E4319 v2

"Management and Protection of Key Biodiversity Areas of Belize"

Environmental Management Framework

July 31, 2014

Ministry of Forestry, Fisheries and Sustainable Development

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Acronyms and Abbreviations

BMDP	Belize Municipal Development Plan
CPS	Country Partnership Strategy
DOE	Department of Environment
EA	Environmental Assessment
ECP	Environmental Compliance Plan
EIA	Environmental Impact Assessment
EME	Environmental Management Expert
EMF	Environmental Management Framework
EO	Environmental Officer
EPA	Environmental Protection Act
FR	Forest Reserve
GEF	Global Environment Facility
ha(s)	Hectare(s)
IDB	Inter-American Development Bank
IUCN	International Union for Conservation of Nature
KBAs	Key Biodiversity Areas
LLES	Limited Level Environmental Study
MAPKBA	Management and Protection of Key Biodiversity Areas
M & E	Monitoring and Evaluation
MFFSD	Ministry of Forestry, Fisheries and Sustainable Development
MMM	Maya Mountain Massif
NEAC	National Environmental Appraisal Committee
NGO	Non-Governmental Organization
NP	National Park
NPAPSP	National Protected Areas Policy and System Plan
NPAS	National Protected Areas Secretariat/System
NRM	Natural Resources Management
NTFP	Non-Timber Forest Products
PAD	Project Appraisal Document
PAs	Protected Areas
PES	Payment for Ecosystem Services
PIF	Project Identification Form
PMU	Project Management Unit
PSC	Project Steering Committee
TOR	Terms of Reference
UNESCO	United Nations Educational, Scientific and Cultural Organization
WB	World Bank
WS	Wildlife Sanctuary
YCT	Ya'axche Conservation Trust

Glossary

Environmental Management Framework (EMF): An instrument that examines the issues and impacts associated when a project consists of a program and/or series of sub-projects, and the impacts cannot be determined until the program or sub-project details have been identified. The EMF sets out the principles, rules, guidelines, and procedures to assess the environmental and social impacts. It contains measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project impacts (World Bank, 2012).

Environmental Management Plan (EMP): An instrument that details the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental impacts or to reduce them to acceptable levels; and the actions needed to implement these measures. The EMP is an integral part of Category "A" EAs (irrespective of other instruments used). EAs for Category B projects may also result in an EMP (World Bank, 2012).

Project Area of Influence: The area likely to be affected by the project, including all its ancillary aspects, such as power transmission corridors, pipelines, canals, tunnels, relocation and access roads, borrow and disposal areas, and construction camps, as well as unplanned developments induced by the project (e.g., spontaneous settlement, logging, or shifting agriculture along access roads). The area of influence may include, for example, (a) the watershed within which the project is located; (b) any affected estuary and coastal zone; (c) off-site areas required for resettlement or compensatory tracts; (d) the airshed (e.g., where airborne pollution such as smoke or dust may enter or leave the area of influence; (e) migratory routes of humans, wildlife, or fish, particularly where they relate to public health, economic activities, or environmental conservation; and (f) areas used for livelihood activities (hunting, fishing, grazing, gathering, agriculture, etc.) or religious or ceremonial purposes of a customary nature.

1.0 Introduction

Belize's natural resources are critical to the health of its economy and well-being of its most vulnerable population. As part of a wider response for biodiversity conservation, Belize signed a Country Partnership Strategy (CPS) with the World Bank (WB) for the Financial Years 2012-2015 which supports the country's efforts to adopt a sustainable natural resource-based economic model, while enhancing Belize's resilience to climate change and natural hazards.

Subsequently, the Ministry of Forestry, Fisheries and Sustainable Development (MFFSD), with the assistance of the WB received funding from the Global Environment Facility (GEF) to conduct preparation activities for a project entitled ***"Management and Protection of Key Biodiversity Areas* (MAPKBA) *in Belize"*** (hereinafter referred to as "the Project") aimed at assisting in the protection of selected key terrestrial Protected Areas (PAs) throughout the country but without compromising the ability of their buffer communities that traditionally rely on the natural resources to continue making a living.

The Project preparation activities are being coordinated by the National Protected Areas Secretariat in the Ministry of Forestry, Fisheries and Sustainable Development, with the oversight of a Project Steering Committee. The activities are aimed at ensuring that the process will engage stakeholders that will result in the full design of the Project.

This Environmental Management Framework (EMF) is in fulfilment of the terms of reference for an Environmental Management Expert's support to the Project team in developing preparation activities for the Project. The specific objectives for this consultancy are as follows:

- To develop an EMF for the Project to identify the required environmental management measures that need to be taken by the Project authorities during the planning, design, and implementation phases in order to ensure compliance with the Government of Belize's environmental requirements and those of the WB;
- Recommend mitigation measures in consultation with country stakeholders and a Natural Resource Management (NRM) Expert of the Project team;
- Contribute to the development of a monitoring and evaluation system for the Project, including preparation of a results framework along with indicators, baseline and annual targets in consultation with country stakeholders and team members; and
- Along with the team members, develop a budget for project activities, outputs and outcomes while ensuring alignment with GEF requirements.

The EMF was developed for the MFFSD to be applied to the Project as a management tool designed to address issues pertaining to the impacts likely to arise from the implementation of sub-projects, due to their influence on the bio-physical environment and interaction with the

wider system **(Figure 1)**. It will provide guidance on the selection of sub-projects, which will be fully developed during Project implementation, to implementing agencies, regulatory agencies, and recipients of Project funds. This guidance enhances the likelihood of the sub-project's compliance with applicable local environmental legislation and WB safeguard measures. Currently in Belize, projects that may potentially have significant impacts are screened under the national EIA regulations. However, WB safeguard measures apply if a project is funded wholly or in part by the WB. Therefore, the EMF provides the necessary guidance to carry out additional assessments and management plans as required by the applicable WB safeguards.

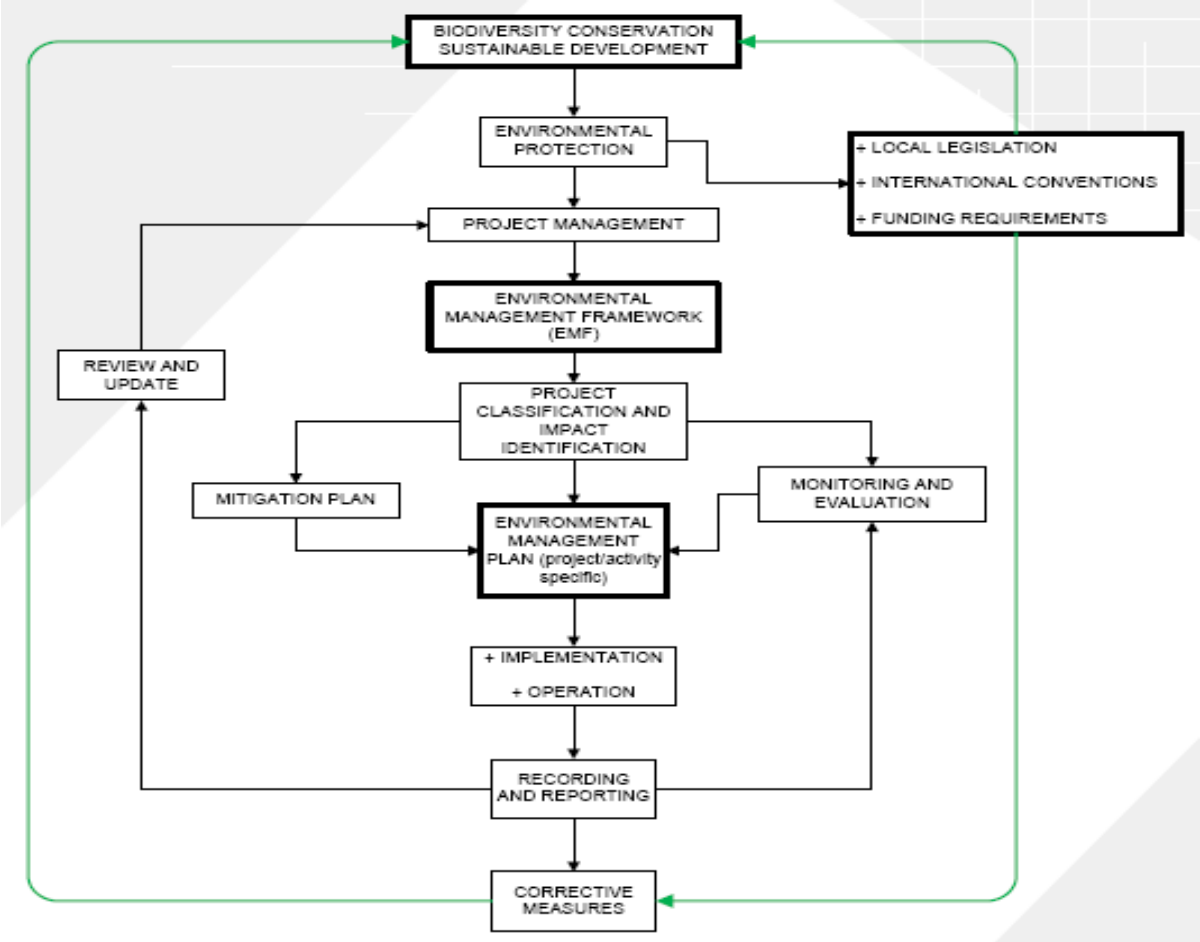
Ultimately, the EMF will ensure that sub-projects are managed in a way that eliminates or significantly reduces their negative and strengthens their positive environmental impacts. It will further ensure that the Project does not create unfair barriers to any community or group of people to access natural resources upon which they have traditionally relied, while making sure the environment is not degraded in such a way that would affect their ability to maintain a good standard of living. The framework will provide the basis under which an evaluation can be made at the macro-level, taking environmental protection measure into consideration during the sub-project cycle. It is a proactive approach that provides information to categorize any sub-project and to determine from the inception to operation, requirements for approval on the basis of the level of environmental protection a sub-project will provide before any work commences.

