Maya Mountains can be considered strongholds. The species seems widespread and common in these areas. Throughout its Central American range, hunting for meat and habitat destruction are the biggest threat. The positive combination of traditionally low hunting pressure and intact forest creates that Belize can still be considered a stronghold for the species. Potentially tapirs might be a good indicator of climate change, with already dry landscapes, losing their surface water areas with increasing temperatures and reduced precipitation. Tapirs are present in all three component areas.

Species of concern in Belize

There are only a limited number of species that are of concern within the wider terrestrial Belizean landscape, undergoing local extinction events. The main one concerns white lipped peccary (*Tayassu pecari*), the only herding Neotropical ungulate, moving around in large numbers. White lipped peccary are considered "vulnerable" on the IUCN red list (one step below endangered). The species is found from Mexico to the Amazonian region, which can still be considered its stronghold. The large ranges of the seasonally nomadic herds create that extinction of a herd

can cause local extinction within an area. The large noisy herds can be easily located by hunters, which combined with commercialisation of the game meat market creates the situation that hunters have an incentive to whip out entire herds. In Belize the species is hardly ever found outside of well protected areas and has been extirpated from the Central Belizean forests east of the Western Highway and North of the Hummingbird Highway. The decline of the species, even within a forest wilderness country like Belize shows that this is a species of concern. The species is not present in Manatee and the Northern part of the component 1 area. It became extinct in the 1970s in these forests. It is present in Sittee River and likely in Sibun forest reserve. Another species of conservation concern in Belize concerns the scarlet macaw (*Ara macao*), although not listed on IUCN red list as such. The Northern subspecies is highly threatened, and the pet trade is threatening to eradicate the species from the northern part of the Central American subcontinent. In Belize, the species is only found in the Maya Mountain Massive with specific concentrations in the Chiquibul. Potentially it can be found in Sibun and Sittee River Forest Reserves, together with the north eastern portion of the Chiquibul.

The other species of concern is an odd one, the white-tailed deer (*Odocoileus virginianus*). This common deer species, reaching pest status within the United States, has limited habitat availability within the wilderness of Belize. It is confined to edge habitat and the more open pine/savannah areas, which are easily accessible by hunters. Its priced meat has caused considerable decline of the species. As this concerns a naturally rare species with a limited range distribution within the country, conservation action can only be confined to these areas. Increased conversion of low to medium intensity agriculture would actually profit the species, as they thrive in these landscapes in the United States. This species is present at the edges of all component areas.

The last-mentioned species of concern is the paca (*Cuniculus paca*), as the most priced game species in the country. The species is still widespread and omnipresent, and thus not of concern in this respect. It remains however a top of the list priced game species, taken in high volumes every year. Sustainability of harvest and assessment of this species as a nationally priced economic resource, should be a priority for any national wildlife management strategy. This species is present in all component areas.

Proxy indicator species to demonstrate threat reduction / functionality of corridor systems

Jaguar (*Panthera onca*)

This charismatic, largest felid of the Americas has many attractive features to assure its inclusion within a national monitoring program. Apart from its general appeal and charisma, which is very useful for fundraising and putting attention on its plight, there are four reasons to prioritise the species for monitoring:

- As previously indicated, jaguars can be easily and uniquely identified from camera trap photos. Each jaguar has a unique and complex rosette pattern, which can be stored in an individual identification database. In this manner the fate of individuals can be tracked through time and space, allowing for complex analyses regarding survival, and recruitment of various populations throughout the country. It equally allows, tracking of redistributions around the country in terms dispersal distances and lifetime home range estimation.
- The large home range sizes of these cats, ranging from 100-600 km² in Belize, means that population processes take place at the national level rather than within single protected areas. Viable populations can only exist across large contiguous wilderness areas, and there are no national parks within the country large enough to sustain such numbers. They are therefore an indicator of national health of wilderness.
- As the largest terrestrial predator of the Americas, with an opportunistic diet, the status of this cat is highly indicative of the presence of a healthy prey base consisting of high numbers of different species. It is therefore another general indicator of overall wilderness health
- The jaguar seems to have a preference for water rich areas. Although also found in drier areas, even here it will confine activity in the few waterway areas. The highest distributions are always found near river areas, wetlands, and gallery forest. They are therefore using areas in high demand for further human population expansion. Riverine habitat is always preferred for agricultural and urban expansion alike. They are therefore very vulnerable to conversion activity.

Puma (*Puma concolor*)

The puma is in essence a poorer quality indicator version of the jaguar. They fall in the same size class, with pumas being slightly smaller. They are both top predators, with an opportunistic diet, but pumas can survive on smaller prey items. Pumas cannot be individually identified, allowing less detailed tracking of individuals through time and

space. They are not associated with riverine or particular habitats that are in high demand for human population expansion. On all accounts, they score lower as an indicator species compared to jaguars. However, their large size and similar requirements mean that the two cats are in essence competitors of each other, with the larger, stronger and bulkier jaguar being the obvious dominant species in case of direct encounters. There is evidence that pumas avoid jaguars and as such it is likely that puma numbers are suppressed in high density jaguar areas. Lowering of jaguar numbers might therefore have an effect of “meso-predator release” for pumas, meaning that the detriment of jaguars will have a positive effect on pumas. Changes in prey species dynamics and numbers might favour one cat over the other and thus cause different dynamics in time and space, with varying conditions. With higher understanding of these dynamics, tracking of numbers of jaguars and pumas can be highly revealing of ecosystem change.

As optimal camera trap locations are similar for jaguars and pumas at the microscale (larger pathways through landscapes), differences in capture probability between the species at the larger landscape scale can be attributed to variation in associated landscape co-variables, like habitat, elevation, distance to human habitation or associated prey species assemblages. Lack of ability to identify pumas means we must confine analyses to broader scale species level analyses, focussing on differences in capture probability or occupancy across landscapes.

Ocelot (*Leopardus pardalis*)

This medium sized cat is mainly included as it is easily captured on trail-based camera grids, while equally being easily individually recognisable due to their unique coat patterns. The prey range for this felid is much smaller compared to jaguars and pumas and mainly consists of rodents, ground birds and smaller reptiles. The ocelot is considered a habitat generalist, being both at home in forest and more open habitat. They are however not frequently found near human habitation. The prey assemblage of ocelots is of limited conservation indicator value and not of conservation concern. As such, the ocelot is mainly included here as an easily monitored species, allowing detailed population tracking. It is however bycatch within the monitoring program, and can be considered an interesting species, allowing detailed study due to individual identification and high capture rates.

The main conservation question that can be studied within a monitoring program, concerns its competition relation with the two other smaller felids, margay (*Leopardus wiedii*) and jaguarundi (*Puma yagouaroundi*). There is evidence that the ocelot has a negative competitive effect on margays, which are considered naturally much rarer and in decline. A detailed study of the three smaller cat species regarding; habitat requirements, abundance distribution, and long-term change through time, can provide valuable insight into any conservation needs for these small cats. Long-term national data can indicate habitat preferences, and any changes in small cat species, assemblages associated with habitat conversion, fragmentation and degradation can be studied in detail.

Margay (*Leopardus wiedii*)

This arboreal cat is considered a forest specialist, with limited habitat plasticity. Their general low capture probability on ground-based camera traps (few individuals and recaptures), has been interpreted as the species being naturally rare and of concern. An alternative explanation concerns the inefficiency of ground-based cameras as a survey method for these smaller arboreal cats.

The diet of margays seems similar to ocelots, mainly consisting of rodents, birds and smaller reptiles. It is however possible that this prey species categorisation is too broad with margays focussing on arboreal species with limited competition. However, some evidence exists that margay densities are negatively influenced by the presence of ocelots. Lack of larger datasets, with enough variation of distribution for both species, has prevented researchers from understanding these relations in detail. The current national monitoring program provides us with an ideal opportunity to study these patterns. Equally to ocelots, margays have uniquely distinguishable coat patterns, allowing detailed analyses of relations between ocelots and margays in terms of distributions and habitat variation.

Jaguarundi (*Puma yagouaroundi*)

The third felid of Belize seems mostly terrestrial and associated with more open habitat. This cat seems relatively at home in altered, open landscapes and can be found near villages and in rural agricultural areas. The diet of jaguarundis is similar to the other two smaller cats and consists of rodents, ground birds and lizards. It is still found at the edges of broadleaf forest complexes but does not seem to penetrate deep into forest areas. Jaguarundi are

potentially a good indicator of altered landscapes and their close relation, similar size and diet compared to the other two felids, can show interesting interspecies dynamics in areas with landscape change.

Tapir (*Tapirus bairdii*)

Tapirs are the largest land mammals of the Americas and Baird's tapir is the largest tapir species, endemic to Central America. This endangered species is threatened by overhunting and habitat destruction. Tapirs are highly associated with freshwater bodies, feeding within and at river edges. They don't require primary forest and do well in lush pioneer vegetation near rivers and swamps. They are therefore not necessarily affected by fires or recent logging. They are however, very vulnerable to hunting and the main problem concerns that these damaged areas usually are not allowed to return to previous state and are hunted out. Although tapir hunting has always happened in Belize, it is at very low levels, with many ethnic groups, like the Maya, not hunting or consuming tapir. As such they are relatively safe within Belize. The water rich Maya Mountains and lagoon areas of Central Belize can be considered their strongholds.

As a regional species of conservation concern, tapirs are an important target for management. They are equally a good indicator of water system health. The worrying trend of continuous drought in the northern part of their range, equally affecting the north of Belize, means that tapirs might be struggling in these areas. They are therefore a good indicator for water system health and persistence. Unfortunately, tapirs are not individually recognisable and solitary, making any large scale effort of individual marking, extremely labour intensive and not worth the effort. They do however show up regularly on camera traps and an approach of monitoring occupancy and changes in distribution would be a viable means of continuous monitoring this species within a national camera grid system. Any effort for collaring tapirs, with the purpose of gathering movement data should be followed by camera efforts to assure more in-depth density studies can be carried out within these areas in terms of density and survival estimates. Caught tapirs should be given a permanent mark with ear tags or other recognisable features, not affecting their survival.

White lipped peccary (*Tayassu pecari*)

White lipped peccaries are the only larger ungulate with herd sizes exceeding 20 individuals in the Neotropical environment. As such, they are sometimes referred to as Neotropical habitat engineers, with large herd (maximum of 300 individuals), being able to cause considerable vegetation change, in search of food. They are considered nomadic, seasonally moving to different food patches, dependent on fruiting or roots availability according to the season. The species has a wide distribution from Mexico to the core of the Amazon, meaning that they have had considerable impact as a potential keystone species on total Neotropical forest structure. Their diverse diet of tubers, fruits, plants, and occasional carrion means that large groups target different sources of the forest at a seasonal rotation.

Being the only herding ungulate in large numbers also means that they are a sought-after game species for people throughout their range. Their natural defensive system of holding their ground, forming a ring around young and vulnerable, makes them very vulnerable to overhunting with firearms. The noisy herds can be easily traced and within a commercial game hunting economy, hunters and poachers will whip out entire herds, meaning that they disappear quickly from the landscape. They are equally susceptible to domestic livestock diseases, with the species sometimes disappearing from large parts of their range with slow recovery. They are an important prey species for jaguars and an integral part of undisturbed forest wilderness.

In Belize they have disappeared from many areas with minimal levels of protection, close to human habitation. They are therefore an extremely good indicator of levels of human hunting incursions or management of game extraction. The large herds show up readily on camera traps, when present. Unfortunately, they cannot be individually recognised but it is possible to capture large numbers of them within a corral system. This does not require anaesthesia, meaning that an effective team can ear tag large numbers of single herds, allowing long-term monitoring of survival of individuals and movement. We strongly encourage that above the general monitoring of occupancy (minimum possible within the proposed general camera grid), that a tagging program is developed so we can study the species in more detail through time. This is necessary as survival is one of the important parameters for conservation with hunting being their main threat.

White lipped peccary can be considered the most vulnerable terrestrial species in Belize with the highest chance of disappearance from large portions of the Belizean wilderness landscape. It is therefore imperative to acquire more detailed information on movement and survival through individual recognition.

Collared peccary (*Pecari tajacu*)

Slightly smaller than white lipped peccary, the collared peccary lacks many of the target monitoring characteristics of its larger cousin. The collared peccary lives in much smaller herds with a maximum size up to 10, is much more of a habitat generalist, with a much wider species distribution, and occupying a wider range of habitats. It has much lower capture probability at trail-based camera traps compared to white lipped peccary, meaning that it is difficult to establish (relative) abundance as capture rates are a poor indication of abundance. They are of limited conservation concern and more resilient to disturbance.

It is for this reason that they are of much more secondary concern and any analyses should concentrate on comparisons with white lipped peccary in terms of occupancy and distribution pattern changes over time. They are however even easier to catch, tag and handle as white lipped peccary due to their smaller size. Such efforts should however only be considered locally with specific research purposes in mind (e.g. PhD project).

Red brocket deer (*Mazama temama*)

This small solitary forest deer is common in undisturbed broadleaf forest systems and still seems to be relatively prolific within well protected area systems. It is commonly caught on trail-based camera traps with relatively high capture probability. As wider trails can be considered secondary forest regrowth, they likely browse along the trail systems, allowing them to be easily caught on camera when present. They seem relatively resilient to mild hunting pressure and as such are not an immediate indicator of extraction pressure. Camera trapping has revealed several cases of red brocket deer with mange near villages, requiring further attention. The high capture probability when present, and their broadleaf forest specialist habits, means they are a good species to use within an occupancy modelling framework, studying changes in distribution patterns.

There is little known about brocket deer, indicated by a recent reassessment of naming species within the family of brocket deer. Such basic knowledge gaps indicate that this is an understudied species.

White tailed deer (*Odocoileus virginianus*)

This deer species is an interesting oddity as an indicator for Belizean wilderness systems. On the one hand, they are extremely common, even reaching pest status in temperate zones, while on the other hand, they are becoming extremely rare within the Belizean natural environment. White tail deer are edge species, not venturing far into broadleaf habitats. In Belize they occupy a narrow niche at edges of broadleaf forest complexes, at the ecotone between broadleaf and more open pine-savannah habitat. This habitat is naturally sparse in Belize and easily accessible by humans for hunting purpose. Without hunting, white tail deer would be naturally rare in Belize due to limited availability of habitat. The high hunting pressure makes them of local conservation concern within Belize. Deer meat is a very popular game meat within Belize and therefore deer has an economic value for hunters. Savannah habitat is however far less useful for agricultural purpose and thus less vulnerable to land conversion. Intense yearly burning and habitat conversion of broadleaf forest actually increases potential habitat for white tail deer, creating the situation of two opposing forces, impacting the national white tail deer populations differentially. Habitat conversion has a positive impact on white tail deer, as they like open areas, with new pioneer vegetation to browse; while on the other hand, increased access within easily accessible habitat will lower the population due to hunting. White tail deer are known to occupy wide logging trails and browse at the edges, penetrating deeper into otherwise less suitable interior forest areas (e.g. Gallon Jug). A long-term monitoring program with camera traps, at the national level can assess variations in distribution across time due to changes in the environment and hunting pressure. Occupancy modelling across time can show levels of local extinction and recolonization of the species throughout the Belizean landscape. These patterns can be interpreted within the framework of habitat change and extraction pressure. Comparison with red brocket deer, having opposite habitat requirements, will be interesting.

Paca (*Cuniculus paca*)

Pacas would not be included within this list, if they were not of considerable national concern. The species is slightly too small for easy camera trapping efforts and prefers habitat away from trail areas, preferring to remain in the undergrowth, eating vegetation, fruits and nuts. Capture probability is relatively low on trail-based systems, but they are detected.