More specifically, the EMF:

- Analyses the existing local and institutional aspects that provide the environmental protection framework during implementation of the sub-projects;
- Characterizes the selected KBAs that will provide the greatest environmental returns due to reduced pressures on their natural resources;
- Analyses the environmental management capacities of the key players, including co-managers of prioritized KBAs to determine their capabilities of environmental management of sub-projects;
- Provides measures for enhancement and improvement of environmental conditions in the selected Project areas;
- Provide guiding principles for minimizing and mitigating any potential negative and strengthen positive environmental impacts of Project related interventions.

During Project implementation, the EMF will be revised for updates and improvements on an as-needed basis and in collaboration with Project stakeholders.

Figure 1: Environmental Management System for the MAPKBA Project[1]



2.0 Background[2]

Belize is a small, upper-middle income country with a population of 310,000 and a per capita GDP of US$ 4,115 (2009). It is well-known for having plentiful natural resources and a vast array of ecotypes with respect to water and biodiversity. The total national territory covers 46,620 km^2, which includes 22,960 km^2 of land and 1,060 km^2 of cayes. Belize is a small, open economy endowed with unique natural resources and ecosystems that drive the economy and support tourism, fishing, agriculture, forestry, and hydroelectric power. Belize has a very high level of terrestrial and aquatic biodiversity, including more than 150 species of mammals, 540 species of birds, 151 species of amphibians and reptiles, nearly 600 species of freshwater and marine fishes, high numbers of invertebrates, and 3,408 species of vascular plants. Belize's rich terrestrial and marine ecosystems provide important habitat for these species, represented by

[1] Developed by the consultant.
[2] Taken from the Project Appraisal Document.

the Belize Barrier Reef—the largest barrier reef in the Americas—that has been classified as one of the world's marine hotspots and encompasses seven United Nations Educational, Scientific, and Cultural Organization (UNESCO) World Heritage sites.

Much of the terrestrial area of Belize forms a part of the Mesoamerican Biological Corridor, which stretches from Mexico to Panama. In fact, Belize has the highest forest cover in both Central America and the Caribbean; 62% of Belize (as a percentage of land) is covered with forests, of which 37% are classified as primary forests. Belize has two large, unified blocks of intact virgin rainforest that are likely to be the last strongholds for species that require large, undisturbed areas for their long-term survival, such as the Jaguar (considered the flagship species of Belizean conservation). The Maya Mountain/Mountain Pine Ridge Massif is the country's dominant physical feature and rises to 1,124 meters (m; 3,688 feet) at its highest point. It is surrounded by rugged karst limestone hills. Belize has 103 protected areas, covering almost 35% of the national land area.

Terrestrial species of global significance occurring in Belize include: the jaguar (*Panthera onca*), puma (*Felis concolor*), Central American tapir (*Tapirus bairdii*), white-lipped peccary (*Tayassu pecari*), the endangered yellow-headed parrot (*Amazona oratrix*), Mesoamerican river turtle (*Dermatemys mawii*), and the endemic Maya Mountains frog (*Rana juliani*). Belize's marine biodiversity is also characterized as being globally significant, as its network of marine protected areas (MPAs) is home to seven UNESCO designated World Heritage Sites which make up the Belize Barrier Reef Reserve System. The world heritage site totals 96,300 hectares (ha) and is home to over 500 species of fish, 65 scleraetinian corals, 45 hydroids, and 350 mollusks in the area, plus a great diversity of sponges, marine worms, and crustaceans. The area has one of the largest populations (300-700 individuals) of West Indian manatee (*Trichechus manatus)* in the world and its coastal zone is home to two species of threatened crocodiles (*Crocodylus acutus* and *C. moreletii*).

Although Belize has managed to preserve its environmental capital to a greater extent than its neighbours, it faces serious environmental problems that adversely affect the poor as well as economic growth prospects. Forest cover in Belize has continued to decrease from 72.90% in 1989 to 61.64% in 2012 and is predicted to continue to do so (Cherrington et al, 2012). Main anthropogenic threats to the forests include the expansion of agriculture, housing, and tourism. Also damaging are illegal logging, looting of archeological sites, hunting, and poaching, in some areas by neighboring Guatemalan communities. The data shows that protected areas in the country have been effective in protecting forests—only 6.4% of overall deforestation occurred within protected areas during 2010-2012—. However, pressure on protected areas, especially from agricultural production, is high as seen in the case of de-reservation of a significant portion of Freshwater Creek Forest Reserve and Columbia River Forest Reserve. Another factor

driving deforestation in Belize is the existing land tenure legislation, which requires that leased lands that are forested must be 'developed' by the owners or their leases will be revoked. This provides strong incentive for landowners to clear the land in an effort to meet the requirements of 'development'. However, it has been observed that many of these lands lie idle after they have been cleared, since the landowners lack the capital to engage in alternative land uses.

Even more threatening to the forests in Belize are natural causes such as wildfires and hurricanes. In addition to the estimated 25,092 ha of cleared lands, another 33,129 ha were estimated to have suffered from fire/hurricane damage3 between 2010 and 2012. Belize has been identified as one of the countries that are most vulnerable to the adverse impacts of climate change including more intense and frequent tropical storms and hurricanes, flood damage, and rising sea levels. Like the rest of the Caribbean, Belize has experienced frequent natural disasters of catastrophic proportions4, and most recently suffered the impact of a Category 1 hurricane (Richard in October 2010), which led to extensive forest area destruction leaving much debris which accumulated and dried up, causing forest fires. Consequently, during the 2011 dry season Belize experienced some of the most extensive forest fires across the country. The short-term impacts of natural disasters and the long-term effects of climate change are expected to undermine the resilience of the natural ecosystems and human vulnerability, increasing the urgency of tackling these challenges.

Interventions to avoid deforestation and to aid reforestation of degraded forests would significantly enhance the country's potential for climate change mitigation. According to the Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) (July 2002), over 91% of the country's emission of greenhouse gases (GHGs) come from Land Use, Land Use Change and Forestry (LULUCF). Further, Belize is in a unique position to reduce emissions from deforestation and forest degradation and to increase carbon stocks through enhancement of conservation and sustainable management of forests (REDD+).

Loss of forests in deforestation hotspots, particularly in key watersheds, leads to loss of ecosystem services: protection of water quality in adjacent watersheds and reduction of nutrient flows that are damaging to coral reefs. Location is important with respect to the loss of ecosystem services such as water quality protection by riparian forests. Deforestation has been found to be more severe along rivers, reaching 13% annually in some areas.

Forests are a valuable asset for Belize and generate a range of important ecosystem services

[3] Forest damage from fire/hurricane was not included in the estimate of 2012 deforestation, because deforestation implies land use change. (Cherrington *et al.,* 2012)

[4] Tropical Storm Arthur (May 2008) caused widespread flooding and extensive damage to infrastructure and the agriculture sector. Hurricanes Keith (2000) and Iris (2001) struck Belize in the first year of the previous CPS period, each causing damage reaching 45% and 25% of GDP, respectively.

such as biodiversity habitats, non-timber forest products (NTFPs) for local and indigenous communities, fuel for rural communities, and a large untapped potential for the use of medicinal plants in the pharmaceutical industry. Forests provide soil stabilization, which prevents excessive sedimentation of estuaries and reduces the runoff of nutrients from agricultural areas to sensitive coral reef and mangrove ecosystems, which greatly impacts the tourism and fisheries sectors, critical foreign exchange earners for Belize (approximately US$260 million and US$25 million respectively in 2011).

Striking a balance between the drivers of economic growth and the pressures they exert on natural resources and the environmental integrity of the country remains a huge challenge in Belize. The population growth rate over the past three years in Belize is on average 3.39 %, while the rural population continues to be larger than the urban population. This increase places an undue burden on the country's natural resources. The poorest people and communities in Belize are predominantly rural and their livelihoods depend largely on access to land and natural resources. Furthermore, the highest poverty levels tend to occur in areas with the highest (e.g., South and West of Belize) or lowest (e.g., North and East of Belize) levels of biodiversity, thus presenting critical poverty-environment challenges (for example with encroachment and enforcement issues). Many of those classified as poor live near forests (both forests that fall within protected areas and forests not under protected status). These people use the forest and can contribute to sustainable forest management. However, they need income generating and employment options that are not destructive to the forest and that are consistent with sustainable forest management. It is therefore important to support effective and improved management of the environment and natural resources for sustainable livelihoods and economic growth in Belize.

Unregulated development of coastal areas and the rising pollution from cruise ship tourism has led to the degradation of mangroves and coral reefs. According to some estimates, nearly 80% of all coastal land in Belize has been purchased for development, adding stress to mangroves, coral reefs, and other coastal ecosystems.

Belize's sector-specific policies and legislation are generally comprehensive and robust, such as the 2009 Water Resources Management Act, the 1992 National Lands Act, and the 1999 Coastal Zone Management Act. However, problems and weaknesses frequently arise from the complications of different jurisdictions and regulations over management of protected areas (PAs). The National Protected Areas Policy and System and Plan (NPAPSP) define that PAs of Belize are administered and regulated by different laws and enforced by different Government agencies (e.g., Department of Environment, Forest Department, Fisheries Department, Coastal Zone Management Authority and Institute, Institute of Archaeology, and the Lands and Survey Department). The institutions that are directly responsible for the management of Belize's environment and natural resources are underfunded, understaffed, and in many cases lack the capacity to perform their basic functions including monitoring and enforcement. It is evident that the capacity of most protected area staff to assess biodiversity and natural resources is a

significant limiting factor to the reliability and use of 'self-assessed' data. There are not sufficient historical information of some indicators to be able to gauge current status, or have a limited understanding of some indicator and threats. Historically, environmental civil society organizations (often co-management organizations[5] in protected areas) have been very strong in Belize and have played a crucial yet insufficient role in complementing the existing government capacity to manage protected areas and formulate environmental policies.

The management and protection of key biodiversity areas is in part one of the strategic interventions and outcomes by the Government of Belize to sustainably preserve the natural resources of the country, in line with the NPAPSP developed in 2005. The NPAPSP was a key step in the Government of Belize efforts to devise a strategy to properly and cohesively address the management of the 98 PAs across the country of Belize. The plan emphasizes some strategic actions that pertained to the establishment of a commission, streamlining of the policies and legislation that governs PAs, strengthening and maintaining a biological corridor from ridge to reef, and addressing financing needs for sustainable PA management.

3.0 Project Description and Objectives

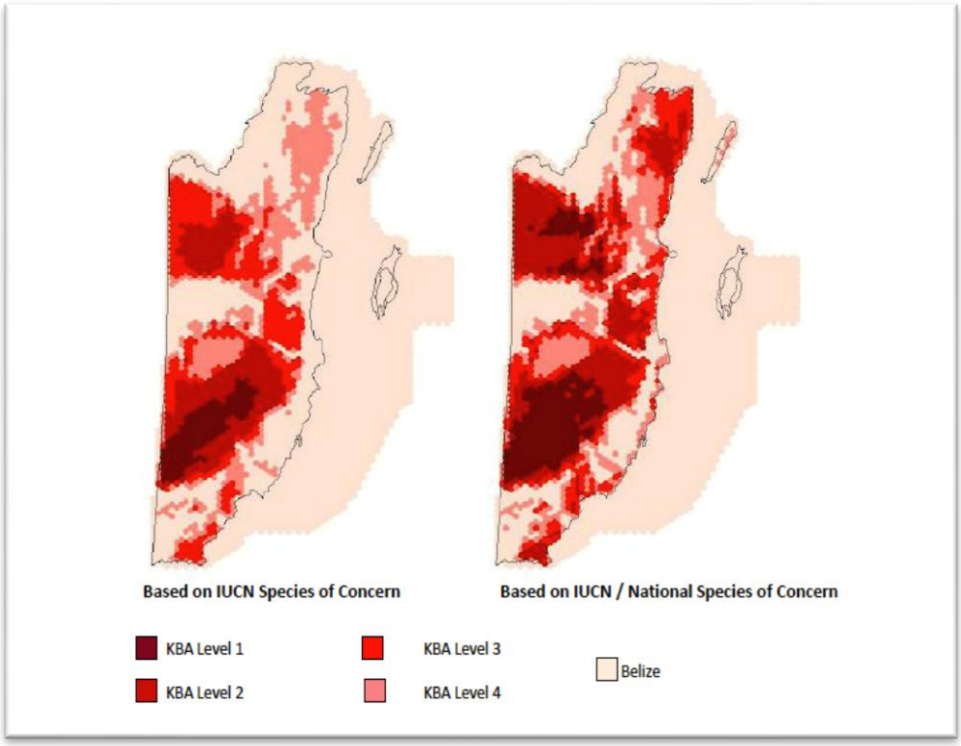
To address the challenges described above and based on the principle of site conservation, the proposed Project would support the forest protection, climate change mitigation and resilience, sustainable forest management, and biodiversity conservation in targeted areas within the Key Biodiversity Areas (KBAs) in Belize. Site conservation is among the most effective means to reduce biodiversity loss. Therefore, it is critical to identify those sites where unique biodiversity must be conserved. To this end, the concept of KBAs was developed by global practitioners seeking to identify and ultimately ensure that networks of globally important sites are safeguarded. This methodology builds on the identification of species-based conservation targets (through the International Union for Conservation of Nature, IUCN Red List) and nests within larger-scale conservation approaches. Site selection is driven by the distribution and population of species that require site-level conservation. In 2007, a collaborative effort by the Government of Belize, Belize Tropical Forest Studies, Conservation International, and the Critical Ecosystem Partnership Fund resulted in the definition of the KBAs in Belize as detailed in the report "Establishing a Baseline to Monitor Species and Key Biodiversity Areas in Belize" (Meerman, 2007). Map 1 demonstrates the four groups of KBAs identified in Belize.

Priority areas for biodiversity protection were identified under the KBAs Assessment (Meerman, 2007) based on a Marxan analysis, with two outputs – the first focused on the presence of globally threatened species as per the IUCN Red List criteria; the second included species of national concern, such as birds that concentrate at highly vulnerable nesting colonies and sub

[5] In Belize, there is a strong connection between key government agencies, particularly the Forestry Department, and the co-management organizations that manage the targeted priority sites. This unique conservation framework is beneficial for the institutional and financial sustainability of the Project outcomes. It helps to address the issues of inadequate capacity, personnel, and financial resources of the government to manage the extensive PAs. In general, co-management of PAs means equal sharing of power and responsibility between government and a local community unit, with advisory involvement of an NGO where possible and desired, in the management of a PA by members living on, near or adjacent to it.

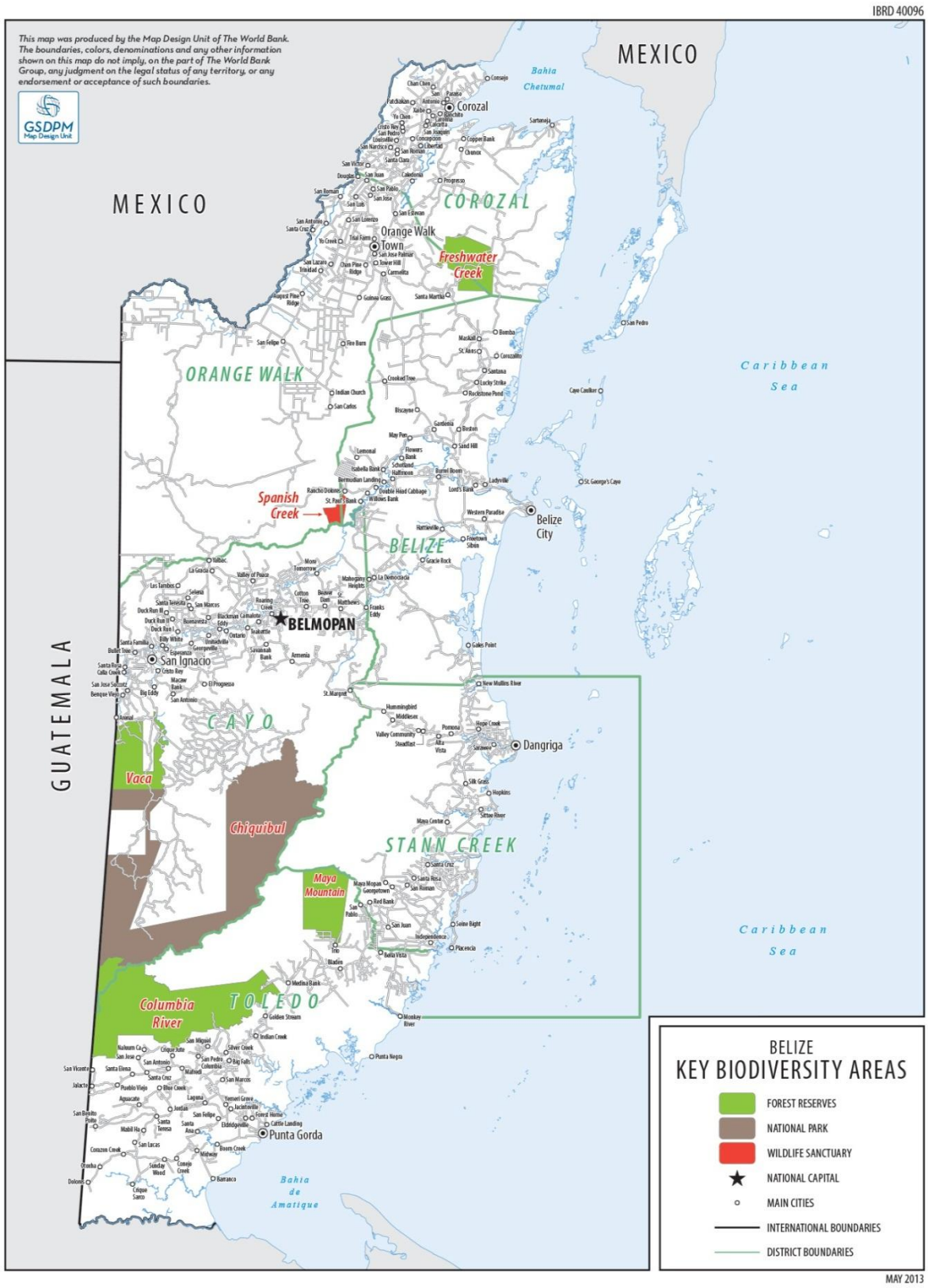
species of national concern such as the scarlet macaw, see Map 1. Ultimately, 39 IUCN-listed species were included in the KBA analysis.

Map 1: Key Biodiversity Area Outputs (Marxan outputs, Meerman, 2007)



The identified highest priority biodiversity areas of global concern in Belize (Global Key Biodiversity Area 1) are adequately covered by the National Protected Areas System (NPAS), occurring within the protected areas of the Maya Mountains Massif. The second highest priority areas are also primarily within the Maya Mountains Massif. Map 2 presents the targeted Project Areas.