The reason for inclusion concerns their popularity as a game species. They are the most common game species, with meat frequently sold at markets and food stands. This means they form part of the national economy and culture. It is for this reason alone that we should include them and try to see if we can establish any trends from the low bycatch captures within a national camera monitoring system. Starting analyses should potentially have to concentrate on how to improve monitoring for this species, while equally assessing to what extent we can extract useful information for the current bycatch efforts from trail-based grids. It is likely that we need to adjust camera trapping to off-trail locations with special paca-grids. We would encourage special projects (e.g. PhDs) to investigate methods and protocols to monitor this species in more detail. One of the advantages of pacas is that they can be individually recognised, based on their uniquely identifiable spot patterns. This means that we can carry out detailed analyses, regarding survival and individual distribution.

Larger game birds, with countrywide the Greater curassow (*Crax rubra*)

This large game bird of high conservation value has rapidly decreased in numbers, in the last 20 years, across its Neotropical distribution. Overexploitation has reduced populations to a few strongholds, consisting of large forest complexes. Belize can be considered one of those strongholds. Curassows spend considerable time foraging on the forest floor. They fly to low level branches when in danger and look to investigate their assailants. This allows hunters to easily shoot these large birds, which are a popular hunting quarry. Curassow are therefore an extremely good and sensitive indicator for increased hunting pressure. They will recover relatively quick when hunting pressure is lowered, while numbers equally drop rapidly when it increases again. An added value concerns their high capture probability on trail-based camera grids, when present. Frequent assessments of national distribution of the species, can indicate hotspots in hunting pressure when they seem to disappear from areas. It is likely that the species can be easily captured without the use of anaesthesia and uniquely marked with rings around their legs. This will allow a higher level of detail in study in terms of survival and distribution of individuals. We need to develop safe and easy to implement capture-protocol, like drop nets or string traps. Handling of the species can be done without anaesthesia with appropriate training. There are other larger ground game birds in Belize but curassow have the most advantages characteristics in terms of countrywide omnipresence within the Belize forest complex, and having the highest capture probability of all game bird species. Next to curassow, the different tinamou species (*Tinamidae spec.*) could be potential candidates as monitoring species, with lower but reasonable capture probabilities on trail-based camera grids. Equally, ocellated turkeys (*Meleagris ocellata*) can be considered, but they have a much more limited range distribution within Belize, being confined to the North and mid-western part of the country.

Coyote (*Canis latrans*)

This opportunist canid has been colonising Belize naturally since ~ 2008. Coyotes showed a rapid southward distribution expansion from the United States and Northern Mexico. They followed the expanding agricultural frontier through Central America and originally bypassed Belize as unsuitably forested. The first records of colonisation started at the agricultural western parts of the country and they gradually moved across the open areas of the country. The coyote is a follower of conversion and can be considered an opportunist, exploiting the interface between human rural landscapes and degraded open wilderness. This canid does not do very well in prime broadleaf forest and as such is missing from the interiors of the Maya Mountains and Rio Bravo. The expansion of coyotes therefore signals a change in the Belizean landscape in terms of higher rates of conversions and opening up, allowing this species to settle throughout the country.

Photo records are still sparse but widespread as we are at the start of the colonisation process. It is therefore important to monitor the increase within the national camera grid. Changes in occupancy, (colonisation) and extinction of patches, will be the main variable to consider in terms of the change in population distribution of the species.

Grey foxes (*Urocyon cinereoargenteus*)

This naturally occurring little canid occupies roughly similar habitat as the coyote; the more open edge habitat and savannah areas, but likely able to use more forest areas compared to coyotes. It is equally at home in human dominated landscapes and occupies tourist areas in broadleaf forest areas, living off garbage. When present, they have very high capture probability and readily get caught on camera.

There is anecdotal evidence that they get displaced by coyotes in rural Belize. In some areas of the US, mortality of grey foxes can for 90% be attributed to hunting events of coyotes, having considerable impact on general survival. They equally seem to avoid areas with feral dogs and thus seem to be confined to areas without the competing presence of larger canids. The high capture probability of grey foxes, when present, makes them a good indicator, allowing us study canid species dynamics with grey foxes, coyotes and feral dogs.

ANNEX 12: MANAGEMENT EFFECTIVENESS TRACKING TOOLS

I. General Info

Project Title: Enhancing jaguar corridors and strongholds through improved management and threat reduction

GEF Project ID: 10241

Agency Project ID: 00118244

Implementing Agency: UNDP

Project Type: MSP

Country: Belize

Date of submission of the tracking tool: 24 January 2020

Name of reviewers completing tracking tool and completion date: Bart J. Harmsen

Planned project duration: 3 years

Actual project duration: 3 years (under implementation to date)

Lead Project Executing Agency (ies): Forest Department

II. Total Extent by Biome

Terrestrial (insert total hectares for terrestrial coverage: 186,827 ha

Freshwater (insert total hectares for freshwater coverage): -

Marine (insert total hectares for marine coverage): -

III. Targeted Protected Areas

Manatee Forest Reserve

Area in Hectares	36,474
Biome type	Terrestrial
Local Designation of Protected Area	Forest Reserve
IUCN Category	6
WDPA site code	12226
Location of protected area	Belize/Stann Creek districts (17° 7'38.63" N/88° 27'26.13" W)
Date of establishment	1959

Ownership details	State
Management Authority	Belize Forest Department
Main values for which the area is designated	Timber extraction, Watershed Protection
Management objective 1	Timber extraction
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	Limited to 50km ² in the North
Indicator 2	Monitoring Level of Incursions
Status at project start-up	1 time per year

Questions	Criteria and Score	Protected Area
		Manatee Forest Reserve
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	1
3. Law Enforcement: Can staff (i.e. those with responsibility for	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)	0

managing the site) enforce protected area rules well enough?	2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	
4. Protected area objectives: Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these objectives 2: The protected area has agreed objectives, but is only partially managed according to these objectives 3: The protected area has agreed objectives and is managed to meet these objectives	1
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult 1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	1
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	2
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	0
7.a Planning process: The planning process allows adequate opportunity for key	0: No 1: Yes	0

stakeholders to influence the management plan		
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	1
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	0
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	1
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	2
11. Research: Is there a programme of	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the	0

management-orientated survey and research work?	needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	0
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	0
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	1
17. Management of budget: Is the budget	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year)	1

managed to meet critical management needs?	1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	0
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	1
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	1
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g.	0: No 1: Yes	2

volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.		
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	2

22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	<p>0: There is no contact between managers and neighbouring official or corporate land and water users</p> <p>1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation</p> <p>2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation</p> <p>3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management</p>	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	<p>0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area</p> <p>1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management</p> <p>2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved</p> <p>3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management</p>	0
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	<p>0: Local communities have no input into decisions relating to the management of the protected area</p> <p>1: Local communities have some input into discussions relating to management but no direct role in management</p> <p>2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved</p> <p>3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management</p>	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	<p>0: No</p> <p>1: Yes</p>	0
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected	<p>0: No</p> <p>1: Yes</p>	0

area resources, are being implemented		
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	0
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	1
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1

29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1
Total METT Score		32

Sibun Forest Reserve

Area in Hectares	36,706
Biome type	Terrestrial
Local Designation of Protected Area	Forest Reserve
IUCN Category	6
WDPA site code	3307
Location of protected area	Cayo (16° 59'13.95" N/88° 38'52.67" W)
Date of establishment	1959
Ownership details	State
Management Authority	Belize Forest Department
Main values for which the area is designated	Timber Extraction, Watershed Protection
Management objective 1	Timber Extraction
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions

Status at project start-up	1 time per year
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Questions	Criteria and Score	Protected Area
		Sibun Forest Reserve
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there	1

to control land use and activities (e.g. hunting)?	are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	0
4. Protected area objectives: Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these objectives 2: The protected area has agreed objectives, but is only partially managed according to these objectives 3: The protected area has agreed objectives and is managed to meet these objectives	0
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult 1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	3
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	2
7. Management plan: Is there a	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being	0

management plan and is it being implemented?	implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	0
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	1
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	0.5

10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	1
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	0.5
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	0
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	0
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1

16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	1
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	0.5
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	1
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	1
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	0
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat conservation:	0: No 1: Yes	2

Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.		
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at	0: No 1: Yes	2

an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	0
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous	0: No 1: Yes	0

people, stakeholders and protected area managers		
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	1
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	0.5
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	0
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0

28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	0.5
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1
Total METT Score		31.5

Sittee River Forest Reserve

Area in Hectares	37,360
Biome type	Terrestrial
Local Designation of Protected Area	Forest Reserve
IUCN Category	6
WDPA site code	12229
Location of protected area	Stann Creek (16° 54' 39.67" N/88° 26'21.48" W)
Date of establishment	1977
Ownership details	State
Management Authority	Belize Forest Department
Main values for which the area is designated	Timber Extraction, Watershed Protection
Management objective 1	Timber Extraction
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	

Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	1 time per year

Questions	Criteria and Score	Protected Area
		Sittee River Forest Reserve
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist	1

	<p>but there are some weaknesses or gaps</p> <p>3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management</p>	
<p>3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?</p>	<p>0: The staff have no effective capacity/resources to enforce protected area legislation and regulations</p> <p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	0
<p>4. Protected area objectives: Is management undertaken according to agreed objectives?</p>	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	0
<p>5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?</p>	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc</p>	3
<p>6. Protected area boundary demarcation: Is the boundary known and demarcated?</p>	<p>0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users</p> <p>1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users</p> <p>2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated</p>	2

	3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	0
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	0
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	1
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	0.5

10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/resource use	1
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	0.5
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	0
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	0
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1

16. Security of budget: Is the budget secure?	<p>0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding</p> <p>1: There is very little secure budget and the protected area could not function adequately without outside funding</p> <p>2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding</p> <p>3: There is a secure budget for the protected area and its management needs</p>	1
17. Management of budget: Is the budget managed to meet critical management needs?	<p>0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year)</p> <p>1: Budget management is poor and constrains effectiveness</p> <p>2: Budget management is adequate but could be improved</p> <p>3: Budget management is excellent and meets management needs</p>	0.5
18. Equipment: Is equipment sufficient for management needs?	<p>0: There are little or no equipment and facilities for management needs</p> <p>1: There are some equipment and facilities but these are inadequate for most management needs</p> <p>2: There are equipment and facilities, but still some gaps that constrain management</p> <p>3: There are adequate equipment and facilities</p>	1
19. Maintenance of equipment: Is equipment adequately maintained?	<p>0: There is little or no maintenance of equipment and facilities</p> <p>1: There is some ad hoc maintenance of equipment and facilities</p> <p>2: There is basic maintenance of equipment and facilities</p> <p>3: Equipment and facilities are well maintained</p>	1
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	<p>0: There is no education and awareness programme</p> <p>1: There is a limited and ad hoc education and awareness programme</p> <p>2: There is an education and awareness programme but it only partly meets needs and could be improved</p> <p>3: There is an appropriate and fully implemented education and awareness programme</p>	1
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	<p>0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area</p> <p>1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area</p> <p>2: Adjacent land and water use planning partially takes into account the long term needs of the protected area</p> <p>3: Adjacent land and water use planning fully takes into account the long term needs of the protected area</p>	2

21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	0: No 1: Yes	2
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	2
22. State and commercial neighbours: Is there co-	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate	1

operation with adjacent land and water users?	land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	0
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	1

25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	<p>0: The protected area does not deliver any economic benefits to local communities</p> <p>1: Potential economic benefits are recognised and plans to realise these are being developed</p> <p>2: There is some flow of economic benefits to local communities</p> <p>3: There is a major flow of economic benefits to local communities from activities associated with the protected area</p>	0.5
26. Monitoring and evaluation: Are management activities monitored against performance?	<p>0: There is no monitoring and evaluation in the protected area</p> <p>1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results</p> <p>2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management</p> <p>3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management</p>	0
27. Visitor facilities: Are visitor facilities adequate?	<p>0: There are no visitor facilities and services despite an identified need</p> <p>1: Visitor facilities and services are inappropriate for current levels of visitation</p> <p>2: Visitor facilities and services are adequate for current levels of visitation but could be improved</p> <p>3: Visitor facilities and services are excellent for current levels of visitation</p>	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	<p>0: There is little or no contact between managers and tourism operators using the protected area</p> <p>1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters</p> <p>2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values</p> <p>3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values</p>	0.5
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	<p>0: Although fees are theoretically applied, they are not collected</p> <p>1: Fees are collected, but make no contribution to the protected area or its environs</p> <p>2: Fees are collected, and make some contribution to the protected area and its environs</p> <p>3: Fees are collected and make a substantial contribution to the protected area and its environs</p>	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	<p>0: Severely degraded</p> <p>1: Partially degraded</p> <p>2: Mostly intact</p> <p>3: Completely intact</p>	1

Total METT Score		33.5
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Monkey Bay (private)

Area in Hectares	470
Biome type	Terrestrial
Local Designation of Protected Area	Private Reserve
IUCN Category	4
WDPA site code	301913
Location of protected area	Belize District (17° 18' 27.02" N/88° 33'12.61" W)
Date of establishment	1990
Ownership details	Individual Landowner
Management Authority	Private
Main values for which the area is designated	Ecotourism
Management objective 1	Ecotourism
Management objective 2	Biodiversity protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	1 time per year

Questions	Criteria and Score	Protected Area
		Monkey Bay Private Reserve
1. Legal status: Does the protected area have legal status (or in the case of private	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is	1

reserves is covered by a covenant or similar)?	still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	0
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	1
4. Protected area objectives: Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these objectives 2: The protected area has agreed objectives, but is only partially managed according to these objectives 3: The protected area has agreed objectives and is managed to meet these objectives	2
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult 1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	1
6. Protected area boundary demarcation:	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not	1

Is the boundary known and demarcated?	known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	1
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	0
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making	1

	<p>2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making</p> <p>3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making</p>	
10. Protection systems: Are systems in place to control access/resource use in the protected area?	<p>0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use</p> <p>1: Protection systems are only partially effective in controlling access/resource use</p> <p>2: Protection systems are moderately effective in controlling access/resource use</p> <p>3: Protection systems are largely or wholly effective in controlling access/ resource use</p>	1
11. Research: Is there a programme of management-orientated survey and research work?	<p>0: There is no survey or research work taking place in the protected area</p> <p>1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management</p> <p>2: There is considerable survey and research work but it is not directed towards the needs of protected area management</p> <p>3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs</p>	0
12. Resource management: Is active resource management being undertaken?	<p>0: Active resource management is not being undertaken</p> <p>1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented</p> <p>2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed</p> <p>3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented</p>	1
13. Staff numbers: Are there enough people employed to manage the protected area?	<p>0: There are no staff</p> <p>1: Staff numbers are inadequate for critical management activities</p> <p>2: Staff numbers are below optimum level for critical management activities</p> <p>3: Staff numbers are adequate for the management needs of the protected area</p>	1
14. Staff training: Are staff adequately trained to fulfill management objectives?	<p>0: Staff lack the skills needed for protected area management</p> <p>1: Staff training and skills are low relative to the needs of the protected area</p> <p>2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management</p> <p>3: Staff training and skills are aligned with the management needs of the protected area</p>	0
15. Current budget: Is the current budget sufficient?	<p>0: There is no budget for management of the protected area</p> <p>1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage</p> <p>2: The available budget is acceptable but could be further improved to fully achieve effective management</p>	1

	3: The available budget is sufficient and meets the full management needs of the protected area	
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	1
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	2
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	1
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	2
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	2
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat	0: No 1: Yes	2

conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.		
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of	0: No 1: Yes	2

freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	2
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	0
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	2
24 b. Impact on communities:	0: No 1: Yes	1.5