Map 2: Project Areas

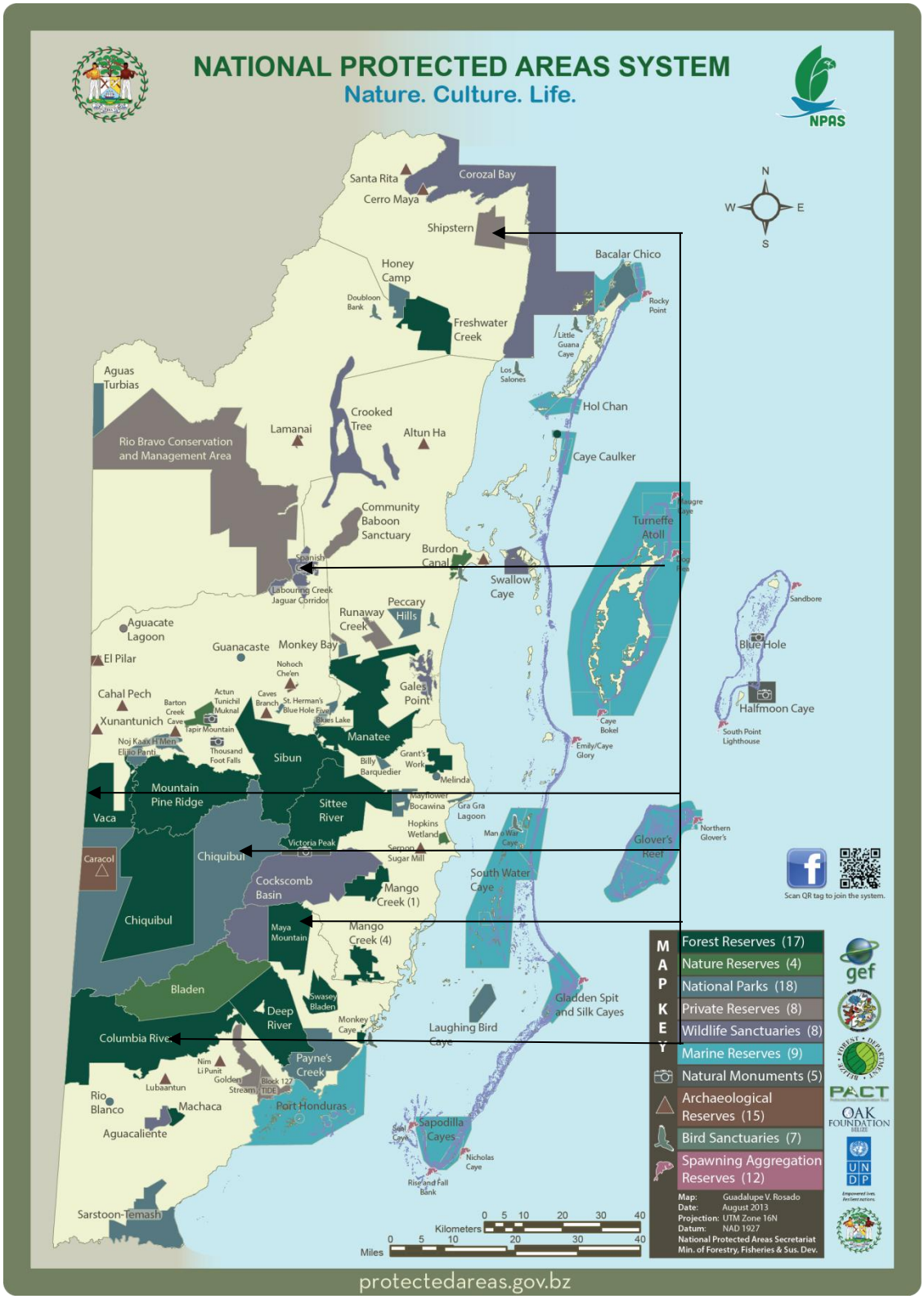


The targeted areas within the KBAs for the proposed Project were chosen through a stakeholder engagement process in addition to a prioritization of terrestrial areas from the

2012 rationalization exercise for the NPAS. Criteria were developed to prioritize PAs within the KBAs based on threats, carbon sequestration potential, management capacity, risk factors, socio-economic factors, and economic values of ecosystem services. These were further broken down into criteria that were used to determine whether the PAs were under extreme stress. On February 8, 2013 the Ministry of Forestry, Fisheries and Sustainable Development held a working session where in the end and with consultation with stakeholders, six sites from the NPAS were chosen as requiring better protection from further environmental degradation; see Table 1 and Map 2. The approach was a participatory one as the workshop was convened with representation from a cross-section of stakeholders. PAs across the country were selected and evaluated. These areas fall within two critical Management Units: the Northern Lowlands and the Maya Mountains Massif.

Table 1: Selected Priority Sites for Proposed Project

Name	***KBA***	***Type***	***Area (acres)***
Spanish Creek Wildlife Sanctuary	Northern Lowlands	Wildlife Sanctuary	6,001
Freshwater Creek Forest Reserve	Northern Lowlands	Forest Reserve	33,393
Chiquibul National Park	Maya Mountains Massif	National Park	264,003
Columbia River Forest Reserve	Maya Mountains Massif	Forest Reserve	148,303
Vaca Forest Reserve	Maya Mountains Massif	Forest Reserve	34,887
Maya Mountain Forest Reserve	Maya Mountains Massif	Forest Reserve	41,730



Map 3: Selected KBAs

The Project intervention area will cover a total of 528,317 acres (213,802 ha), excluding the

communities surrounding the PAs that will engage in the proposed Project. Chapter 3.1 presents a detailed description of each PA to be included in the proposed Project.

Climate change mitigation from avoided deforestation and restoration efforts are critical aspects of the proposed Project. The carbon sequestration potential of the targeted priority sites is listed in Table 2.

Table 2: Carbon Sequestration Potential of the Priority Sites

Name	*Habitat Type*	*Above Ground C/ac*	*Below Ground C/ac*	*Total C/ac*	*Estimated total above ground C x 1000*	*Estimated total below ground C x 1000*	*Total C x 1000*
Spanish Creek Wildlife Sanctuary	Broadleaf	35	21	56	211	127	338
Freshwater Creek Forest Reserve	Broadleaf	35	21	56	1,172	707	1,879
Chiquibul National Park	Broadleaf	65	14	79	17,094	3,649	20,743
Columbia River Forest Reserve	Broadleaf	65	14	79	9,603	2,050	11,653
Vaca Forest Reserve	Broadleaf	65	14	79	2,259	482	2,741
Maya Mountain Forest Reserve	Broadleaf	65	14	79	2,702	577	3,279
Total					**33,041**	**7,592**	**40,633**

Sustainable forest management takes multiple forms within the proposed Project since the six priority areas are all managed in different ways. Chiquibul National Park is co-managed by Friends for Conservation and Development (FCD), and currently has a management plan. Spanish Creek Wildlife Sanctuary is co-managed by the Rancho Dolores Environment and Development Group, which has a presence in the park, but no management plan to date. There is a need for increased capacity for park management, administration, and fundraising. Freshwater Creek Forest Reserve is currently in the process of becoming co-managed by Corozal Sustainable Future Initiative (CSFI), who also co-manage two other protected areas (Shipstern Nature Reserve and Honey Camp Natural Park). Columbia River Forest Reserve has a strategic management plan. Ya'axche Conservation Trust has partnered with the Forest Department to manage the area. The strategy of this forest reserve is unique because it uses an integrated approach to address agroforestry and sustainable forest management involving

surrounding communities. In addition, a core conservation area exists to protect the watershed. Vaca Forest Reserve is co-managed by Friends for Conservation Development (FCD), which provide long term forest licenses for logging. Ya'axche Conservation Trust (YCT) has been identified as a possible co-management organization for Maya Mountain Forest Reserve since they already work with some of the buffer communities and have experience in integrated landscape management.

The Project Development Objective (PDO) is to strengthen natural resource management and biodiversity conservation in Key Biodiversity Areas (KBAs) of Belize. The Project would achieve this by helping to: reduce deforestation rates and fragmentation pressure in targeted KBAs and enhance sustainable forest management practices; improve the protection of Forest Reserves and reduce forest fires; improve local livelihoods through community-based sustainable use of ecosystem goods and services; strengthen legal and administrative frameworks for Protected Areas (PAs); manage Protected Areas (PAs) in the KBAs more effectively; strengthen capacity for compliance monitoring and enforcement of key agencies responsible for the environment and enhance the coordination among Government agencies charged with conservation; enhance effectiveness of the Environmental Impact Assessment (EIA) System; and mainstream climate change mitigation and resilience considerations into the National Protected Areas System Plan (NPASP).

The objectives are to be realized by addressing the issues in the four overarching components as follows:

Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas This component will support activities in (1) forest protection and (2) sustainable forest management, contributing to reduction of emissions from deforestation and degradation and increase in sequestration of CO_2. Forest protection will be achieved through (a) support for review and amendment of the land tenure legislation that requires land owners to develop or clear forested lands, (b) support for assessment and training to promote a REDD+ program to incentivize private land protection and provide sustainable funding for protected areas, and (c) development of a fire incidence rapid response team to decrease forest fires. Sustainable forest management with local communities in targeted areas will be achieved through (a) rehabilitation of critical areas of high conservation value through community-based activities, incorporating climate change mitigation and resiliency measures, (b) support for sustainable harvesting and marketing of non-timber forest products (NTFPs) and community-based forestry opportunities in target areas, (c) awareness raising on sustainable forest management, and (d) establishment of the sustainable forest management system.

Component 2: Promoting Effective Management of Key Biodiversity Areas (KBAs) Effective management is critical to mitigate threats to the KBAs. This component will support (1) improving management of the KBAs and (2) monitoring and compliance within the KBAs. Effective administration and management of the KBAs will be achieved through (a) support for implementation of recommendations from the recent consultations conducted by the Government of Belize to improve the Protected Areas System (the PA Rationalization Exercise)

including establishment of procedures/guidelines and criteria for the declaration, re-alignment and de-reservation of PAs, and implementation of the comprehensive protected areas legislation to integrate all PAs that are currently managed under different acts, (b) support for improvement of protected area management in six target sites, and (c) updating the Protected Areas System Plan with considerations to climate change mitigation and resilience. Monitoring and compliance activities will be supported through (a) improving legal frameworks for protection of biodiversity and forests, (b) implementation of monitoring and compliance in the PAs through demarcation of PA boundaries, establishment of a monitoring and compliance unit, and an operational plan for such unit, training and transportation support, and (c) establishing a biodiversity monitoring system for the KBAs and increasing biodiversity monitoring capacity.

Component 3: Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations This component will support enhanced coordination and training among government agencies charged with environmental management. This is critical for the long-term protection of areas for natural resources management, climate change mitigation, and biodiversity conservation. This will be achieved through supporting (1) increased coordination for improved environmental management and development and (2) integration of environmental screening tools and processes. The Project will (a) establish a committee devoted solely to environmental management; (b) provide training and equipment for compliance monitoring. The project will also (a) establish a standardized EIA program and protocol for enhanced environmental screening; (b) improve decision making in the EIA process; and (c) introduce other environmental tools (such as Strategic Environmental Assessments, SEA) to complement EIA into the environmental screening and clearance process.

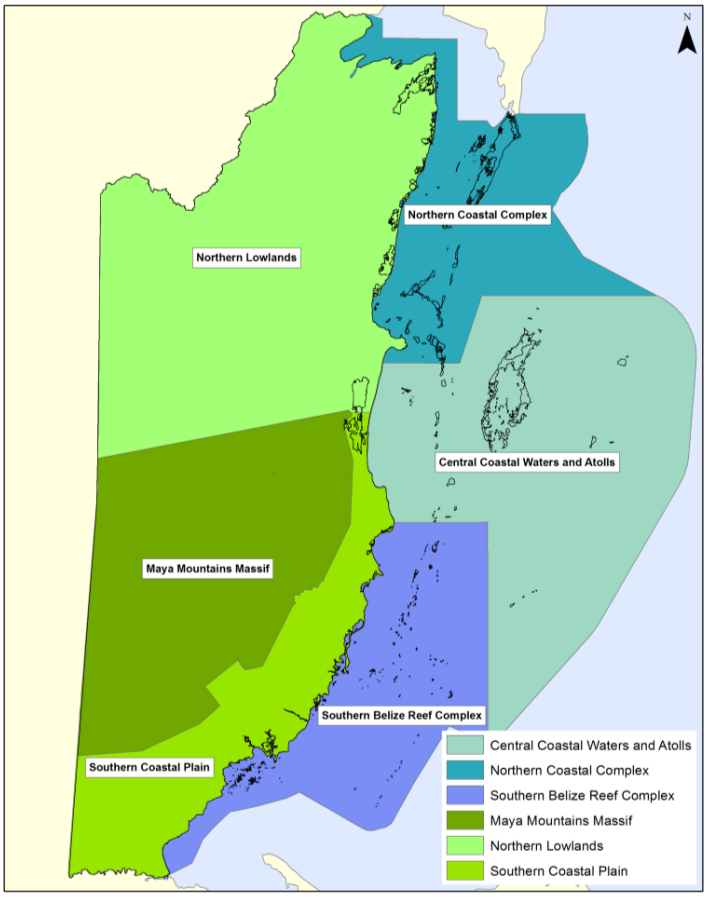
Component 4: Project management, monitoring and assessment This component will provide technical, administrative, and fiduciary support to the Project. A monitoring and evaluation program will be designed and implemented, which include collection of data and regular updates, stakeholder involvement, and overall Project implementation. The Project Management Unit (PMU) will be established in MFFSD, consisting of Project Manager, Project Officer, staff from the existing units within MFFSD, namely the National Protected Areas Secretariat, the Department of Environment, and Forest Department, and fiduciary staff from PACT. Effort will be made to harmonize the coordination of this project with other existing World Bank/GEF projects.

3.1. Selected Key Biodiversity Areas in Belize and Their Co-management Status

The project will implement two broad types of project activities: those that have system wide impacts on the management and sustainable use of KBAs in Belize, and those that are site specific. The site specific activities will affect six protected areas (PAs) within the KBAs and the PAs adjacent communities.

The entire network of KBAs will benefit from the legislative reform that will be undertaken and the management systems that will be developed under the Project. The opportunity will be provided for development of legislation that fully integrates private PAs into the national system, and reduce the risk of de-reservation of public PAs, ensuring that biological corridors connecting KBAs are sustainable and pressures on their biodiversity is reduced. The management systems that will be developed include data collection and management, site management, and monitoring and enforcement systems for specific sites will be available for adoption and use throughout the National Protected Areas System (NPAS).

Map 4: Protected Areas Management Units



The NPAS consists of 6 Management Units (See Map 4) that are subsumed within the KBAs. These are:

Terrestrial Management Units:

- Northern Lowlands
- Maya Mountains Massif
- Southern Coastal Plan

Marine Management Units:

- Northern Coastal Complex
- Central Coastal Waters and Atolls
- Southern Belize Reef Complex

Target Protected Areas

Some of the Project activities will be site specific. These types of activities include alternative livelihood activities, high value restoration, implementation of enforcement activities, demarcation of boundaries and development of databases to support management and decision making within the PAs. The lessons drawn from these sites will bring benefit to the entire NPAS and to the terrestrial KBAs in Belize.

Six protected areas have been selected for site specific activities. They are presented in Table 3. Four of the six sites are forest reserves, one is a wildlife sanctuary and one is a national park.

Three of the six sites are on Belize's western border with Guatemala and have significant transboundary incursions. Primarily from Guatemalan border communities, they include illegal hunting, logging, and agricultural activities, as well as looting of archaeological sites and poaching of wildlife. Extractive use of resources is a common thread in all six sites. These sites are located in the Northern and Central KBAs.

Table 3: The Proposed Project Sites for Site-Specific Activities

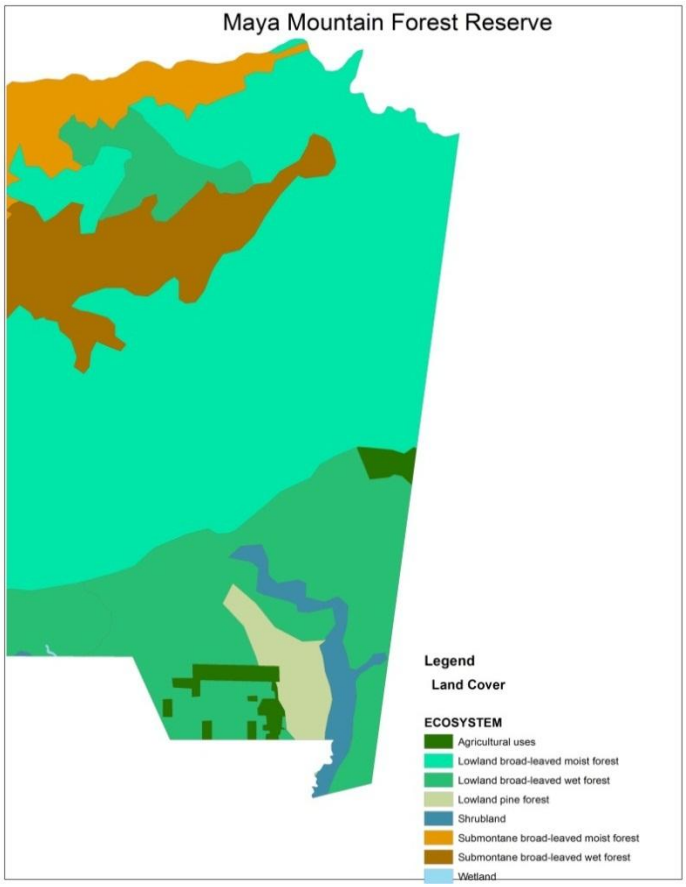
Protected Area	Acreage	Agency Responsible	Co-Manager
Freshwater Creek Forest Reserve	33,393	Forest Department	Corozal Sustainable Future Initiative (CSFI), http://www.csfi.bz/
Spanish Creek Wildlife Sanctuary	6,001	Forest Department	Rancho Dolores Environment and Development Group, http://apamo.net/index.php/rancho-dolores-environmental-a-development-group
Vaca Forest Reserve	34,887	Forest Department	Friends for Conservation and Development (FCD), http://www.fcdbelize.org/
Chiquibul National Park	264,003	Forest Department	Friends for Conservation and Development (FCD)
Maya Mountain Forest Reserve	41,730	Forest Department	None
Columbia River Forest Reserve	148,303	Forest Department	None

Below is a detailed description of each priority site.

MAYA MOUNTAIN FOREST RESERVE

Name	IUCN Category	Gazetted	Management	Acres
Maya Mountain Forest Reserve	VI	1997/114	Forest Department	41,730

Map 5: Land Cover for Maya Mountain Forest Reserve



The Maya Mountain Forest Reserve is on the easternmost face of the Maya Mountain Massif (MMM). As shown in Map 5, the ecosystems present are lowland broad leaf forest, sub-montane broadleaf forest, lowland pine forest, and shrub lands.

This east facing side of the Maya Mountains is important for the water security of agricultural areas and communities downstream. It provides steep slope protection as the Maya Mountains quickly transition into the lowlands of the coastal plains. This PA has steep slopes unsuitable for agriculture or habitation.

Clearance of these steep slopes could be detrimental to agricultural activities and communities downstream. Climate change predictions of increased intensity of storms could destabilize soils on cleared, steep slopes, resulting in the mudslides and landslides seen in Guatemala and Honduras.

It is recommended that this forest reserve be managed as an integral part of the NPAS. Efforts should be made to reduce pressures for de-reservation. The areas of the forest reserve that buffer communities should be managed for sustainable community use based on agroforestry practices. Sustainable community use plans based on experiences for integrated landscape management should be developed and implemented in these buffer areas. The landscape approach should seek to retain the forest canopy for future water security. The need for PA

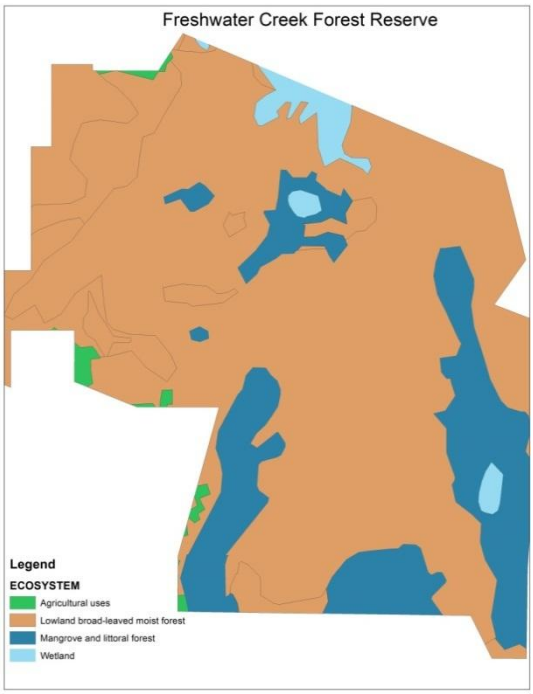
management, monitoring, and support for livelihood activities that fit within the livelihood framework of the buffering communities is essential.

A non-governmental organization (NGO) partner should be identified to support the preparation and implementation of a management plan for the forest reserve as well as to support the preparation and implementation of sustainable community land use plans for the buffer areas. Ya'axche Conservation Trust (YCT) is a possible candidate since they already work with some of the buffer communities and have experience in integrated landscape management.