Programmes to enhance community welfare, while conserving protected area resources, are being implemented		
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	0.5
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	0
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	1.5
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1

29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	1
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1.5
Total METT Score		40

Monkey Bay National Park

Area in Hectares	859
Biome type	Terrestrial
Local Designation of Protected Area	National Park
IUCN Category	2
WDPA site code	301914
Location of protected area	Belize District (17° 17' 34.26" N/88° 32'02.65" W)
Date of establishment	1994
Ownership details	State
Management Authority	Belize Forest Department
Main values for which the area is designated	Timber Extraction, Watershed Protection
Management objective 1	Timber Extraction
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	1 time per year

Questions	Criteria and Score	Protected Area
		Monkey Bay National Park
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	<p>0: The protected area is not gazetted/covenanted</p> <p>1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun</p> <p>2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant)</p> <p>3: The protected area has been formally gazetted/covenanted</p>	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	<p>0: There are no regulations for controlling land use and activities in the protected area</p> <p>1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses</p> <p>2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps</p> <p>3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management</p>	1
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	<p>0: The staff have no effective capacity/resources to enforce protected area legislation and regulations</p> <p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	0
4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	0
5. Protected area design: Is the protected area the	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is</p>	2

right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	0.5
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	0
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	0
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research	0: No 1: Yes	0

and evaluation are routinely incorporated into planning		
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	0
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	0
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	1
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	0
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	0

13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	0
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	0
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	1
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	1
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	1
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	1

20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	1
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	1
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	0: No 1: Yes	1
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key	0: No 1: Yes	1

habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).		
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	1
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions	0

using the protected area have input to management decisions?	relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	0
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g.	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities	0

income, employment, payment for environmental services?	3: There is a major flow of economic benefits to local communities from activities associated with the protected area	
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	0
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	0.5
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	0
Total METT Score		20

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Runaway Creek

Area in Hectares	2,888
Biome type	Terrestrial
Local Designation of Protected Area	Private Reserve
IUCN Category	1
WDPA site code	342394
Location of protected area	Belize District (17° 19' 26.98" N/88° 27'12.52" W)
Date of establishment	1998
Ownership details	Individual Landowner
Management Authority	Private
Main values for which the area is designated	Biodiversity Protection, Research
Management objective 1	Biodiversity Protection
Management objective 2	Research
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	Yearly bird surveys and 10 continuous camera trap stations
Indicator 2	Monitoring Level of Incursions
Status at project start-up	Irregular

Questions	Criteria and Score	Protected Area
		Runaway Creek
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet	1

	have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	0
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	1
4. Protected area objectives: Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these objectives 2: The protected area has agreed objectives, but is only partially managed according to these objectives 3: The protected area has agreed objectives and is managed to meet these objectives	2
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult 1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	1
6. Protected area boundary demarcation: Is the boundary	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users	1.5

known and demarcated?	2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	1
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	3
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	2
9. Resource inventory: Do you have enough	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of	2

information to manage the area?	<p>the protected area is not sufficient to support planning and decision making</p> <p>2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making</p> <p>3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making</p>	
<p>10. Protection systems:</p> <p>Are systems in place to control access/resource use in the protected area?</p>	<p>0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use</p> <p>1: Protection systems are only partially effective in controlling access/resource use</p> <p>2: Protection systems are moderately effective in controlling access/resource use</p> <p>3: Protection systems are largely or wholly effective in controlling access/ resource use</p>	3
<p>11. Research: Is there a programme of management-orientated survey and research work?</p>	<p>0: There is no survey or research work taking place in the protected area</p> <p>1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management</p> <p>2: There is considerable survey and research work but it is not directed towards the needs of protected area management</p> <p>3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs</p>	2
<p>12. Resource management: Is active resource management being undertaken?</p>	<p>0: Active resource management is not being undertaken</p> <p>1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented</p> <p>2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed</p> <p>3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented</p>	1
<p>13. Staff numbers: Are there enough people employed to manage the protected area?</p>	<p>0: There are no staff</p> <p>1: Staff numbers are inadequate for critical management activities</p> <p>2: Staff numbers are below optimum level for critical management activities</p> <p>3: Staff numbers are adequate for the management needs of the protected area</p>	3
<p>14. Staff training: Are staff adequately trained to fulfill management objectives?</p>	<p>0: Staff lack the skills needed for protected area management</p> <p>1: Staff training and skills are low relative to the needs of the protected area</p> <p>2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management</p> <p>3: Staff training and skills are aligned with the management needs of the protected area</p>	1

15. Current budget: Is the current budget sufficient?	<p>0: There is no budget for management of the protected area</p> <p>1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage</p> <p>2: The available budget is acceptable but could be further improved to fully achieve effective management</p> <p>3: The available budget is sufficient and meets the full management needs of the protected area</p>	1
16. Security of budget: Is the budget secure?	<p>0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding</p> <p>1: There is very little secure budget and the protected area could not function adequately without outside funding</p> <p>2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding</p> <p>3: There is a secure budget for the protected area and its management needs</p>	2
17. Management of budget: Is the budget managed to meet critical management needs?	<p>0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year)</p> <p>1: Budget management is poor and constrains effectiveness</p> <p>2: Budget management is adequate but could be improved</p> <p>3: Budget management is excellent and meets management needs</p>	1
18. Equipment: Is equipment sufficient for management needs?	<p>0: There are little or no equipment and facilities for management needs</p> <p>1: There are some equipment and facilities but these are inadequate for most management needs</p> <p>2: There are equipment and facilities, but still some gaps that constrain management</p> <p>3: There are adequate equipment and facilities</p>	2
19. Maintenance of equipment: Is equipment adequately maintained?	<p>0: There is little or no maintenance of equipment and facilities</p> <p>1: There is some ad hoc maintenance of equipment and facilities</p> <p>2: There is basic maintenance of equipment and facilities</p> <p>3: Equipment and facilities are well maintained</p>	3
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	<p>0: There is no education and awareness programme</p> <p>1: There is a limited and ad hoc education and awareness programme</p> <p>2: There is an education and awareness programme but it only partly meets needs and could be improved</p> <p>3: There is an appropriate and fully implemented education and awareness programme</p>	2
21. Planning for land and water use: Does land and water use planning recognise	<p>0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area</p> <p>1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental the area</p>	3

the protected area and aid the achievement of objectives?	2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	0: No 1: Yes	3
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	3
21c. Land and water planning for	0: No 1: Yes	3

ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	2
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	0
24. Local communities: Do local communities resident or near the protected area have	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved	1

input to management decisions?	3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	1
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management	3

	3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	1.5
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	2
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	2
Total METT Score		62

Zoo Managed Property

Area in Hectares	700
Biome type	Terrestrial
Local Designation of Protected Area	Not Designated
IUCN Category	0
WDPA site code	555582997

Location of protected area	Belize District (17° 22' 13.89" N/88° 33'23.41" W)	
Date of establishment	1988	
Ownership details	Not Reported	
Management Authority	Belize Zoo	
Main values for which the area is designated	Biodiversity Protection	
Management objective 1	Biodiversity Protection	
Management objective 2	Education	
Key Biodiversity Indicators Used in This Protected Area		
Indicator 1	Monitoring Wildlife Abundance and Presence	
Status at Project Start-Up	None	
Indicator 2	Monitoring Level of Incursions	
Status at project start-up	Irregular and Reactive	
Questions	Criteria and Score	Protected Area
		Zoo Managed Area
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	2
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	1
3. Law Enforcement: Can	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations	1

staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	<p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	
4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	1
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc</p>	2
6. Protected area boundary demarcation: Is the boundary known and demarcated?	<p>0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users</p> <p>1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users</p> <p>2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated</p> <p>3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated</p>	3
7. Management plan: Is there a management plan and is it being implemented?	<p>0: There is no management plan for the protected area</p> <p>1: A management plan is being prepared or has been prepared but is not being implemented</p> <p>2: A management plan exists but it is only being partially implemented because of funding constraints or other problems</p> <p>3: A management plan exists and is being implemented</p>	0
7.a Planning process: The planning process	<p>0: No</p> <p>1: Yes</p>	1

allows adequate opportunity for key stakeholders to influence the management plan		
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	1
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	2
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	1

11. Research: Is there a programme of management-orientated survey and research work?	<p>0: There is no survey or research work taking place in the protected area</p> <p>1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management</p> <p>2: There is considerable survey and research work but it is not directed towards the needs of protected area management</p> <p>3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs</p>	2
12. Resource management: Is active resource management being undertaken?	<p>0: Active resource management is not being undertaken</p> <p>1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented</p> <p>2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed</p> <p>3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented</p>	1
13. Staff numbers: Are there enough people employed to manage the protected area?	<p>0: There are no staff</p> <p>1: Staff numbers are inadequate for critical management activities</p> <p>2: Staff numbers are below optimum level for critical management activities</p> <p>3: Staff numbers are adequate for the management needs of the protected area</p>	1
14. Staff training: Are staff adequately trained to fulfill management objectives?	<p>0: Staff lack the skills needed for protected area management</p> <p>1: Staff training and skills are low relative to the needs of the protected area</p> <p>2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management</p> <p>3: Staff training and skills are aligned with the management needs of the protected area</p>	2
15. Current budget: Is the current budget sufficient?	<p>0: There is no budget for management of the protected area</p> <p>1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage</p> <p>2: The available budget is acceptable but could be further improved to fully achieve effective management</p> <p>3: The available budget is sufficient and meets the full management needs of the protected area</p>	1
16. Security of budget: Is the budget secure?	<p>0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding</p> <p>1: There is very little secure budget and the protected area could not function adequately without outside funding</p> <p>2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding</p> <p>3: There is a secure budget for the protected area and its management needs</p>	1

17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	2
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	2
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	2
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	3
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate	0: No 1: Yes	1

environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.		
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	1
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to	0: No 1: Yes	1

maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	2
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	1
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	0
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community	0: No 1: Yes	0

welfare, while conserving protected area resources, are being implemented		
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	1
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	0
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	3
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	2

29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	1
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1
Total METT Score		49

Chiquibul (North/East Section)

Area in Hectares	19,628
Biome type	Terrestrial
Local Designation of Protected Area	National Park
IUCN Category	2
WDPA site code	20230
Location of protected area	Cayo District (16° 51' 50.69" N/88° 41'51.34" W)
Date of establishment	1991
Ownership details	State
Management Authority	Friends for Conservation and Development
Main values for which the area is designated	Biodiversity Protection, Watershed Protection
Management objective 1	Biodiversity Protection
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions

Status at project start-up	Many areas never visited
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Questions	Criteria and Score	Protected Area
		Chiquibul National Park (North/East portion)
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there	2

to control land use and activities (e.g. hunting)?	are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	1
4. Protected area objectives: Is management undertaken according to agreed objectives?	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these objectives 2: The protected area has agreed objectives, but is only partially managed according to these objectives 3: The protected area has agreed objectives and is managed to meet these objectives	3
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult 1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management) 2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes) 3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	2
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	1.5
7. Management plan: Is there a	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being	2

management plan and is it being implemented?	implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	2
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	2
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	2
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	1
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	2

10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	2
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	2
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	2
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	1
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1

16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	2
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	2.5
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	2
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	2
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	2
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat conservation:	0: No 1: Yes	2

Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.		
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at	0: No 1: Yes	2

an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	2
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	2
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous	0: No 1: Yes	2

people, stakeholders and protected area managers		
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	1
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	0.5
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	2
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	1

28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1.5
Total METT Score		66

Northern Biological Corridor

Area in Hectares	36,040
Biome type	Terrestrial
Local Designation of Protected Area	Special use area
IUCN Category	6
WDPA site code	Not yet assigned
Location of protected area	Corozal District (18° 12' 33.90" N/88° 11'56.05" W)
Date of establishment	January 2020
Ownership details	Private
Management Authority	Corozal Sustainable Forest Initiative
Main values for which the area is designated	Protection and sustainable use of last Belizean Northern Forests
Management objective 1	Biodiversity protection
Management objective 2	Sustainable use
Key Biodiversity Indicators Used in This Protected Area	

Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	Limited to 50km ² in the North
Indicator 2	Landscape integrity indicators
Status at project start-up	1 time per year

Questions	Criteria and Score	Protected Area
		Northern Biological Corridor
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	3
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	3
4. Protected area objectives: Is	0: No firm objectives have been agreed for the protected area 1: The protected area has agreed objectives, but is not managed according to these	2

management undertaken according to agreed objectives?	<p>objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc</p>	1
6. Protected area boundary demarcation: Is the boundary known and demarcated?	<p>0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users</p> <p>1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users</p> <p>2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated</p> <p>3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated</p>	3
7. Management plan: Is there a management plan and is it being implemented?	<p>0: There is no management plan for the protected area</p> <p>1: A management plan is being prepared or has been prepared but is not being implemented</p> <p>2: A management plan exists but it is only being partially implemented because of funding constraints or other problems</p> <p>3: A management plan exists and is being implemented</p>	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	<p>0: No</p> <p>1: Yes</p>	1
7.b Planning process: There is an established schedule	<p>0: No</p> <p>1: Yes</p>	1

and process for periodic review and updating of the management plan		
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	1
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	3
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	2
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	3
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	2
12. Resource management: Is	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species,	2

active resource management being undertaken?	ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	3
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	3
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	3
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	3
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs	3

	<p>2: There are equipment and facilities, but still some gaps that constrain management</p> <p>3: There are adequate equipment and facilities</p>	
19. Maintenance of equipment: Is equipment adequately maintained?	<p>0: There is little or no maintenance of equipment and facilities</p> <p>1: There is some ad hoc maintenance of equipment and facilities</p> <p>2: There is basic maintenance of equipment and facilities</p> <p>3: Equipment and facilities are well maintained</p>	3
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	<p>0: There is no education and awareness programme</p> <p>1: There is a limited and ad hoc education and awareness programme</p> <p>2: There is an education and awareness programme but it only partly meets needs and could be improved</p> <p>3: There is an appropriate and fully implemented education and awareness programme</p>	3
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	<p>0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area</p> <p>1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area</p> <p>2: Adjacent land and water use planning partially takes into account the long term needs of the protected area</p> <p>3: Adjacent land and water use planning fully takes into account the long term needs of the protected area</p>	2
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	<p>0: No</p> <p>1: Yes</p>	1

21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	0
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	0
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation	3

	3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	2
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	2
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	1
24 c. Impact on communities: Local and/or indigenous people actively	0: No 1: Yes	1

support the protected area		
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	2
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	3
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	3
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	3
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	2
30. What is the overall condition of	0: Severely degraded 1: Partially degraded	2

the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	2: Mostly intact 3: Completely intact	
Total METT Score		82

Colombia River Forest Reserve

Area in Hectares	1,740	
Biome type	Terrestrial	
Local Designation of Protected Area	Forest reserve	
IUCN Category	6	
WDPA site code	3314	
Location of protected area	Toledo District (16° 19' 35.24" N/89° 00'34.09" W)	
Date of establishment	1954	
Ownership details	State	
Management Authority	Belize Forest Department	
Main values for which the area is designated	Timber extraction, Watershed Protection	
Management objective 1	Timber extraction	
Management objective 2	Watershed Protection	
Key Biodiversity Indicators Used in This Protected Area		
Indicator 1	Monitoring Wildlife Abundance and Presence	
Status at Project Start-Up	None	
Indicator 2	Monitoring Level of Incursions	
Status at project start-up	Many areas never visited	
Questions	Criteria and Score	Protected Area
		Colombia River Forest Reserve

1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	<p>0: The protected area is not gazetted/covenanted</p> <p>1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun</p> <p>2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant)</p> <p>3: The protected area has been formally gazetted/covenanted</p>	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	<p>0: There are no regulations for controlling land use and activities in the protected area</p> <p>1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses</p> <p>2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps</p> <p>3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management</p>	1
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	<p>0: The staff have no effective capacity/resources to enforce protected area legislation and regulations</p> <p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	1
4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	1
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and</p>	2

conservation concern?	habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	1,5
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	1
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	0
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0

8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	1
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	2
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	1
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	0
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	0
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	0

14. Staff training: Are staff adequately trained to fulfill management objectives?	<p>0: Staff lack the skills needed for protected area management</p> <p>1: Staff training and skills are low relative to the needs of the protected area</p> <p>2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management</p> <p>3: Staff training and skills are aligned with the management needs of the protected area</p>	2
15. Current budget: Is the current budget sufficient?	<p>0: There is no budget for management of the protected area</p> <p>1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage</p> <p>2: The available budget is acceptable but could be further improved to fully achieve effective management</p> <p>3: The available budget is sufficient and meets the full management needs of the protected area</p>	1
16. Security of budget: Is the budget secure?	<p>0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding</p> <p>1: There is very little secure budget and the protected area could not function adequately without outside funding</p> <p>2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding</p> <p>3: There is a secure budget for the protected area and its management needs</p>	1
17. Management of budget: Is the budget managed to meet critical management needs?	<p>0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year)</p> <p>1: Budget management is poor and constrains effectiveness</p> <p>2: Budget management is adequate but could be improved</p> <p>3: Budget management is excellent and meets management needs</p>	0.5
18. Equipment: Is equipment sufficient for management needs?	<p>0: There are little or no equipment and facilities for management needs</p> <p>1: There are some equipment and facilities but these are inadequate for most management needs</p> <p>2: There are equipment and facilities, but still some gaps that constrain management</p> <p>3: There are adequate equipment and facilities</p>	1
19. Maintenance of equipment: Is equipment adequately maintained?	<p>0: There is little or no maintenance of equipment and facilities</p> <p>1: There is some ad hoc maintenance of equipment and facilities</p> <p>2: There is basic maintenance of equipment and facilities</p> <p>3: Equipment and facilities are well maintained</p>	1
20. Education and awareness: Is there a planned education programme linked to	<p>0: There is no education and awareness programme</p> <p>1: There is a limited and ad hoc education and awareness programme</p> <p>2: There is an education and awareness programme but it only partly meets needs and could be improved</p> <p>3: There is an appropriate and fully implemented education and awareness programme</p>	1

the objectives and needs?		
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	<p>0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area</p> <p>1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area</p> <p>2: Adjacent land and water use planning partially takes into account the long term needs of the protected area</p> <p>3: Adjacent land and water use planning fully takes into account the long term needs of the protected area</p>	2
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	<p>0: No</p> <p>1: Yes</p>	2
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel)	<p>0: No</p> <p>1: Yes</p>	2

between freshwater spawning sites and the sea, or to allow animal migration).		
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	2
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	1

24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	2
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	0
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	0.5

environmental services?		
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	0
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	0.5
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	0
Total METT Score		36

Deep River Forest Reserve

Area in Hectares	10,218
Biome type	Terrestrial
Local Designation of Protected Area	Forest reserve
IUCN Category	6
WDPA site code	3311
Location of protected area	Toledo District (16° 22' 06.42" N/88° 36'04.17" W)
Date of establishment	1941
Ownership details	State
Management Authority	Belize Forest Department/ Gomez Saw Mill
Main values for which the area is designated	Timber extraction, Watershed Protection
Management objective 1	Timber extraction,
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	Many areas never visited

Questions	Criteria and Score	Protected Area
		Deep River Forest Reserve
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant) 3: The protected area has been formally gazetted/covenanted	3
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	0: There are no regulations for controlling land use and activities in the protected area 1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses 2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps 3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management	2
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	0: The staff have no effective capacity/resources to enforce protected area legislation and regulations 1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support) 2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain 3: The staff have excellent capacity/resources to enforce protected area legislation and regulations	1

4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	2
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc</p>	2
6. Protected area boundary demarcation: Is the boundary known and demarcated?	<p>0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users</p> <p>1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users</p> <p>2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated</p> <p>3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated</p>	2
7. Management plan: Is there a management plan and is it being implemented?	<p>0: There is no management plan for the protected area</p> <p>1: A management plan is being prepared or has been prepared but is not being implemented</p> <p>2: A management plan exists but it is only being partially implemented because of funding constraints or other problems</p> <p>3: A management plan exists and is being implemented</p>	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	<p>0: No</p> <p>1: Yes</p>	1

7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	2
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	2
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	2
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	1.5
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	3
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	1.5
12. Resource management: Is active	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented	2

resource management being undertaken?	2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	3
14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	2
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	2
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	2
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	2

19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	3
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	0
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area 2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	2
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	0: No 1: Yes	1
21b. Land and water planning for connectivity: Management of corridors linking the protected area	0: No 1: Yes	1

provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).		
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	1
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions	0

area have input to management decisions?	relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	2
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	1
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	1
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	2

environmental services?		
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	2
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	1
Total METT Score		58

Maya Mountains Forest Reserve

Area in Hectares	2,004
Biome type	Terrestrial
Local Designation of Protected Area	Forest reserve
IUCN Category	6
WDPA site code	28850
Location of protected area	Toledo District (16° 37' 41.46" N/88° 41'16.32" W)
Date of establishment	1977
Ownership details	State
Management Authority	Ya'axche Conservation Trust/Belize Forest Department
Main values for which the area is designated	Timber extraction, Watershed Protection
Management objective 1	Timber extraction,
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	Many areas never visited

Questions	Criteria and Score	Protected Area
		Maya Mountains Forest Reserve
1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	0: The protected area is not gazetted/covenanted 1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun 2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved	3

	<p>areas, which do not yet have national legal status or covenant)</p> <p>3: The protected area has been formally gazetted/covenanted</p>	
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	<p>0: There are no regulations for controlling land use and activities in the protected area</p> <p>1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses</p> <p>2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps</p> <p>3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management</p>	1
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	<p>0: The staff have no effective capacity/resources to enforce protected area legislation and regulations</p> <p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	1
4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	0
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key conservation concern?	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc</p>	2

6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	1,5
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	1
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	2
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	0
8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	2
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision	1

	<p>making</p> <p>2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making</p> <p>3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making</p>	
10. Protection systems: Are systems in place to control access/resource use in the protected area?	<p>0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use</p> <p>1: Protection systems are only partially effective in controlling access/resource use</p> <p>2: Protection systems are moderately effective in controlling access/resource use</p> <p>3: Protection systems are largely or wholly effective in controlling access/ resource use</p>	2
11. Research: Is there a programme of management-orientated survey and research work?	<p>0: There is no survey or research work taking place in the protected area</p> <p>1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management</p> <p>2: There is considerable survey and research work but it is not directed towards the needs of protected area management</p> <p>3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs</p>	2
12. Resource management: Is active resource management being undertaken?	<p>0: Active resource management is not being undertaken</p> <p>1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented</p> <p>2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed</p> <p>3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented</p>	2
13. Staff numbers: Are there enough people employed to manage the protected area?	<p>0: There are no staff</p> <p>1: Staff numbers are inadequate for critical management activities</p> <p>2: Staff numbers are below optimum level for critical management activities</p> <p>3: Staff numbers are adequate for the management needs of the protected area</p>	2
14. Staff training: Are staff adequately trained to fulfill management objectives?	<p>0: Staff lack the skills needed for protected area management</p> <p>1: Staff training and skills are low relative to the needs of the protected area</p> <p>2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management</p> <p>3: Staff training and skills are aligned with the management needs of the protected area</p>	2

15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	2
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	1
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	2.5
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	2
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	3
20. Education and awareness: Is there a planned education programme linked to the objectives and needs?	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	3
21. Planning for land and water use: Does land and water use planning recognise the protected	0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area 1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental the area	2

area and aid the achievement of objectives?	2: Adjacent land and water use planning partially takes into account the long term needs of the protected area 3: Adjacent land and water use planning fully takes into account the long term needs of the protected area	
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	0: No 1: Yes	2
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between freshwater spawning sites and the sea, or to allow animal migration).	0: No 1: Yes	2
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular	0: No 1: Yes	2

species, fire management to maintain savannah habitats etc.)"		
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	1
24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	2
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	2
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	1

24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	0
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	1.5
26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	2
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	0
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	1.5
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the	0: Severely degraded 1: Partially degraded	2

protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	2: Mostly intact 3: Completely intact	
Total METT Score		61

Golden Stream Corridor Reserve

Area in Hectares	1,740
Biome type	Terrestrial
Local Designation of Protected Area	Private reserve
IUCN Category	4
WDPA site code	301941
Location of protected area	Toledo District (16° 18' 44.64" N/88° 43'01.96" W)
Date of establishment	1998
Ownership details	State
Management Authority	Ya'axche Conservation Trust
Main values for which the area is designated	Biodiversity conservation, Watershed protection
Management objective 1	Biodiversity conservation
Management objective 2	Watershed Protection
Key Biodiversity Indicators Used in This Protected Area	
Indicator 1	Monitoring Wildlife Abundance and Presence
Status at Project Start-Up	None
Indicator 2	Monitoring Level of Incursions
Status at project start-up	Many areas never visited

Questions	Criteria and Score	Protected Area
		Golden Stream Corridor Private Reserve

1. Legal status: Does the protected area have legal status (or in the case of private reserves is covered by a covenant or similar)?	<p>0: The protected area is not gazetted/covenanted</p> <p>1: There is agreement that the protected area should be gazetted/covenanted but the process has not yet begun</p> <p>2: The protected area is in the process of being gazetted/covenanted but the process is still incomplete (includes sites designated under international conventions, such as Ramsar, or local/traditional law such as community conserved areas, which do not yet have national legal status or covenant)</p> <p>3: The protected area has been formally gazetted/covenanted</p>	1
2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?	<p>0: There are no regulations for controlling land use and activities in the protected area</p> <p>1: Some regulations for controlling land use and activities in the protected area exist but these are major weaknesses</p> <p>2: Regulations for controlling land use and activities in the protected area exist but there are some weaknesses or gaps</p> <p>3: Regulations for controlling inappropriate land use and activities in the protected area exist and provide an excellent basis for management</p>	3
3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?	<p>0: The staff have no effective capacity/resources to enforce protected area legislation and regulations</p> <p>1: There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget, lack of institutional support)</p> <p>2: The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain</p> <p>3: The staff have excellent capacity/resources to enforce protected area legislation and regulations</p>	3
4. Protected area objectives: Is management undertaken according to agreed objectives?	<p>0: No firm objectives have been agreed for the protected area</p> <p>1: The protected area has agreed objectives, but is not managed according to these objectives</p> <p>2: The protected area has agreed objectives, but is only partially managed according to these objectives</p> <p>3: The protected area has agreed objectives and is managed to meet these objectives</p>	3
5. Protected area design: Is the protected area the right size and shape to protect species, habitats, ecological processes and water catchments of key	<p>0: Inadequacies in protected area design mean achieving the major objectives of the protected area is very difficult</p> <p>1: Inadequacies in protected area design mean that achievement of major objectives is difficult but some mitigating actions are being taken (e.g. agreements with adjacent land owners for wildlife corridors or introduction of appropriate catchment management)</p> <p>2: Protected area design is not significantly constraining achievement of objectives, but could be improved (e.g. with respect to larger scale ecological processes)</p> <p>3: Protected area design helps achievement of objectives; it is appropriate for species</p>	3

conservation concern?	and habitat conservation; and maintains ecological processes such as surface and groundwater flows at a catchment scale, natural disturbance patterns etc	
6. Protected area boundary demarcation: Is the boundary known and demarcated?	0: The boundary of the protected area is not known by the management authority or local residents/neighbouring land users 1: The boundary of the protected area is known by the management authority but is not known by local residents/neighbouring land users 2: The boundary of the protected area is known by both the management authority and local residents/neighbouring land users but is not appropriately demarcated 3: The boundary of the protected area is known by the management authority and local residents/neighbouring land users and is appropriately demarcated	2
7. Management plan: Is there a management plan and is it being implemented?	0: There is no management plan for the protected area 1: A management plan is being prepared or has been prepared but is not being implemented 2: A management plan exists but it is only being partially implemented because of funding constraints or other problems 3: A management plan exists and is being implemented	1
7.a Planning process: The planning process allows adequate opportunity for key stakeholders to influence the management plan	0: No 1: Yes	1
7.b Planning process: There is an established schedule and process for periodic review and updating of the management plan	0: No 1: Yes	2
7.c Planning process: The results of monitoring, research and evaluation are routinely incorporated into planning	0: No 1: Yes	2

8. Regular work plan: Is there a regular work plan and is it being implemented	0: No regular work plan exists 1: A regular work plan exists but few of the activities are implemented 2: A regular work plan exists and many activities are implemented 3: A regular work plan exists and all activities are implemented	3
9. Resource inventory: Do you have enough information to manage the area?	0: There is little or no information available on the critical habitats, species and cultural values of the protected area 1: Information on the critical habitats, species, ecological processes and cultural values of the protected area is not sufficient to support planning and decision making 2: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient for most key areas of planning and decision making 3: Information on the critical habitats, species, ecological processes and cultural values of the protected area is sufficient to support all areas of planning and decision making	2
10. Protection systems: Are systems in place to control access/resource use in the protected area?	0: Protection systems (patrols, permits etc) do not exist or are not effective in controlling access/resource use 1: Protection systems are only partially effective in controlling access/resource use 2: Protection systems are moderately effective in controlling access/resource use 3: Protection systems are largely or wholly effective in controlling access/ resource use	2
11. Research: Is there a programme of management-orientated survey and research work?	0: There is no survey or research work taking place in the protected area 1: There is a small amount of survey and research work but it is not directed towards the needs of protected area management 2: There is considerable survey and research work but it is not directed towards the needs of protected area management 3: There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs	2.5
12. Resource management: Is active resource management being undertaken?	0: Active resource management is not being undertaken 1: Very few of the requirements for active management of critical habitats, species, ecological processes and cultural values are being implemented 2: Many of the requirements for active management of critical habitats, species, ecological processes and, cultural values are being implemented but some key issues are not being addressed 3: Requirements for active management of critical habitats, species, ecological processes and, cultural values are being substantially or fully implemented	3
13. Staff numbers: Are there enough people employed to manage the protected area?	0: There are no staff 1: Staff numbers are inadequate for critical management activities 2: Staff numbers are below optimum level for critical management activities 3: Staff numbers are adequate for the management needs of the protected area	3