FRESHWATER CREEK FOREST RESERVE

Name	IUCN Category	Gazetted	Management	Acres
Fresh Water Creek Forest Reserve	VI	2001/66	Forest Department	33,393

Map 6: Land cover in Freshwater Creek Forest Reserve



Freshwater Creek Forest Reserve is the northernmost target site for the proposed Project. When it was first established in 1997 it was made up of 60,000 acres and has since been reduced to 33,393 acres. The buffer communities include Orange Walk Town, San Estevan, Santa Marta, Honeycamp Lagoon, and Chunox. Each of the communities are mainly composed of mestizos, with some immigrants from Mexico and Central America, primarily Guatemala and El Salvador. Most residents work in agriculture, and most do not use the forest reserve on a

regular basis, although a few people do occasionally hunt and fish in the reserve. The incursions into the PA have been mainly for agricultural uses, resulting in fragmentation and de-reservation of portions of the reserve.

As shown in Map 6, agricultural incursions into Freshwater Creek Forest Reserve continue. Sugarcane plantations and sugarcane production dominate the buffer area, which is likely the largest cause of agricultural activity in the PA.

Freshwater Creek is considered an important secondary node for the northeast biological corridor, and will therefore facilitate ecosystem adaptation to climate change. Agricultural incursions are fragmenting the forest, reducing resilience to climate change and increasing susceptibility to fire.

The lands to east of Freshwater Creek are in private ownership, with large-scale land clearance for agriculture by the Mennonites. The site provides protection to the yellow-headed parrots which are globally endangered and which have declined rapidly in Belize over the last 15 years due to increased anthropogenic fires.

Overall, Freshwater Creek Forest Reserve is an important component of the North East Biological Corridor, and critical for maintaining wide-ranging species such as white-lipped peccary, and allowing ecosystems and species migration in response to climate change. Consequently, it should remain an integral part of the NPAS. Required actions include:

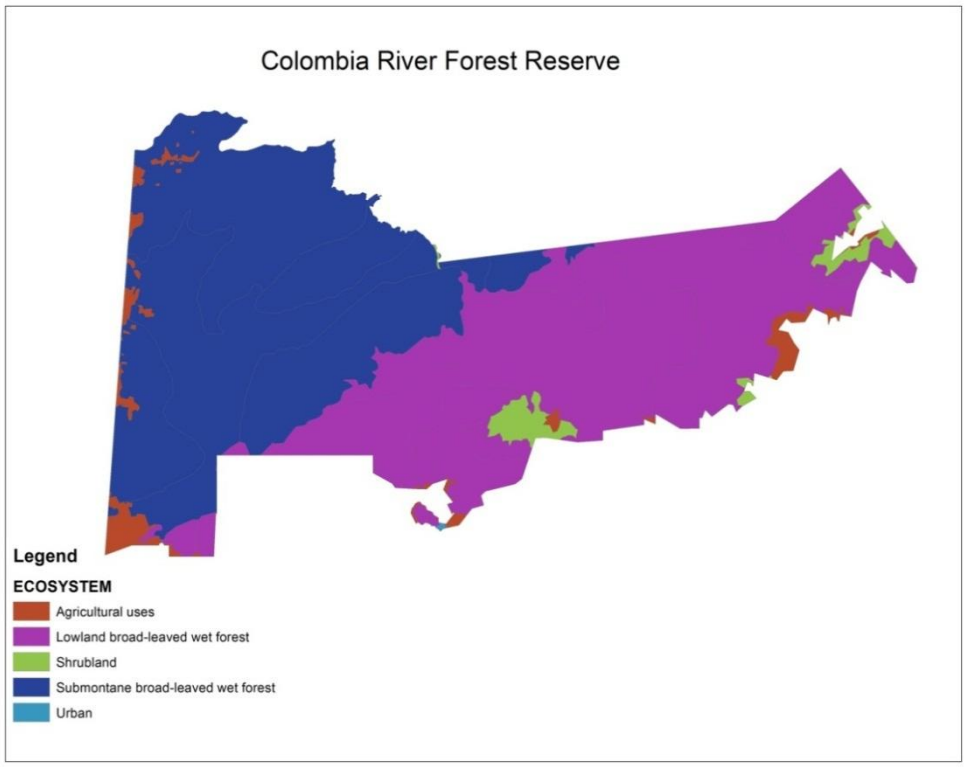
- Re-establish and enforce moratorium on logging within the Forest Reserve until stocks are assessed as having recovered sufficiently for sustainable extraction.
- Implement areas of agro-forestry as an interim measure in impacted areas to re-establish forest cover and engender social support, based on approved Community Sustainable Use Plans. It is critical that these uses retain the forest canopy for future biological corridor functionality.
- Needs management and monitoring – potential for community conservation focus through biological corridor program – identify a potential co-management group.
- Management Unit: Northern Lowlands.
- Maintain forest cover and reduce fragmentation by logging tracks and agricultural incursions – potential for community agroforestry initiative linked to north east biological corridor.
- Proactive fire prevention and effectively address fires that occur.
- Implement moratorium to allow forest recovery.

COLOMBIA RIVER FOREST RESERVE

Name	**IUCN Category**	**Gazetted**	**Management**	**Acres**
Columbia River	VI	1997/115	Forest	148,303

Forest Reserve			Department	

Map 7: Columbia River Forest Reserve and the Current Land Cover



Columbia River Forest Reserve is the southernmost PA in the MMM. According to the rationalization exercise, Colombia River Forest Reserve is one of the six highest priority terrestrial PAs in Belize. Effective management is important for all PAs, and particularly for those considered as priorities.

A national management effectiveness assessment was conducted in 2009 (Walker et al., 2010), and averaged ratings per PA analyzed in relation to prioritization to identify those priority protected areas most in need of strengthening. It should be borne in mind that the national assessment tool (Young et al., 2005) is heavily focused on assessment of management processes – whether organizations have processes in place – so large organizations and Government departments can have misleadingly high ratings that do not necessarily reflect their conservation outputs. The prioritization scoring is particularly useful in the assessment of where investments in strengthening PA management are most needed. Of the high priority protected areas, Columbia River Forest Reserve rates as the one in most need of strengthening in terms of having a very high prioritization score but poor management effectiveness.

The south-eastern face of the Colombia River Forest Reserve transitions from steep slopes to the coastal plan. The steep and transitioning slopes should remain under forest cover. Steep slope protection: Clearance of steep hill slopes will increase the risk to property and human life, especially in the context of climate change predictions which suggest an increased intensity of

storms, which will destabilize soils on cleared, steep slopes, resulting in the mud slides and landslides.

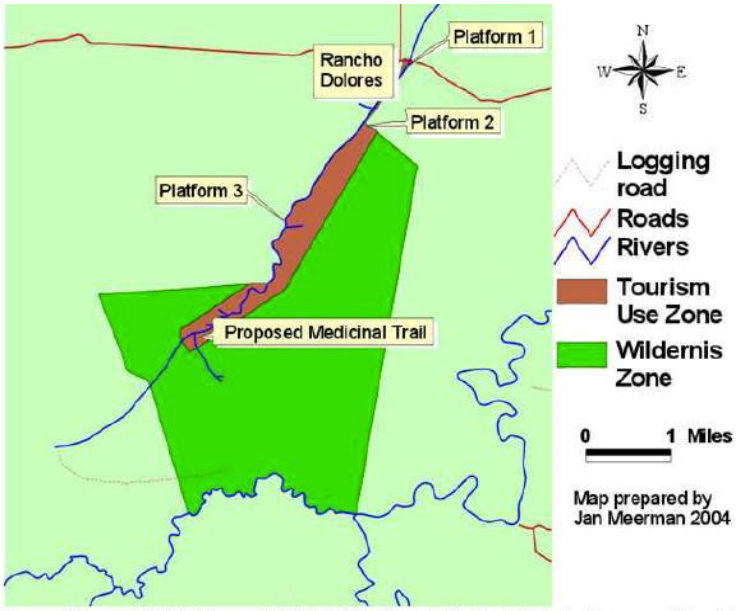
CRFR is a Core part of the MMM. There is a high level of incursion by Guatemala for hunting, farming, and natural resource extraction. This PA needs to remain as an integral part of the NPAS. Other important actions include:

- As a priority, strengthen security against transboundary incursions.
- Implement areas of community sustainable use, based on approved Community Sustainable Use Plans through concession agreements. Critical that these uses retain the forest canopy for future water security.
- Needs management and monitoring – engage NGO partner – Ya'axche.
- Management Unit: Maya Mountains Massif.
- Manage fire risk in limestone areas/adjacent agricultural areas.
- Maintain forest cover within the Forest Reserve, including areas of community sustainable use.
- Encourage maintenance of forest cover in the lowland, coast plain landscape to increase water catchment in the upper watershed.
- Minimize human impacts, including logging tracks, which may increase susceptibility to storm events.

SPANISH CREEK WILDLIFE SANCTUARY

Name	**IUCN Category**	**Gazetted**	**Management**	**Acres**
Spanish Creek Wildlife Sanctuary	IV	2002/87	Forest Department	6,001

Map 8: Spanish Creek Wildlife Sanctuary



Source: Meerman, J. C., P. Herrera, B. Holland & A. Howe 2004, Rapid Ecological Assessment Spanish Creek Wildlife Sanctuary. 48 pp.

Spanish Creek Wildlife Sanctuary is the only wildlife sanctuary among the six target PAs. It is also the smallest of the six at 6,001 acres. It is located in the Belize River Valley in the Belize District. The adjacent communities are primarily of Creole descent with a long history in the logging industry.

Spanish Creek Wildlife Sanctuary, declared a protected area in June 2002, is situated along 5 miles of Spanish Creek. The Wildlife Sanctuary lies within the Belize River watershed, along Spanish Creek, south of Rancho Dolores. This Wildlife Sanctuary forms an important link in the Northern Biological Corridor. The PA is considered to be a potential resource for local tourism, with a number of features of touristic value including high bird diversity, and the presence of prominent species such as Morelet's crocodile and the black howler monkey.

The sanctuary was established for the protection of local biodiversity, and to strengthen corridor connectivity between Rio Bravo, the Community Baboon Sanctuary and Crooked Tree Wildlife Sanctuary. Uses within the Wildlife Sanctuary include Non-extractive – tourism, education and research.