14. Staff training: Are staff adequately trained to fulfill management objectives?	0: Staff lack the skills needed for protected area management 1: Staff training and skills are low relative to the needs of the protected area 2: Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management 3: Staff training and skills are aligned with the management needs of the protected area	2
15. Current budget: Is the current budget sufficient?	0: There is no budget for management of the protected area 1: The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage 2: The available budget is acceptable but could be further improved to fully achieve effective management 3: The available budget is sufficient and meets the full management needs of the protected area	1
16. Security of budget: Is the budget secure?	0: There is no secure budget for the protected area and management is wholly reliant on outside or highly variable funding 1: There is very little secure budget and the protected area could not function adequately without outside funding 2: There is a reasonably secure core budget for regular operation of the protected area but many innovations and initiatives are reliant on outside funding 3: There is a secure budget for the protected area and its management needs	2
17. Management of budget: Is the budget managed to meet critical management needs?	0: Budget management is very poor and significantly undermines effectiveness (e.g. late release of budget in financial year) 1: Budget management is poor and constrains effectiveness 2: Budget management is adequate but could be improved 3: Budget management is excellent and meets management needs	3
18. Equipment: Is equipment sufficient for management needs?	0: There are little or no equipment and facilities for management needs 1: There are some equipment and facilities but these are inadequate for most management needs 2: There are equipment and facilities, but still some gaps that constrain management 3: There are adequate equipment and facilities	2
19. Maintenance of equipment: Is equipment adequately maintained?	0: There is little or no maintenance of equipment and facilities 1: There is some ad hoc maintenance of equipment and facilities 2: There is basic maintenance of equipment and facilities 3: Equipment and facilities are well maintained	3
20. Education and awareness: Is there a planned education programme linked to	0: There is no education and awareness programme 1: There is a limited and ad hoc education and awareness programme 2: There is an education and awareness programme but it only partly meets needs and could be improved 3: There is an appropriate and fully implemented education and awareness programme	3

the objectives and needs?		
21. Planning for land and water use: Does land and water use planning recognise the protected area and aid the achievement of objectives?	<p>0: Adjacent land and water use planning does not take into account the needs of the protected area and activities/policies are detrimental to the survival of the area</p> <p>1: Adjacent land and water use planning does not take into account the long term needs of the protected area, but activities are not detrimental to the area</p> <p>2: Adjacent land and water use planning partially takes into account the long term needs of the protected area</p> <p>3: Adjacent land and water use planning fully takes into account the long term needs of the protected area</p>	3
21a. Land and water planning for habitat conservation: Planning and management in the catchment or landscape containing the protected area incorporates provision for adequate environmental conditions (e.g. volume, quality and timing of water flow, air pollution levels etc) to sustain relevant habitats.	<p>0: No</p> <p>1: Yes</p>	3
21b. Land and water planning for connectivity: Management of corridors linking the protected area provides for wildlife passage to key habitats outside the protected area (e.g. to allow migratory fish to travel between	<p>0: No</p> <p>1: Yes</p>	1

freshwater spawning sites and the sea, or to allow animal migration).		
21c. Land and water planning for ecosystem services and species conservation: "Planning addresses ecosystem-specific needs and/or the needs of particular species of concern at an ecosystem scale (e.g. volume, quality and timing of freshwater flow to sustain particular species, fire management to maintain savannah habitats etc.)"	0: No 1: Yes	1
22. State and commercial neighbours: Is there co-operation with adjacent land and water users?	0: There is no contact between managers and neighbouring official or corporate land and water users 1: There is contact between managers and neighbouring official or corporate land and water users but little or no cooperation 2: There is contact between managers and neighbouring official or corporate land and water users, but only some co-operation 3: There is regular contact between managers and neighbouring official or corporate land and water users, and substantial co-operation on management	1
23. Indigenous people: Do indigenous and traditional peoples resident or regularly using the protected area have input to management decisions?	0: Indigenous and traditional peoples have no input into decisions relating to the management of the protected area 1: Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management 2: Indigenous and traditional peoples directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Indigenous and traditional peoples directly participate in all relevant decisions relating to management, e.g. co-management	0.5

24. Local communities: Do local communities resident or near the protected area have input to management decisions?	0: Local communities have no input into decisions relating to the management of the protected area 1: Local communities have some input into discussions relating to management but no direct role in management 2: Local communities directly contribute to some relevant decisions relating to management but their involvement could be improved 3: Local communities directly participate in all relevant decisions relating to management, e.g. co-management	1
24 a. Impact on communities: There is open communication and trust between local and/or indigenous people, stakeholders and protected area managers	0: No 1: Yes	2.5
24 b. Impact on communities: Programmes to enhance community welfare, while conserving protected area resources, are being implemented	0: No 1: Yes	2
24 c. Impact on communities: Local and/or indigenous people actively support the protected area	0: No 1: Yes	2
25. Economic benefit: Is the protected area providing economic benefits to local communities, e.g. income, employment, payment for environmental services?	0: The protected area does not deliver any economic benefits to local communities 1: Potential economic benefits are recognised and plans to realise these are being developed 2: There is some flow of economic benefits to local communities 3: There is a major flow of economic benefits to local communities from activities associated with the protected area	1

26. Monitoring and evaluation: Are management activities monitored against performance?	0: There is no monitoring and evaluation in the protected area 1: There is some ad hoc monitoring and evaluation, but no overall strategy and/or no regular collection of results 2: There is an agreed and implemented monitoring and evaluation system but results do not feed back into management 3: A good monitoring and evaluation system exists, is well implemented and used in adaptive management	2
27. Visitor facilities: Are visitor facilities adequate?	0: There are no visitor facilities and services despite an identified need 1: Visitor facilities and services are inappropriate for current levels of visitation 2: Visitor facilities and services are adequate for current levels of visitation but could be improved 3: Visitor facilities and services are excellent for current levels of visitation	2.5
28. Commercial tourism operators: Do commercial tour operators contribute to protected area management?	0: There is little or no contact between managers and tourism operators using the protected area 1: There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters 2: There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values 3: There is good co-operation between managers and tourism operators to enhance visitor experiences, and maintain protected area values	2
29. Fees: If fees (i.e. entry fees or fines) are applied, do they help protected area management?	0: Although fees are theoretically applied, they are not collected 1: Fees are collected, but make no contribution to the protected area or its environs 2: Fees are collected, and make some contribution to the protected area and its environs 3: Fees are collected and make a substantial contribution to the protected area and its environs	0
30. What is the overall condition of the biodiversity of the protected area in terms of the indicator(s) indicated in Data Sheet 2 above?	0: Severely degraded 1: Partially degraded 2: Mostly intact 3: Completely intact	3
Total METT Score		80

ANNEX 13: GEF CORE INDICATORS

Core Indicator 1	Terrestrial protected areas created or under improved management for conservation and sustainable use					(Hectares)	
				Hectares (1.1+1.2)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 1.1	Terrestrial protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected			Achieved	
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Indicator 1.2	Terrestrial protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
					Endorsement	MTR	TE
Sittee River Forest Reserve	12229	6 – Managed resource Protected Area	37,360		37		
Sibun Forest Reserve	3307	6 – Managed resource Protected Area	36,706		37		
Manatee Forest Reserve	12226	6 – Managed resource Protected Area	36,474		37		
Monkey Bay National Park	301914	2	859		19		
Monkey Bay private reserve	301913	4	470		40		
Runaway Creek	342394	1	2,888		61		
Zoo-managed property	555582997	0	700		49		
Chiquibul North / East	20230	2	19,628		62		
Deep River FR	3311	X	10,218		61		
Maya Mountains FR	28850	X	2,004		58		
Columbia River Forest Reserve	3314	X	1,740		36		
Golden Corridor Reserve	301941	X	1,740		80		

Northern Biological Corridor	X	X	36,040		82		
		Sum	186,827				
Core Indicator 2	Marine protected areas created or under improved management for conservation and sustainable use						(Hectares)
				Hectares (2.1+2.2)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 2.1	Marine protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category		Hectares			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
Indicator 2.2	Marine protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
Core Indicator 3	Area of land restored						(Hectares)
				Hectares (3.1+3.2+3.3+3.4)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 3.1	Area of degraded agricultural land restored						
				Hectares			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 3.2	Area of forest and forest land restored						
				Hectares			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 3.3	Area of natural grass and shrublands restored						
				Hectares			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored						
				Hectares			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)						(Hectares)
				Hectares (4.1+4.2+4.3+4.4)			
				Expected		Expected	
				PIF stage	Endorsement	MTR	TE

			157,475		
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity				
			Hectares		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations				
Third party certification(s):			Hectares		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems				
			Hectares		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
				157,475	
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided				
Include documentation that justifies HCVF			Hectares		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity				
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations				
Third party certification(s):			Number		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial				
			Number		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Indicator 5.3	Amount of Marine Litter Avoided				
			Metric Tons		
			Expected		Achieved
			PIF stage	Endorsement	MTR TE
Core Indicator 6	Greenhouse gas emission mitigated				
			Expected metric tons of CO ₂ e (6.1+6.2)		
			PIF stage	Endorsement	MTR TE
	Expected CO ₂ e (direct)				
	Expected CO ₂ e (indirect)				
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector				
			Expected metric tons of CO ₂ e		
			PIF stage	Endorsement	MTR TE
	Expected CO ₂ e (direct)				
	Expected CO ₂ e (indirect)				
	Anticipated start year of accounting				

	Duration of accounting					
Indicator 6.2	Emissions avoided Outside AFOLU					
			Expected metric tons of CO ₂ e			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected CO ₂ e (direct)					
	Expected CO ₂ e (indirect)					
	Anticipated start year of accounting					
	Duration of accounting					
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Metric Tons)
Fishery Details			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					(Metric Tons)
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)					

POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Hydrochlorofluorocarbons (HCFC) Reduced/Phased out					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	PIF stage	Endorsement
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					(grams of toxic equivalent gTEQ)
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					(Number)
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female				
		Male				
		Total				

ANNEX 14: GEF 7 TAXONOMY

Level 1	Level 2	Level 3	Level 4
<input checked="" type="checkbox"/> Influencing models			
	<input checked="" type="checkbox"/> Transform policy and regulatory environments		
	<input checked="" type="checkbox"/> Strengthen institutional capacity and decision-making		
	<input checked="" type="checkbox"/> Convene multi-stakeholder alliances		
	<input checked="" type="checkbox"/> Demonstrate innovative approaches		
	<input type="checkbox"/> Deploy innovative financial instruments		
<input checked="" type="checkbox"/> Stakeholders			
	<input checked="" type="checkbox"/> Indigenous Peoples		
	<input checked="" type="checkbox"/> Private Sector		
		<input type="checkbox"/> Capital providers	
		<input type="checkbox"/> Financial intermediaries and market facilitators	
		<input type="checkbox"/> Large corporations	
		<input checked="" type="checkbox"/> SMEs	
		<input checked="" type="checkbox"/> Individuals/Entrepreneurs	
		<input type="checkbox"/> Non-Grant Pilot	
		<input type="checkbox"/> Project Reflow	
	<input checked="" type="checkbox"/> Beneficiaries		
	<input checked="" type="checkbox"/> Local Communities		
	<input checked="" type="checkbox"/> Civil Society		
		<input checked="" type="checkbox"/> Community Based Organization	
		<input checked="" type="checkbox"/> Non-Governmental Organization	
		<input checked="" type="checkbox"/> Academia	
		<input type="checkbox"/> Trade Unions and Workers Unions	
	<input checked="" type="checkbox"/> Type of Engagement		
		<input checked="" type="checkbox"/> Information Dissemination	
		<input checked="" type="checkbox"/> Partnership	
		<input checked="" type="checkbox"/> Consultation	
		<input checked="" type="checkbox"/> Participation	
	<input checked="" type="checkbox"/> Communications		
		<input checked="" type="checkbox"/> Awareness Raising	
		<input type="checkbox"/> Education	
		<input checked="" type="checkbox"/> Public Campaigns	
		<input checked="" type="checkbox"/> Behavior Change	
<input checked="" type="checkbox"/> Capacity, Knowledge and Research			
	<input type="checkbox"/> Enabling Activities		
	<input checked="" type="checkbox"/> Capacity Development		
	<input checked="" type="checkbox"/> Knowledge Generation and Exchange		
	<input type="checkbox"/> Targeted Research		
	<input checked="" type="checkbox"/> Learning		
		<input checked="" type="checkbox"/> Theory of Change	

		<input checked="" type="checkbox"/> Adaptive Management	
		<input checked="" type="checkbox"/> Indicators to Measure Change	
	<input checked="" type="checkbox"/> Innovation		
	<input checked="" type="checkbox"/> Knowledge and Learning		
		<input checked="" type="checkbox"/> Knowledge Management	
		<input checked="" type="checkbox"/> Innovation	
		<input checked="" type="checkbox"/> Capacity Development	
		<input checked="" type="checkbox"/> Learning	
	<input checked="" type="checkbox"/> Stakeholder Engagement Plan		
<input checked="" type="checkbox"/> Gender Equality			
	<input checked="" type="checkbox"/> Gender Mainstreaming		
		<input checked="" type="checkbox"/> Beneficiaries	
		<input checked="" type="checkbox"/> Women groups	
		<input checked="" type="checkbox"/> Sex-disaggregated indicators	
		<input checked="" type="checkbox"/> Gender-sensitive indicators	
	<input checked="" type="checkbox"/> Gender results areas		
		<input checked="" type="checkbox"/> Access and control over natural resources	
		<input checked="" type="checkbox"/> Participation and leadership	
		<input type="checkbox"/> Access to benefits and services	
		<input checked="" type="checkbox"/> Capacity development	
		<input checked="" type="checkbox"/> Awareness raising	
		<input checked="" type="checkbox"/> Knowledge generation	
<input checked="" type="checkbox"/> Focal Areas/Theme			
	<input type="checkbox"/> Integrated Programs		
		<input type="checkbox"/> Commodity Supply Chains (⁹⁵ Good Growth Partnership)	
			<input type="checkbox"/> Sustainable Commodities Production
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Financial Screening Tools
			<input type="checkbox"/> High Conservation Value Forests
			<input type="checkbox"/> High Carbon Stocks Forests
			<input type="checkbox"/> Soybean Supply Chain
			<input type="checkbox"/> Oil Palm Supply Chain
			<input type="checkbox"/> Beef Supply Chain
			<input type="checkbox"/> Smallholder Farmers
			<input type="checkbox"/> Adaptive Management
		<input type="checkbox"/> Food Security in Sub-Sahara Africa	
			<input type="checkbox"/> Resilience (climate and shocks)
			<input type="checkbox"/> Sustainable Production Systems
			<input type="checkbox"/> Agroecosystems
			<input type="checkbox"/> Land and Soil Health
			<input type="checkbox"/> Diversified Farming
			<input type="checkbox"/> Integrated Land and Water Management
			<input type="checkbox"/> Smallholder Farming
			<input type="checkbox"/> Small and Medium Enterprises
			<input type="checkbox"/> Crop Genetic Diversity
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Gender Dimensions
			<input type="checkbox"/> Multi-stakeholder Platforms

		<input type="checkbox"/> Food Systems, Land Use and Restoration	
			<input type="checkbox"/> Sustainable Food Systems
			<input type="checkbox"/> Landscape Restoration
			<input type="checkbox"/> Sustainable Commodity Production
			<input type="checkbox"/> Comprehensive Land Use Planning
			<input type="checkbox"/> Integrated Landscapes
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Smallholder Farmers
		<input type="checkbox"/> Sustainable Cities	
			<input type="checkbox"/> Integrated urban planning
			<input type="checkbox"/> Urban sustainability framework
			<input type="checkbox"/> Transport and Mobility
			<input type="checkbox"/> Buildings
			<input type="checkbox"/> Municipal waste management
			<input type="checkbox"/> Green space
			<input type="checkbox"/> Urban Biodiversity
			<input type="checkbox"/> Urban Food Systems
			<input type="checkbox"/> Energy efficiency
			<input type="checkbox"/> Municipal Financing
			<input type="checkbox"/> Global Platform for Sustainable Cities
			<input type="checkbox"/> Urban Resilience
	<input checked="" type="checkbox"/> Biodiversity		
		<input checked="" type="checkbox"/> Protected Areas and Landscapes	
			<input checked="" type="checkbox"/> Terrestrial Protected Areas
			<input type="checkbox"/> Coastal and Marine Protected Areas
			<input checked="" type="checkbox"/> Productive Landscapes
			<input type="checkbox"/> Productive Seascapes
			<input checked="" type="checkbox"/> Community Based Natural Resource Management
		<input checked="" type="checkbox"/> Mainstreaming	
			<input type="checkbox"/> Extractive Industries (oil, gas, mining)
			<input type="checkbox"/> Forestry (Including HCVP and REDD+)
			<input checked="" type="checkbox"/> Tourism
			<input checked="" type="checkbox"/> Agriculture & agrobiodiversity
			<input type="checkbox"/> Fisheries
			<input type="checkbox"/> Infrastructure
			<input type="checkbox"/> Certification (National Standards)
			<input type="checkbox"/> Certification (International Standards)
		<input checked="" type="checkbox"/> Species	
			<input checked="" type="checkbox"/> Illegal Wildlife Trade
			<input checked="" type="checkbox"/> Threatened Species
			<input checked="" type="checkbox"/> Wildlife for Sustainable Development
			<input type="checkbox"/> Crop Wild Relatives
			<input type="checkbox"/> Plant Genetic Resources
			<input checked="" type="checkbox"/> Animal Genetic Resources
			<input type="checkbox"/> Livestock Wild Relatives
			<input type="checkbox"/> Invasive Alien Species (IAS)
		<input checked="" type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangroves
			<input type="checkbox"/> Coral Reefs

		<input type="checkbox"/> Sea Grasses
		<input type="checkbox"/> Wetlands
		<input type="checkbox"/> Rivers
		<input type="checkbox"/> Lakes
		<input type="checkbox"/> Tropical Rain Forests
		<input checked="" type="checkbox"/> Tropical Dry Forests
		<input type="checkbox"/> Temperate Forests
		<input type="checkbox"/> Grasslands
		<input type="checkbox"/> Paramo
		<input type="checkbox"/> Desert
	<input type="checkbox"/> Financial and Accounting	
		<input type="checkbox"/> Payment for Ecosystem Services
		<input type="checkbox"/> Natural Capital Assessment and Accounting
		<input type="checkbox"/> Conservation Trust Funds
		<input type="checkbox"/> Conservation Finance
	<input type="checkbox"/> Supplementary Protocol to the CBD	
		<input type="checkbox"/> Biosafety
		<input type="checkbox"/> Access to Genetic Resources Benefit Sharing
	<input type="checkbox"/> Forests	
	<input type="checkbox"/> Forest and Landscape Restoration	
		<input type="checkbox"/> REDD/REDD+
	<input type="checkbox"/> Forest	
		<input type="checkbox"/> Amazon
		<input type="checkbox"/> Congo
		<input type="checkbox"/> Drylands
	<input type="checkbox"/> Land Degradation	
	<input type="checkbox"/> Sustainable Land Management	
		<input type="checkbox"/> Restoration and Rehabilitation of Degraded Lands
		<input type="checkbox"/> Ecosystem Approach
		<input type="checkbox"/> Integrated and Cross-sectoral approach
		<input type="checkbox"/> Community-Based NRM
		<input type="checkbox"/> Sustainable Livelihoods
		<input type="checkbox"/> Income Generating Activities
		<input type="checkbox"/> Sustainable Agriculture
		<input type="checkbox"/> Sustainable Pasture Management
		<input type="checkbox"/> Sustainable Forest/Woodland Management
		<input type="checkbox"/> Improved Soil and Water Management Techniques
		<input type="checkbox"/> Sustainable Fire Management
		<input type="checkbox"/> Drought Mitigation/Early Warning
	<input type="checkbox"/> Land Degradation Neutrality	
		<input type="checkbox"/> Land Productivity
		<input type="checkbox"/> Land Cover and Land cover change
		<input type="checkbox"/> Carbon stocks above or below ground
	<input type="checkbox"/> Food Security	
	<input type="checkbox"/> International Waters	
	<input type="checkbox"/> Ship	
	<input type="checkbox"/> Coastal	
	<input type="checkbox"/> Freshwater	
		<input type="checkbox"/> Aquifer
		<input type="checkbox"/> River Basin
		<input type="checkbox"/> Lake Basin
	<input type="checkbox"/> Learning	
	<input type="checkbox"/> Fisheries	
	<input type="checkbox"/> Persistent toxic substances	

	<input type="checkbox"/> SIDS : Small Island Dev States	
	<input type="checkbox"/> Targeted Research	
	<input type="checkbox"/> Pollution	
		<input type="checkbox"/> Persistent toxic substances
		<input type="checkbox"/> Plastics
		<input type="checkbox"/> Nutrient pollution from all sectors except wastewater
		<input type="checkbox"/> Nutrient pollution from Wastewater
	<input type="checkbox"/> Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
	<input type="checkbox"/> Strategic Action Plan Implementation	
	<input type="checkbox"/> Areas Beyond National Jurisdiction	
	<input type="checkbox"/> Large Marine Ecosystems	
	<input type="checkbox"/> Private Sector	
	<input type="checkbox"/> Aquaculture	
	<input type="checkbox"/> Marine Protected Area	
	<input type="checkbox"/> Biomes	
		<input type="checkbox"/> Mangrove
		<input type="checkbox"/> Coral Reefs
		<input type="checkbox"/> Seagrasses
		<input type="checkbox"/> Polar Ecosystems
		<input type="checkbox"/> Constructed Wetlands
	<input type="checkbox"/> Chemicals and Waste	
	<input type="checkbox"/> Mercury	
	<input type="checkbox"/> Artisanal and Scale Gold Mining	
	<input type="checkbox"/> Coal Fired Power Plants	
	<input type="checkbox"/> Coal Fired Industrial Boilers	
	<input type="checkbox"/> Cement	
	<input type="checkbox"/> Non-Ferrous Metals Production	
	<input type="checkbox"/> Ozone	
	<input type="checkbox"/> Persistent Organic Pollutants	
	<input type="checkbox"/> Unintentional Persistent Organic Pollutants	
	<input type="checkbox"/> Sound Management of chemicals and Waste	
	<input type="checkbox"/> Waste Management	
		<input type="checkbox"/> Hazardous Waste Management
		<input type="checkbox"/> Industrial Waste
		<input type="checkbox"/> e-Waste
	<input type="checkbox"/> Emissions	
	<input type="checkbox"/> Disposal	
	<input type="checkbox"/> New Persistent Organic Pollutants	
	<input type="checkbox"/> Polychlorinated Biphenyls	
	<input type="checkbox"/> Plastics	
	<input type="checkbox"/> Eco-Efficiency	
	<input type="checkbox"/> Pesticides	
	<input type="checkbox"/> DDT - Vector Management	
	<input type="checkbox"/> DDT - Other	
	<input type="checkbox"/> Industrial Emissions	
	<input type="checkbox"/> Open Burning	
	<input type="checkbox"/> Best Available Technology / Best Environmental Practices	
	<input type="checkbox"/> Green Chemistry	
	<input type="checkbox"/> Climate Change	
	<input type="checkbox"/> Climate Change Adaptation	
		<input type="checkbox"/> Climate Finance
		<input type="checkbox"/> Least Developed Countries
		<input type="checkbox"/> Small Island Developing States
		<input type="checkbox"/> Disaster Risk Management
		<input type="checkbox"/> Sea-level rise

		<input type="checkbox"/> Climate Resilience
		<input type="checkbox"/> Climate information
		<input type="checkbox"/> Ecosystem-based Adaptation
		<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> National Adaptation Programme of Action
		<input type="checkbox"/> National Adaptation Plan
		<input type="checkbox"/> Mainstreaming Adaptation
		<input type="checkbox"/> Private Sector
		<input type="checkbox"/> Innovation
		<input type="checkbox"/> Complementarity
		<input type="checkbox"/> Community-based Adaptation
		<input type="checkbox"/> Livelihoods
		<input type="checkbox"/> Climate Change Mitigation
		<input type="checkbox"/> Agriculture, Forestry, and other Land Use
		<input type="checkbox"/> Energy Efficiency
		<input type="checkbox"/> Sustainable Urban Systems and Transport
		<input type="checkbox"/> Technology Transfer
		<input type="checkbox"/> Renewable Energy
		<input type="checkbox"/> Financing
		<input type="checkbox"/> Enabling Activities
		<input type="checkbox"/> Technology Transfer
		<input type="checkbox"/> Poznan Strategic Programme on Technology Transfer
		<input type="checkbox"/> Climate Technology Centre & Network (CTCN)
		<input type="checkbox"/> Endogenous technology
		<input type="checkbox"/> Technology Needs Assessment
		<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> United Nations Framework on Climate Change
		<input type="checkbox"/> Nationally Determined Contribution
	<input checked="" type="checkbox"/> Rio Markers	
		<input type="checkbox"/> Paris Agreement
		<input checked="" type="checkbox"/> Sustainable Development Goals
		<input checked="" type="checkbox"/> Climate Change Mitigation 0
		<input type="checkbox"/> Climate Change Mitigation 1
		<input type="checkbox"/> Climate Change Mitigation 2
		<input checked="" type="checkbox"/> Climate Change Adaptation 0
		<input type="checkbox"/> Climate Change Adaptation 1
		<input type="checkbox"/> Climate Change Adaptation 2

XII. OPTIONAL ANNEXES

ANNEX 15: BASELINE OVERVIEWS, BY PROJECT COMPONENT

Component 1

National database: Belize is the first English speaking tropical country south of the United States. As such it is extremely popular for US and European universities as a teaching ground for tropical ecology courses or for establishment of field sites for postgraduate research. In light of this, Belize can be considered one of the Neotropical sites with the highest density of camera trapping in Neotropics. The high density of camera trapping effort and the small size of Belize thus allows the ability to assess population status of wide-ranging species at the national level (e.g. jaguar, puma, white lipped peccary). For many of these species monitoring effort is insufficient at the local site level of protected areas and thus the combining of datasets for national assessments is essential. Preliminary efforts of combining some datasets has already shown remarkable results, with the furthers recorded moves of jaguars ever recorded (160 km), indicating considerable dispersal distances of jaguars moving between survey sites. One of the largest barriers for freely sharing data and consolidating collaborative efforts into single studies concerns the dispersed funding and research bodies that have paid for these studies. All entities require recognition to sustain their activities and in essence compete for the same funding. Here crediting and recognition are important considerations. Equally funding efforts mainly concentrate on field activity with limited to no consideration given to data storage. Cleaning up of badly managed datasets after 2-3 years, frequently shows that it is impossible to extract useful information, making many camera trap efforts useless. It is in this light that current efforts need to be streamlined and brought under good data management with transparent and honest systems of data-sharing, recognising and involving the on the ground efforts when writing and publishing assessments (the ultimate calling cards of monitoring efforts).

Several initiatives and clearing house mechanisms have been proposed for standardisation of protocols and storage. Camera traps are by definition a standardised means of collecting data as they are standard automated units collecting similar data per location. Within the Key Biodiversity Areas project for GEF 5 camera traps were recognised as the most standardised survey method, which should be used to spearhead national monitoring database efforts. During this project, the 5 largest NGOs, together with major camera trap partners and the Forest Department were brought together to discuss, means, conditions and possible platforms for data sharing of camera data (KBA national monitoring document 2019). All partners agreed on the need for sharing, and under what conditions they were willing to do so, within a single platform. The KBA project stopped in September. The current proposed GEF7 funding can provide the necessary finishing impetus for assuring that this is brought to fruition, as an initial building block from which further national issues can develop. There are several international partners ready to assure assistance for this. It is the perfect starting point for wildlife database management at the national scale, brought in a framework of agreement with the 5 larger national NGOs and camera trap partners, together with the forest department. The camera database thus created a structure of data ordering and exchange and this format can than easily be expanded into further wildlife databases with more political sensitivities, such as game meat hunting (component 3) or wildlife conflict resolution (component 2), which frequently require camera trapping as part of their monitoring effort.

Area of implementation: When Belize was under British rule, the economy of the country revolved around extraction of tropical hardwood. The country was thus divided into logging estates, with different operators as managing units of the logging operations. After independence, logging remained an important part of the Belize economy up to this date, maintaining the logging estate management intact. The country has maintained this within the forest reserve system for many important areas, including some for watershed protection, in which potential extraction should be allowed. Belize can pride itself on managing lumber sustainably with long cycles of 40 years for regrowth. Studies in Belize (Rio Bravo), Guatemala and Peru have shown that sustainable logging operations maintain thriving wildlife populations, as long as this goes together with adequate protection and management of the road systems and created infrastructure (Kelly & Rowe 2014; Tobler et al. 2018).

The Forest Department manages a considerable number of Forest Reserves with limited financial resources. There is considerable variation in management capacity between the different forest reserves, based on revenue generation from extraction. Some are highly financially sustainable operations funded by logging with adequate presence (e.g. Chiquibul Forest Reserve, Mountain Pine Ridge). However, some of the reserves have limited presence as they are without revenue generating activities (e.g. too rugged to sustain logging operations or permanent infrastructures). These reserves are highly vulnerable to illegal extraction, especially of non-timber products which do not require the heavy machinery and infrastructure necessary for wood extraction. Hunting and smaller plant gathering can be done on foot with backpacks and pick up trucks on smaller tracks. The forest department has been able to find management solutions for several of these reserves, not generating enough income from logging, finding suitable NGOs to develop and implement management plans (e.g. Freshwater Creek in the North with CSFI and Maya Mountains with Ya'axche Conservation Trust, and Vaca having a management plan and candidate management organisations). It is thus that management solutions for forest reserves are found at a case by case basis, with projects assuring sufficient logistical and financial attention, bringing partners and communities together for management solutions.

The current component 1 activity concentrates on three extremely vulnerable forest reserves in the centre of the country (Manatee, Sibun, and Sittee River). These three areas form the core connection, outside of the bottleneck of the Central Belize Corridor (renamed the Maya Forest Corridor), between Belize's largest contiguous forest block, the Maya Mountain Massive, and the Selva Maya in the North. With an extremely strong international coalition of partners working together to secure the corridor, this is the right moment to bring an impetus to the neighbouring forest reserves, providing the vital protected connection, through vulnerable watershed areas. The presence of jungle training through the British Army Training Support Unit Belize (BATSUB), assures some positive presence in Manatee, with highly regulated international jungle training, including live firing. BATSUB is funding an intensive EIA project looking at the effects of live firing in both Manatee and Sibun, carried out by Panthera Belize. This project includes an initial camera trap effort. Results from this study show considerable hunting presence in Manatee (Wooldridge & Harmsen 2019) and potentially Sibun (no results yet available). The communities and loose settlements along the highways (coastal road and Hummingbird) can consider the three forest reserves their backyard. There is the considerable potential for easy non-timber extraction, if not checked. Anecdotal evidence indicates that this is the case for at least portions of these forest reserves. One of the main conservation issues for all three areas concerns lack of knowledge in terms of biodiversity status. The current project can therefore provide the necessary impetus for any conservation effort. The camera trap monitoring effort of the proposed coalition can create systems and management structures to bring these three areas together within a management umbrella within a single project. Camera trap surveys are a very good means of creating low key infrastructure and a great conservation colonising tool.

References:

- M. W. Tobler, R. Garcia Anleub, S. E. Carrillo-Perceatogui, G. Ponce Santizo, J. Polisar, A. Zuñiga Hartley, I. Goldstein. 2018. Do responsibly managed logging concessions adequately protect jaguars and other large and medium-sized mammals? Two case studies from Guatemala and Peru. *Biological Conservation* 220 (2018) 245–253
- M. Kelly, C. Rowe. 2014. Progress Report for: Rio Bravo Conservation and Management Area, Programme for Belize. <https://www.pfbelize.org/wp-content/uploads/2017/11/KellyRowe-Report-PfB-20142.pdf>
- R. Wooldridge, B. J. Harmsen. 2019. Assessing the impact of live firing on wildlife populations in Belize's military training estates – Year 1 report; Report to the Government of Belize Department of Environment. Report Environmental impact assessment from Ministry of Defence, UK.