Rancho Dolores Environmental and Development Co. Ltd. operate the Spanish Creek Wildlife Sanctuary as co-managers with the Forestry Department. It is dedicated to the social and economic development of Rancho Dolores Village and the area surrounding the community. One of the values of Spanish Creek Wildlife Sanctuary is the protection of Riparian vegetation, which is important for the stability of riverbanks, filtering run-off and maintaining water quality. As clearance of this vegetation increases, the impacts are seen not only in the declining quality of water in the rivers and along the coast, but also on Belize's reef system, where sedimentation and agro-chemical run-off reduces reef health. The destruction of the Kendall Bridge by Tropical Storm Arthur clearly demonstrated the impacts of clearing riparian forest.

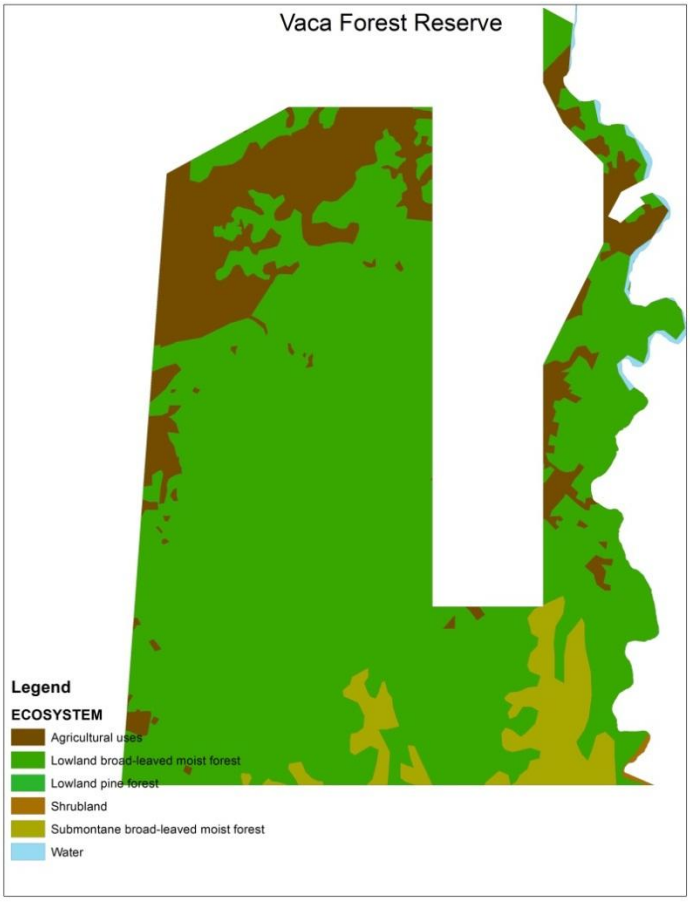
Some of the primary actions in this protected area include:

- Maintain riverside vegetation.
- Actively conserve hicatee – particularly known nesting sites.
- Management of traditional community resource extraction.
- Reclassification of the area to be aligned with IUCN Category VI.
- Needs an approved sustainable fishery plan, with use agreement.
- All other activities must be non-extractive.

VACA FOREST RESERVE

Name	IUCN Category	Gazetted	Management	Acres
Vaca Forest Reserve	VI	2003/137	Forest Department	34,887

Map 9: Land Cover in Vaca Forest Reserve



Vaca Forest Reserve lies on Belize's western border with Guatemala. It is part of the MMM and an integral part of the Central KBAs.

Map 9 shows the ecosystems of the Vaca Forest Reserve, possessing broad leaf forests, both lowland and sub-montane. The map also demonstrates that there is significant agricultural activity within the forest reserve. These activities include cattle pasture and crop production.

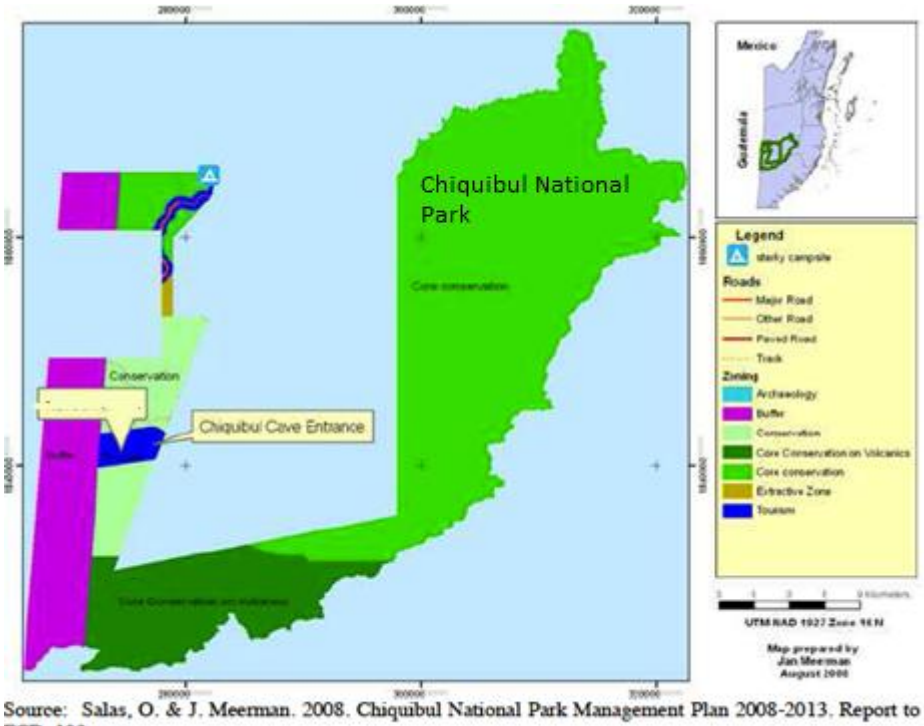
Vaca Forest Reserve includes steep slopes that need to be maintained forested. It is the headwater for the Vaca Dam so maintaining the forest cover is a critical environmental service. Some of the actions required in this PA include:

- Ensure that the reserve remains an integral part of the NPAS.
- As a priority, strengthen security against border incursions.
- Implement areas of communities' sustainable use, based on approved Community Sustainable Use Plans and concession agreements. It is critical that these uses retain the forest canopy for future water security and viability of dam reservoirs.
- Needs active engagement and monitoring – engage NGO partner – FCD.
- Promote livelihood activities that reduce the pressures on the biodiversity of the area.
- Needs a diagnostic study to identify an effective restoration program.
- FCD has conducted a social assessment with farmers.
- FCD has a landscape management strategy, which would include acreage.

CHIQUIBUL NATIONAL PARK

Name	IUCN Category	Gazetted	Management	Acres
Chiquibul National Park	II	1995/55	Forest Department	264,003

Map 10: Chiquibul National Park



Source: Salas, O. & J. Meerman. 2008. Chiquibul National Park Management Plan 2008-2013. Report to FCD. 192 pp.

Chiquibul National Park is the largest of the six PAs targeted for this proposed Project within the KBAs and the only national park. It is also the largest single PA in Belize found within a KBA.

According to the rationalization exercise, Chiquibul National Park is one of the six highest priority terrestrial PAs. It protects steep slopes and ensures that the water flows into the Challio Dam, which is used to supply more than 50% of the potable water needs of the country.

The Chiquibul forest faces significant cross boundary pressures. These include illegal hunting, looting and looting of archaeological sites, harvesting of xate, and poaching of birds.

Some of the actions that need to be taken by the proposed Project include:

- Strengthen against border incursions.
- Maintain connectivity with other protected areas of the Maya Mountains Massif.
- Reduce transboundary incursions and associated fire risks.
- Ensure mining activities do no compromise water quality and availability downstream.
- Private sector (resort/lodges) impacts the PA through extraction of resources.
- Local (surrounding) communities do not impact the national park, but the forest reserve, if not monitored, can expand into the national parks.

It is co-managed by Friends for Conservation and Development.

3.2. Stakeholders' Consultation Process

Consultations were organized in four different stages of Project preparation in order to offer the key stakeholders opportunities to explicate their position on the Project and define the most important factors to determine the most efficient use of the available resources within the confines of the Project objective. The four consultation stages are summarized below and presented in further detail in **Annex I**: 1) Representatives of all the pertinent stakeholder groups were invited to participate in a group session at a central location in an initial workshop in November 2012 to ensure their early engagement with the overall Project and gather pertinent inputs for the EMF preparation; 2) The Project consultants made a four-day tour of field visits to a cross-section of buffer communities and NGOs near the pre-selected KBAs, from north to south of the country, among the areas that were likely to be participants in the Project or recipients of Project funds; 3) A validation workshop was held on May 14, 2013 with key stakeholders to give an overview of the Project objectives, components, proposed activities, results framework, and estimated socioeconomic benefits; and 4) Three final preparation stage consultation events were organized in June 2014, one in Belmopan and two in Toledo, to present and discuss the final drafts of all of the socio-environmental management/safeguard instruments of the Project: the present Environmental Management Framework (EMF), Indigenous People's Planning Framework (IPPF, also known as Culturally Appropriate Consultation and Participation Protocol), Livelihood Restoration Framework, and Involuntary Resettlement Process Framework (IRPF).

The initial workshop had the objective to facilitate information sharing and ensure stakeholder participation throughout the different stages of the process leading up to sub-project selection during Project implementation. The workshop was arranged into four segments: 1) a presentation by the consultancy team that explained the Project objectives and broad components, along with the outcomes and outputs as defined in the Project Identification Form (PIF) approved by the GEF; 2) breakout discussions where the participants were divided in two sub-groups regarding their areas of interest: one combining Components 1 and 2, and the other focusing on Component 3 and especially the Project's environmental aspects and the status of the related protection instruments and efforts by the regulators and other stakeholders; 3) a plenary discussion to consolidate the contributions of the two breakout sessions; and 4) a wrap up determining what had been achieved and how the consultancy team would move forward.

Regarding Component 3 on Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations, Annex I provides a summary of the results of the related breakout session where the proposed Component 3 outputs were discussed and comments compiled as to their effectiveness in meeting the overall Project objective and to formulate appropriate principles of the Project's environmental management.