Component 2

Live capture: The success story of Belize as a conservation beacon, having 60% of its landmass under natural wilderness cover, equally has unwanted side-effects for the Belize economy. The intact trophic species structure of the wilderness environment means a relative high density of top predators. The largest predator, the jaguar, frequently preys on livestock when farms are in close proximity to wilderness areas. Most intensive livestock production takes place in predator free areas and livestock has been bred to be docile and have lost all anti-predator behaviour. It is thus that livestock, without extra protective measures, is extremely vulnerable to jaguar predation. In Belize all rural communities and farms are surrounded by wilderness with jaguars living at the edges of farms and communities. Jaguar predation of livestock is widespread and a problem across the country.

Retaliatory killing of jaguars is common and allowed by law as the current wildlife act indicates that people can protect their livelihood.

Several trials have been initiated by two NGOs (Panthera and Ya'axche), in close collaboration with the forest department, helping and assisting with these trials. Here a limited number of farms with historic records of jaguar predation, were targeted for help with introduction of anti-predation measures. The NGOs financially supported these farmers with the measures as it concerned small scale farmers with limited financial means. They are unfortunately representative of the majority of farmers across Belize; mostly small farms with limited ability for management change, usually having 20-50 head of cattle or livestock (pigs/sheep). This makes that jaguar predation problems are spread across many actors with limited financial means, exacerbating the problem considerably. Solving jaguar depredation problems are easiest when dealing with a limited number of actors, occupying a maximum amount of land. Large landowners equally have the financial means to finance management changes.

The targeted model farms were concerned 10 farms in rural Belize and 10 farms in Southern Belize, introducing different measures of protection: guard animals like donkeys, electric fences, automated lights, night corrals, food banks to concentrate livestock in safe zones. The trials were successful for the individual farms, showing a considerable reduction in predation on the farm itself but not within the wider landscape. The problem was merely moved to neighbouring farms (path of least resistance for jaguars). Equally there was resentment among neighbouring farmers about not being included in the trial and not receiving help, which could potentially lead to a greater incentive to use lethal control of solving their (intensified) problems. The conclusion was that within a small farmer community, with high number of farms, the problems should be solved at the landscape level, moving away from the few single model farms receiving financial help with management. A jaguar working group was started to discuss these complex problems with limited finance and to assure a network of data-sharing, with greater understanding the problem at the national level, setting priorities.

Unfortunately, this group has not been given enough time to make structural national changes, as most of their time was occupied by discussing and trying to solve immediate urgent cases of jaguars moving very close to communities and farms (killing dogs close to people's houses). These cases usually cause considerable fear among people with communities providing bad press for jaguars in social media and among rural communities. The main immediate problem concerns the lack of ability by government and NGO managing stakeholders to act when jaguars pose a genuine problem. Currently there is no permanent team having the ability to safely live capture a jaguar, being able to judge the necessity of situations and act (independent of the discussion of euthanasia or translocation). The expertise to trap jaguars safely when they truly pose a danger or cause considerable fear among the public is simply not permanently present.

To assemble, train and test, a professional Belizean trapping team, with government support and endorsement, requires training and testing at a smaller scale. We propose to do this in the North-Eastern part of the country, in the area managed by the Corozal Sustainable Future Initiative (CSFI). CSFI can be considered one of the most stable and financially viable NGOs in the country with considerable long-term support of outside donors, allowing them to maintain trained staff and build capacity after projects. They equally have a thriving livestock industry surrounding the areas they manage, with a high chance of potential conflict from the jaguars under their direct management. There is equally uncertainty regarding the remaining unprotected forest areas, which are privately owned. Conversion of these forests to agriculture would mean displacing jaguars, who are subsequently more likely to search for food within the livestock industry areas. As Belize has hosted several live capture projects for collar and follow projects of jaguars (including CSFI), there is the logistic knowledge to support trapping. There is equally the international contacts with experienced trapper/veterinarians who have worked in Belize, with several interested Belizean vets ready for training.

Wildlife economy around camera pictures: CSFI carries out large scale camera trap monitoring within their area of management. Camera trapping has been fully internalised within CSFI as an organisation, with experienced staff able to train new recruits. All camera activity has focussed on scientific monitoring, as proposed in component 1. However, CSFI has considerable experience in tourism, letting tourists experience Northern Belize and its nature. The likelihood of tourists or visitors actually seeing a jaguar in the wild is slim in Belize, as anywhere within the jaguar range. Only a select few areas within the jaguars range have specific environmental conditions that can provide for the reliable sighting opportunity for jaguars and other wildlife (e.g. Pantanal) to create a safari experience. As this is not possible in most of the Neotropics, camera traps can be used to indicate the story of

wildlife to tourists. The photos become a resource for tourism, in terms of informing tour guides, creation of postcards, letting people view areas where jaguars have passed (you might not see them but we can proof they walked here).

Equally, unprotected areas with tourist activity can provide proof that they have wildlife (e.g. lodges etc). It is in this manner the northern area of CSFI is equally a good testing ground for increasing economic activity around monitoring and camera trapping.

Component 3

Belize has a strong hunting and game meat consumption culture, with high levels of hunting rifle ownership and widespread hunting. However, this hunting is scarcely regulated. The current wildlife act requires the purchase of a hunting license at a relatively high price (around \$2,000 BZ); this high price, together with a policy of limited enforcement to respect traditional use of game meat extraction, means that few hunters—only two in 2016—take out hunting licenses. Most hunting by rural people is carried out through with guns that are licensed through the farm license system, which allows them to go armed on their own farm / property in order to protect themselves and their livelihood. As such, they have the right to shoot game on their property under the logic of protecting their crops. Nearly all gun ownership is justified through farm licenses. Little information is therefore collected regarding quantities of hunted game and few people apply for licenses.

It is also quite easy to purchase game meat—food stalls openly sell it by the side of the road—including deer, peccary, paca, armadillo and others. Selling of game meat falls under a different part of the wildlife act, and here regulation has improved recently. Public selling appears to have become less common, with a recent publicized enforcement campaign on seller licenses. This does not seem to have reduced the availability of game meat, however, but simply made it is less visible.

Nationally, about seven per cent of all meat consumption (including fish) is estimated to come from terrestrial game—a considerable proportion. In Southern Belize, in Toledo district, this figure may be as high as 20% (Foster et al. 2016). Here, the traditional farming method of Milpa (some corn, some beans, some fruit trees, cacao) creates a relatively high-yield and varied produce that attracts many game species to profit from the overabundance of food. Farmers compensate the food loss with hunted game. The majority of hunting therefore takes place within a human-dominated landscape that is still rich in wildlife, especially in areas neighboring some of the larger protected areas.

The baseline situation is marked by limited understanding of game species populations, availability of game, hunting effort and offtake levels and by informal bush meat markets. Many of the species in question also represent food sources for jaguars. Growing human populations and shrinking forests outside protected areas are contributing to the challenge. A further factor on the demand side is the presence of a growing and relatively affluent resident Asian community, some of whose members may be supplementing traditional medicine and cuisine from Asian with locally acquired substitutes. This trend has already been observed in Suriname, Bolivia and Peru Verheij 2019). In Belize, there is some evidence (personal comment, B. J. Harmsen) that Chinese traders are in contact with local hunters and providing price lists for jaguar meat and teeth. So far, uptake for this seems to be low.

A 2016 US Fish and Wildlife grant, a set up collaboration between Wildtracks (Belizean NGO in the North) and the Forest Department, the program aimed to inform the public about illegal trade and illegal ownership of primates and parrots. The campaign equally held training sessions for the identification of wildlife species. Apart from these efforts the few wildlife officers are trying to deal with human-wildlife conflict and day to day permitting and enforcement issues. As such any hands on addition to the current shorthanded program with NGO staff is very welcome.

ANNEX 16: CAPACITY ASSESSMENTS

Main stakeholders

The larger the group of stakeholders, the more difficult it is to set up collaborative efforts for data sharing, data gathering, and reporting. It is fortunate that within the Belize the group of stakeholders managing areas with substantial hectareage is limited too 5 larger NGOs and the Forest Department (FD), as the government entity. These stakeholders are (from North to South): the Corozal Sustainable Future Initiative (CSFI), Belize Audubon Society (BAS), Program for Belize (Pfb), Friends for Conservation and Development (FCD), and Ya'axche Conservation Trust (Ya'axche). Figure 12 shows the patches of land, managed by these main stakeholders, with FD managing essential connecting forest reserves. Although smaller organisations make valuable contributions, it is these 6 entities that decide the fate of wildlife in Belize. It is for this reason that any larger national plan should focus on these 5 NGOs with the Forest Department at the helm. The small number of 5 NGOs makes it manageable, allowing the creation of mutually beneficial national plans and collaborative data collection and storage as described above. After the development of a framework for these larger 6 entities, we can expand future endeavours to include smaller entities.

The best way to maintain good collaborations would be through the acquisition of single larger grants for the collaborative conglomerate for a period of 2-5 years, with transparent discussions on how it is spend and divided. The current jaguar GEF7 funding might be a good starting point to build such capacity within all these entities. The different entities are at very different stages of capacity and ability to implement, maintain, process/store, and analyse monitoring data. Analysis is the least important as an overarching national assessment, just requires a core group of people, who can pull data together and analyse it. Analytical and quantitative capacity is equally the national resource that takes the longest to grow, as it requires initial higher schooling levels, with good quantitative BSc and MSc courses, with a follow up PhD that embeds people within an understanding of quantitative thinking at the higher level.

As this could actually grow within a proposed national program (the collaborative network of database sharing creates a vehicle for this growth), of immediate concern to create the network, is the on the ground implementation, with meticulous gathering of support data around the camera trap maintenance with the follow up standardized data storage. This is a prerequisite for national assessment. It is therefore necessary, before we can start any national assessment with the 6 entities that we discuss and evaluate their capacity in terms of rigorous data collection.

CSFI

We can consider the most Northern management NGO, CSFI well suited for the task of implementation of monitoring programs. The main job of CSFI concerns the conservation of the last remaining northern forests, and assuring they remain connected to other ecosystems. The organization is embedded within a well-funded network, with experienced wardens and expert biologists. In house analytical skills are a budding entity and do require further capacity building in terms of becoming a completely self-sufficient reporting entity. They have however good relations with some world class experts in several fields.

In terms of field implementation, CSFI is fully capable and ready for implementation, maintaining, and processing of monitoring data from camera traps data on their own and store it in a useful format. They have the warden capacity in terms of field skills, with enough computer knowledge and experience to allow adequate transfer of photo data from the field to database, as described above. With warden teams especially assigned to monitoring duties and wildlife camera trapping, there are limited levels of friction with other tasks (e.g. running tourist facilities for important revenue collection). Short-term training sessions and initial help with implementation of new platforms will be sufficient to assure alignment of CSFI with any national efforts.

BAS

The oldest conservation NGO in Belize manages the world's first jaguar reserve, the Cockscomb Basin Wildlife Sanctuary, and the Ramsar wetland site of Crooked Tree Wildlife Sanctuary. These sites have always received considerable attention, with international research groups using them as long-term study sites. There has been a strong tradition of research by foreign research groups within these areas. The Cockscomb Basin is part of the larger conglomerate of forest, the Maya Mountains, and has likely got one of the highest densities of jaguars and prey ungulates in the country. Although a wetland area mainly set aside for birds, Crooked tree Wildlife Sanctuary can be considered a vital wildlife corridor link between the northern managed areas of CSFI areas and the larger Selva Maya with Rio Bravo as the Belizean bridgehead. BAS is a chapter of the national Audubon Society in the US. Being a bird orientated organisation, most of the organisations own research capacity is focused on bird counts and supporting birding and tourism with birds. The two BAS sites have traditionally been tourist receiving locations and as such staff are focused on maintaining infrastructure and facilitating visitation and stability of sites. Wildlife research and monitoring within the two sites has been historically been carried out by third parties, in particular the US cat conservation organization; Panthera. BAS does strive towards building capacity within their own organisation. With the multitude of tasks that wardens need to perform, it is currently difficult to assign staff permanently to monitoring or science programs. Single promising wardens are being trained and are assigned but it will require a team.

An equal problem concerns education level of wardens. Local field staff has an extremely high level of "bush knowledge", meaning they are extremely capable in terms of navigating and understanding the forest. This is necessary as especially the Cockscomb Basin lacks an internal road system, with a limited walking trail system and considerable expanses of wilderness. The selection of wardens on their bush skills and accompanied fitness comes at the price. The high bush knowledge means lack of further education in terms of quantitative and computer skills. Forest knowledge requires following someone into the jungle from a young age and this means dropping out of school at an early age. This frequently means BAS wardens are not always suited to independently handling monitoring programs, as this requires some deeper understanding of the necessity of rigour, with meticulous storage and notation. The combination of both long-term forest experience and decent reading, writing and computer skills is very rare. To build this capacity requires further sustained funding for training and maintenance of the right staff or combination of staff. The necessity remains for maintenance of field craft, as is present within the BAS staff, it requires additional people with better computer knowledge. Teams of two people specialising in each would be ideal.

BAS has recently invested in well-educated research staff for their terrestrial program, with the ability for analysis. Although emphasising bird monitoring, this person has a good network of international researchers available with Panthera working at their site. Collaborations are currently formed to train this person further, who can further guide warden needs within the sanctuary.

The rugged nature of Cockscomb, with limited vehicle infrastructure, means that any expansion beyond the current limited camera monitoring grid, entails high effort of trail cutting and overnight trips in the wilderness. It will be necessary to expand monitoring effort beyond the current low elevation east basin and equally monitor the surrounding higher elevation areas and the neighbouring west basin area. This will require considerable effort with dedicated staff assignment to these particular tasks. An effort that will require thought and logistical consideration.

PfB

Program for Belize manages the largest conglomerate of forest in the North Western part of the country, the Rio Bravo. This protected area concerns the Eastern extend of the Selva Maya, connected directly with the Péten in Guatemala, and further into the Calakmul Forest Complex in Mexico. PfB does not traditionally carry out any monitoring activities and confines its role to direct management of the protected area, including management of the commercial forestry extraction sites. Wildlife monitoring is carried out by Virginia Tec, a good quality US university with considerable wildlife experience. They provide all their own funding for operation and thus are independent of PfB operations. There are no plans within PfB to change the current situation and expand into a monitoring program or work closer with Virginia Tec to take over some of their tasks. This means that monitoring at the site will remain in the hands of third parties, with limited involvement of PfB themselves. Virginia Tec is a well-known entity in Belize and the collaboration with PfB is stable and strong. The US university equally has good relations with the 5 other entities. There is no reason to foresee any problems with Virginia Tec maintaining their

role as the monitoring entity for the Rio Bravo. One concern would be, as with any self-funded third party, that the program will be terminated with the disappearance of specific people driving it. There is no institutionalisation. Equally any full third-party monitoring effort will make it logistically more complex to set up national monitoring and database systems, as national funding revenue for monitoring must be contracted out to third parties. It is therefore important that the third party is involved from the start to help set things up. Virginia Tec can be considered an asset with considerable technical and analytical experience which can be part of the technical team advising and participating in the setup of the system. Open discussion are necessary with the third party about time lines of commitments and to what level they can and must participate towards national efforts.

FCD

The managers of the largest protected area in the Maya Mountains, which can be considered the heart of the forest system. The main management concern for FCD has always been enforcement issues around encroachment and incursions from Guatemalans looking to extract forest resources, including wildlife. It equally means that for a considerable period installing cameras was extremely difficult. Virginia Tec University (see previous section PFB), used to work in the Chiquibul and pulled out in 2008 when camera theft was unsustainably high, and safety of university field staff could not be guaranteed. FCD has turned this around and currently are looking into returning to camera trapping. Although lacking immediate experience in running large scale camera trapping surveys, they have a dedicated science team with likely the highest analytical knowledge imbedded within a managing NGO in Belize. Even with the more limited experience of camera trapping, they are the NGO at the most advanced stage of self-sufficiency in terms of sustaining monitoring programs, with quality analyses and reporting. Like Cockscomb, many areas of the Chiquibul remain unexplored and difficult to reach due to ruggedness and lack of infrastructure. The core Chiquibul forest reserve, with a network of logging roads, is the easiest accessible area and thus the area with most monitoring activity. The eastern and Southern National Park remain unmonitored. Here there is equally the need for expansion and increased monitoring activity.

Ya'axche

This organisation started with management of the Goldenstream protected area, connecting the Maya Mountains with the coast, protecting the full Goldenstream watershed system. The area of influence expanded considerably when Ya'axche became the co-manager for Bladen Nature Reserve and subsequently the Maya Mountains Forest Reserve. Monitoring activity has mainly been confined to the original Goldenstream area, with the emphasis on enforcement and community outreach for the other areas. The community outreach focusses on the promotion of agroforestry at the boundaries of the protected areas. In terms of capacity to monitor, they manage some of the most rugged and inaccessible areas of Belizean wilderness and mostly confine activities to the lowlands and border areas. Currently there is not the capacity to reach these places and patrols are of expeditionary nature. Equally to BAS and FCD, expansion of monitoring into these areas is a must for understanding the wildlife value of these areas.

The organisation faces a similar challenge as BAS, having extremely competent field staff in terms of handling and navigating through the extreme wilderness but education level is limited and this further limits the ability for rigorous monitoring, as previously described. Ya'axche does have considerable experience in carrying out semi-systematic camera trapping efforts. It is however the systematic surveys with rigorous data storage where the weaknesses have shown. They do however strive for self-reliance and are considerably ahead in this compared to an organisation like BAS.

They have considerable science officer capacity, with well-educated and experienced staff. However, the multitudes of projects and tasks means that there is limited capacity for extensive supervision of the less educated field staff. Recent new hires have increased capacity considerably and we hope that this brings Ya'axche to the same or higher level than FCD in terms of self-sufficiency. It must be noted that Ya'axche already has camera trap experience, while FCD is just starting. It is therefore that some weaknesses have become apparent, where these might still show up for FCD, even when they have a proven record of efficient monitoring in other areas.

Conclusion on the 5 NGOs

As can be noted from the above, the 5 managing organisations have their own challenges in terms of variation in habitat ruggedness and infrastructure (see section “expansion of camera grid”). BAS, FCD, and Ya’axche share the same problems of having difficulty in reaching their own interiors.

Warden capacity is equally variable and dependent on the emphasis the organisation puts on science activities. CSFI and FCD have started monitoring and maintain separate science teams from the inception and recruited separate people for the jobs. Ya’axche has reorganised their staff accordingly and has recently developed a science-based team. BAS has some capacity but still leans on outside capacity for completing monitoring tasks, while PfB outsources this activity completely.

The science teams are equally variable with FCD and Ya’axche having the largest capacity, and CSFI and BAS following and wanting to improve. Logistically CSFI is the furthest advanced in terms of implementing camera surveys throughout their area of influence, and assuring data are gathered and stored within a database.

In terms of the science and national assessment, foreign expertise remains essential. Belize is simply too small to maintain its own capacity within an ever-changing science world with increasing computational complexity. The Belizean wildlife monitoring community needs to be embedded within the larger scientific community, helping to assure they remain in contact with the latest analytical tools for analysis. This is in essence a healthy situation, with Belizean scientist being fully embedded within international networks of choice. It should however be a single team as Belize is too small to have each NGO maintaining its own science team in isolation. The silo system of management, with limited communication between the NGOs, should be broken through in terms of the limited analytical human resource capacity in the country. Science improvement at the national level can only succeed within a non-hierarchical system of scientists working together within networks. If there is an overarching scientific institute, it needs to facilitate, creating a neutral platform, for bringing people together under one umbrella. This institute should have minimal steering power, and the science should not become political. A monitoring institute should be like a statistical census bureau, providing update reports, with minimal political messaging.

Collaboration should be found within the logistical realms as well, finding solutions of common problems. The lack of infrastructure and ruggedness of large parts of the Maya Mountains, requires a team of people who can tackle such areas. Potentially such a team needs to be of higher paid group of people who are chosen on fitness and survival skills (e.g. elite jungle team). These teams carry out expeditions with deployments at different locations in the Maya Mountains with equal high levels of collaboration between the NGOs. Another example of potential for collaborations concerns sharing of camera traps within a national pool. Equally importing lithium batteries in large batches as a single pool. Such a program means that searching for funding and writing proposals becomes a shared responsibility. The more wildlife monitoring becomes a single entity, with lines blurred between the organisations, the better.

FD

The Forest Department has two important functions within the current wildlife monitoring proposal:

- 1) They are the official oversight body of all protected areas and thus have the official mandate to facilitate all the above collaborative efforts under their management umbrella
- 2) They are the only management unit for the remaining, and majority of important protected forest reserves: Labouring Creek Jaguar Corridor Wildlife Sanctuary, Manatee Forest Reserve, Sibun Forest Reserve, Sittouk River Forest Reserve, Mountain Pine Ridge, Vaca Forest Reserve, all the smaller Mango Creek Forest Reserves in the South at the edges of the Maya Mountains, Deep River Forest Reserve, and Colombia Forest Reserve

Currently FD lacks the resources and capacity to perform both tasks optimally (number of employees, training of employees, and availability of vehicles, fuel, and equipment). For the two tasks in particular this means: 1) the overarching mandate needs to break the unwanted silo system of the NGOs, necessary for collaborative efforts, in a diplomatic manner, without causing resentment. 2) being stretched in personnel, means FD lacks the ability to put people in the field to manage the forest reserves adequately, especially when revenue earning extraction activities have to take priority and are generally lacking in some of the rugged forest reserves. The Mountain Pine Ridge Forest Reserve is likely the best managed area with the permanent Forest Department station with La Selva field station.

Another drawback for FD concerns the public service system of continuous rotation after only few years, causing a lack of specialisation within the FD officers. FD officers are constantly responsible for new departments. Early

retirement means that officers actually leave the service when they are at the height of their ability and understanding.

Conclusion regarding role of FD

The Forest Department needs to fill the role of the overarching body, bringing the NGOs together within a national monitoring program. However, the specialist nature of the required jobs means that specialist people need to be attracted who will be placed in permanent positions (e.g. database management, logistic support at larger scale, expedition field teams etc). This group should be chosen on their ability to carry out the necessary outlined tasks, and equally important, chosen on their ability to be accepted and work with the 5 NGOs. It is therefore preferred that there is some employment mobility between the NGOs and FD. Any permanent, experienced FD group needs to become the glue of the collaborative effort between the 5 NGOs.

The forest reserves require urgent management entities and presence, and monitoring activity is the perfect activity to kick start presence and exploration. Potentially intermediate monitoring responsibility (management responsibility) should go to neighbouring NGOs with the largest capacity. Here the larger 5 are the only viable candidates with enough management experience with larger wilderness areas. Adequate compensation from for example PACT funding should be considered as an incentive. This means that the larger 5 NGOs will increase their monitoring footprint and increase collaboration. FD should equally be equipped with a field team (potentially the elite, “deep wilderness team”) to assure that they can assist, guide, and coordinate these increased efforts of management. Foreign involvement in monitoring programs by universities should be considered if viable, long-term candidates present themselves.

Appendix 1 below presents a scorecard assessing the capacities of the five NGOs and FD related to camera trapping.

Appendix 16.1: UNDP Capacity Development Scorecard Summary

National ABS Institutional Capacity Scorecard

Project Title	Enhancing jaguar corridors and strongholds through improved management and threat reduction
Country	Belize
Name of reviewers completing the scorecard and completion date	Bart J. Harmsen
Name of agency (ies) assessed	Corozal Sustainable Future Initiative
Name, affiliation and contact details of responsible person within agency (ies) assessed (address, email, phone)	bharmesen@gmail.com

Capacity Result/Indicator	Staged Indicators	Rating	Scores						Comments	Next Steps
			CSFI	BAS	PFB	FCD	YCT	FD		
CR 1: Organisational participation in process										
Indicator 1.1: The organisation participates in all the meetings considering camera trapping and database management	Never showed up	0								
	30% of meetings	1								
	60% of meetings	2		2				2	FD: Organisation sends representatives in most cases	FD: Better if more consistency in people
	100% of meetings	3	3			3	3			
Indicator 1.2: The organisation has a dedicated person assigned to participate in planning meetings	No	0		0	0			0	FD: Rotation of people send	
	Yes	2	2			2	2			
Indicator 1.3: Designated number of field staff participate for the full duration of camera deployment and field training	Never showed up	0								
	30% of training	1								
	60% of training	2								

	100% of training	3	3	3	3	3	3	3	FD: When training occurs they stay for full length	
Indicator 1.4: Designated number of office staff participate for full duration of database training	Never showed up	0			0					
	30% of training	1		1				1	FD: More office based staff usually not send for training	
	60% of training	2								
	100% of training	3	3			3	3			
CR 1 - Score		11	11	6	3	11	11	6	CSFI: Carries out all their field work and do it well BAS: Does not carry out monitoring but has staff accompany field workers PFB: does not carry out camera monitoring, all done by outside parties	
			100,00%	54,55%	27,27%	100,00%	100,00%	54,55%		
CR 2: NGO ownership of monitoring process										
Indicator 2.1: Number of NGO field employees involved in camera trap deployment and maintenance of surveys (data retrieval and management of raw data brought from the field)	None	0			0			0	FD: Forest department does not carry out surveys, single cameras deployed for conflict	
	30% of field staff	1		1						
	60% of field staff	2								
	100% of field staff	3	3			3	3			
Indicator 2.2: Amount of data loss caused by field mismanagement, as a percentage of camera data not being processed in database	>15%	0		0					BAS: Not relevant, not involved in inputting, done by third party PFB: Not relevant as there is no staff involved FD: Not relevant at the moment as databases are not maintained at this level, or not structured as needed (own in house system at best)	
	10%	1				1	1			
	5%	2	2							
	None	3								
Indicator 2.3: Number of NGO office/computer	None	0		0		0			PFB: Not relevant as there is no staff involved	

literate employees involved in inputting data in database									FCD: So far, FCD not involved in data inputting, done by third parties	
	30% of field staff	1								
	60% of field staff	2						2		
	100% of field staff	3	3				3			
Indicator 2.4: Number of data inputting mistakes noted by national database managing director, as a percentage of data requiring correcting, going back to raw data files	>15%	0				0			PFB: Not relevant as there is no staff involved FD: Not relevant as not structured according to analysable standards	
	10%	1	1				1			
	5%	2								
	None	3								
CR 2 - Score		12	9	1	0	4	8	2	CSFI: Good team but mistakes are made and room for improvement in protocols PFB: Staff is capable, but not involved in monitoring	
			75,00%	8,33%	0,00%	33,33%	66,67%	16,67%		
CR 3: Staff capacity										
Indicator 3.1: Number of literate field staff	None	0								
	1	1					1			
	2	2		2						
	3	3	3		3	3		3		
Indicator 3.2: Number of field staff with basic computer skills	None	0					0			
	1	1								
	2	2		2						
	3	3	3		3	3		3		
Indicator 3.3: Number of office staff with MSc level degree with research component (quantitative, none management degree)	None	0	0							
	1	1								
	2	2			2		2	2		
	3	3		3		3				
Indicator 3.4: Number of office staff with PhD with research component (quantitative)	None	0	0	0	0		0	0		
	1	1				1				
	2	2								
	3	3								

CR 3 - Score		12	6	7	8	10	3	8	CSFI: Field teams are good but CSFI is missing in house higher order expertise	
			50,00%	58,33%	66,67%	83,33%	25,00%	66,67%		
CR 4: Organisational interest in expanding scientific interest										
Indicator 4.1: Has the organisation got a dedicated scientist	No	0			0			0		
	Yes	2	2	2		2	2			
Indicator 4.2: Has the organisation got a fixed field team dedicated to monitoring	No	0		0	0			0		
	Yes	2	2			2	2			
Indicator 4.3: What percentage of the total organisational budget goes to science and monitoring (field or office based)	None	0			0					
	≤ 10%	1		1		1	1	1		
	≤ 20%	2	2							
	>20%	3								
CR 4 - Score		7	6	3	0	5	5	1		
			85,71%	42,86%	0,00%	71,43%	71,43%	14,29%		
CR 5: Organisational capacity in analysis and reporting										
Indicator 5.1: How many times have employees been involved as co-authors of scientific publications	None	0	0	0	0					
	1	1						1		
	2	2				2			FCD: Could be more, unknown	
	3 or more	3					3			
Indicator 5.2: How many times have employees been first authors of scientific publications	None	0	0	0	0			0		
	1	1					1			
	2	2				2			FCD: Could be more, unknown	
	3 or more	3								
Indicator 5.3: How many times have employees been involved as co-authors of national reports	None	0								
	1	1								
	2	2	2	2	2		2		CSFI: This can be higher, some uncertainty BAS: This could be more, uncertain PFB: Uncertain, could be higher YCT: This could be more, unknown	
	3 or more	3				3		3		

Indicator 5.4: How many times have employees been first authors of national reports	None	0	0	0	0			0		
	1	1								
	2	2								
	3 or more	3				3	3			
CR 4 - Score		12	2	2	2	10	9	4		
			16,67%	16,67%	16,67%	83,33%	75,00%	33,33%		
Total Score		54	34	19	13	40	36	21		
			62,96%	35,19%	24,07%	74,07%	66,67%	38,89%		

ANNEX 17: PROCUREMENT PLAN – FOR FIRST YEAR OF IMPLEMENTATION ESPECIALLY

ITEM	ITEM DESCRIPTION	ESTIMATED COST (US \$)	PROCUREMENT METHOD	ESTIMATED START DATE	PROJECTED CONTRACTING DATE
Goods and Non-Consulting Services					
CS Company	International consultancy-development of national jaguar database/information platform	55,000	International procurement	QTR2-YR1	QTR4-YR1
Equipment and Furniture	Procurement for acquisition of 100 camera traps	50,000	International procurement - Competitive Sourcing	QTR2-YR1	QTR3-YR1
IT Equipment	4 Servers and high capacity processors supporting national database	72,500	International procurement – Competitive Sourcing	QTR2-YR1	QTR3-YR1
Communication and Audio-equipment	Telemetry equipment	15,000	International procurement - Competitive Sourcing	QTR2-YR1	QTR3-YR1
SUB-TOTAL (US \$)		192,500			
Consultancy Services					
International consultant	Wildlife modelling expert (training in jaguar capture team, camera trapping and telemetry)	20,000	International procurement – Competitive Sourcing	QTR3-YR1	QTR4-YR1

International Consultant	Development of Indigenous People Plan	15,000	International procurement - Competitive Sourcing	QTR2-YR1	QTR2- YR1
Local consultant	Wildlife Expert (development of national response protocols)	15,000	Local procurement – Competitive Sourcing	QTR2-YR1	QTR3-YR1
Local Consultant	Legal and policy specialist (data sharing agreements)	10,000	Local procurement - Competitive Sourcing	QTR4- YR1	QTR1-YR2
Cotractual Services- Individuals	PMU for 3 years (project manager/ project assistant)	105,000	Local Procurement - Competitive Sourcing	QTR1-YR1	QTR4-YR3
SUB-TOTAL (US \$)		165,000			
TOTAL COST (US \$)		357,500			