The four-day tour of field consultations by the entire consulting team responsible for inputs for the Project preparation visited communities and NGOs in Toledo District, Western Cayo District,

and Orange Walk District. On the way to the Toledo District the team also stopped at Maya Center in the Stann Creek District.

In Toledo District, the team visited Crique Sarco, Sunday Wood, and Indian Creek. In addition, they met with representatives of Toledo Institute for Development and Environment (TIDE), Ya'axché Conservation Trust (Ya'axché), and Sarstoon Temash Institute for Indigenous Management (SATIIM). In the Cayo District, the team visited Friends for Conservation and Development (FCD) and the activities they are undertaking in the Vaca Forest Reserve with Friends of Vaca. In the north of Belize, the team visited La Milpa Field Station in Rio Bravo Conservation Management Area managed by Program for Belize and Gallon Jug Management Area managed by the Bowen Group. The consultant team also met with representatives of the Department of the Environment (DOE), the Environmental Research Institute (ERI), and other actors with planned Project-related initiatives.

The validation workshop discussed the overall Project design and the results of the Social Assessment that addressed projected socioeconomic benefits and a sustainable livelihoods framework. Approximately 35 participants attended the workshop representing government, NGOs, and international agencies.

The three final consultations discussed the final drafts of the environmental and social management/safeguard instruments with a special focus on the Project's expected social impacts. One of the events convened Indigenous Leaders from the Project area for a specific consultation on their Project-related interests and concerns.

Annex 1 provides the full lists of the participants in all of these consultation events as well as related notes on the key points discussed. During Project implementation, further socializing on the EMF and the social management/safeguard instruments will be carried out starting in the early stakeholder meetings, and the instruments will be revised for updates and improvements thereafter on an as-needed basis.

4.0 Local and International Legal and Institutional Framework

In Belize, protection of the biosphere from degradation is primarily the responsibility of the Department of the Environment (DOE) under the portfolio of the MFFSD. However, environmental protection also lies within the purview of other agencies, such as the Forest Department and Department of Fisheries that have responsibility for protection of terrestrial and marine ecosystems generally, and they provide management oversight through issuance of licensing and carrying out monitoring and enforcement of the pertinent local regulations. With the current environmental and forest protection laws, enforcement is concentrated at the government and department levels; not with local authorities. The municipal authorities do not

monitor or enforce environmental and forest regulations and neither would have the capacities to do so. Therefore, all infractions in this regard are handled by the national authorities.

4.1. Environmental Protection Act (EPA)

Chapter 328 of the Laws of Belize contains the Environmental Protection Act (EPA), which was passed into law in 1992. The Act gives broad sweeping powers only to the DOE for the control and prevention of pollution on land, water and air, prohibitions on dumping of waste, environmental impact assessment (EIA) and the control of nutrients deposited into the environment. One of the DOE's key mechanisms for environmental protection under the EPA is the EIA Regulation number 107 of 1995, amended in 2007. The Act requires that all person, organization or entity is required to prepare an EIA if their proposed programme or project will have significant impacts on the environment. Once a project proposal is submitted to the DOE, a screening exercise is undertaken to determine the necessary level of environmental assessment. The DOE regulation categorizes projects in three schedules **(Annex II)**. It is mandatory that an EIA be developed for proposals that fall under "Schedule I" of the regulations. These are usually projects that will have significant negative long term impacts and cause irreversible damage on the biophysical environment. Under "Schedule II", the DOE retains the discretion in determining the level of necessary assessment. These projects usually only differ from "Schedule I" projects in scope. The "Schedule III" is where the magnitude of the project impacts is minimal and does not fit into "Schedule I or II". To avoid delays or the suspension of a programme or project after commencement, it is strongly recommended by DOE that a letter be submitted to them indicating the nature of the programme or project being undertaken, so that they can be properly assessed and issue environmental clearance or a no objection, as necessary.

Under the EIA regulations, the DOE can apply different levels of environmental assessment to determine the likely environmental impacts of a proposed development. They may request an EIA which is highest level of assessment, or a Limited Level Environmental Study (LLES) that is normally applied to "Schedule II" projects. For those projects that do not require either an EIA or LLES, immediate environmental clearance is granted, without a request for a study. Once a project requires a study, applicants follow the procedures outlined in the EIA regulations and guidelines (Department of the Environment Belize, 2011). LLES are usually required for Schedule II proposals. In the case of an EIA, a public consultation is mandatory, while for LLES a public consultation is discretionary on the part of the DOE.

If the DOE determines that an EIA or LLES is required, then a screening phase is followed by a scoping phase which determines the focus area of the study in conformity with guidelines set out in the regulations. Following this, the preparer is given permission to conduct the EIA or

LLES. Upon completion and approval on an EIA or LLES by the DOE, the report can proceed to full submission to DOE. A National Environmental Appraisal Committee (NEAC) reviews the reports and makes recommendations to the DOE on the merits and demerits of each study. DOE is responsible to issue a final approval or disapproval. The NEAC is made up of a cross-sector of technical professionals that are called upon based on the nature of the project to give their recommendations to the DE.

Once the studies are completed and approved by DOE, an Environmental Compliance Plan (ECP) is developed by the DOE. The ECP is a legally binding agreement between the DOE and the developer. It outlines what should be done after the environmental assessment is approved in terms of mitigation and monitoring necessary for environmental protection. Breach of the ECP or EPA can lead to penalties that include revoking of the development licence, fines, and/or confinement to a local prison.

The DOE is located in Belmopan, in the Cayo District, almost in the centre of the country. It is led by a Chief Environmental Officer (CEO) supported by a Deputy CEO, a legal counsel, and environmental officers and technicians. The department coordinates all its activities in Belmopan, as there are no branch offices in the districts. There are scheduled and random monitoring and enforcement activities throughout the year for the country and emphasis is placed on the most sensitive sites. The Environmental Enforcement and Compliance Units and Project Evaluation EIA Units are two sections that are responsible for the review and follow-up on projects. With their current volume of work, the department is already at its capacity and has even been criticized in the public of not doing sufficient monitoring and enforcement as it is required to do. The DOE receives additional support for monitoring and enforcement for other departments, such as Fisheries, Forestry, Petroleum, and Geology that also have a mandate to monitor and enforce their legislation that overlaps with that of the DOE. As it stands, the sub-projects will require on-going monitoring and it is likely that the department will need additional human resources to do so.

4.2. Forest Department Legislation

The Forest Department has the responsibility for administering five pieces of legislation. The Forest Act Chapter 213 of the Laws of Belize provide for the protection and preservation of trees and forest products as it relates to felling of trees, grazing of cattle, hunting, shooting, clearing for cultivation, burning lime or charcoal, and collecting and removing forest products. Depending on the nature of a sub-project, it may also be required for the proponent to consult with other important local legislation or international conventions from time to time **(Table 4)**.

Table 4: Pertinent Legislations

Article/Publication	Department/Ministry
Belize National Park Acts, Chapter 215 - Revised Edition 2000	Forest Department, Ministry of Forestry, Fisheries and Sustainable Development (MFFSD)
Belize National Parks System Act, Chapter 215 Revised Edition 2003	Forest Department, MFFSD
Private Forest (Conservation) Act, Chapter 217 - Revised Edition 2003	Forest Department, MFFSD
Protected Areas Conservation Trust Act, Chapter 218 - Revised Edition 2003	Forest Department, MFFSD
Wildlife Protection Act, Chapter 220	Forest Department, MFFSD
National Institute of Culture and History (NICH) Act, Chapter 331 - 2000	Institute for the Research and Management of Material Culture
Fisheries Act of 1948, Chapter 210 – Revised Edition 2000	Fisheries Department/Ministry of Agriculture and Fisheries
Draft Fisheries Act - Sept 2011	Fisheries Department, Ministry of Agriculture and Fisheries

In addition to the local environmental mechanisms in place, over the past fifty years, Belize has signed a number of International Conventions aimed at protecting the environment in ways that are both nationally and globally important. These agreements listed must be kept in mind when evaluating any sub-project **(Table 5)**.

Table 5: International Conventions and Regional Agreements

International Conventions and Regional Agreements	Ratified	Purpose
International Convention for the Protection and Conservation of Sea Turtles for the Western Hemisphere	1997	To promote the protection, conservation and recovery of sea turtle population and the habitats on which they depend
Alliance for the Sustainable Development of Central America	1994	Regional alliance supporting sustainable development initiatives
Convention on Biological Diversity	1993	To conserve biological diversity to promote the sustainable use of its components, and encourage equitable sharing of benefits arising from the utilization of natural resources
Convention on the Conservation of Biodiversity and the Protection of Priority Wilderness Areas in Central America	1992	To conserve biological diversity and the biological resources of the Central American region by means of sustainable development
United Nations Framework Convention on Climate Change	1992	An overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It

International Conventions and Regional Agreements	Ratified	Purpose
		recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases
UNESCO Man and the Biosphere Programme	1990	To promote the sustainable use and conservation of biological diversity and for the improvement of the relationship between people and their environment globally, through encouraging interdisciplinary research, demonstration and training in natural resource management
Central American Commission for Environment and Development	1989	Regional organizations of Heads of State formed under ALIDES, responsible for the environment of Central America. Initiated Mesoamerican Biological Corridors and Mesoamerican Caribbean Coral Reef Programs
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region	1983	To protect the marine environment of the wider Caribbean region for the benefit and enjoyment of present and future generations
United Nations Convention on the Laws of the SEA	1983	A legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment
Convention on the Conservation of Migratory Species of Wild Animals	1979	To protect migratory species
Convention on the Protection of Archaeological, Historical and Artistic Heritage of American Nations	1976	To protect the Archaeological heritage of signatory countries. Several Maya Archaeological sites exist, four of which have been identified during the Maya Mountain Project - including the second largest site in Southern Belize
Convention on International Trade in Endangered Species of Wild Fauna and Flora	1973	To ensure that international trade in specimens of wild animals and plants does not threaten their survival

International Conventions and Regional Agreements	Ratified	Purpose
Convention Concerning the Protection of the World Cultural and Natural Heritage	1972	To encourage the identification, protection, and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity
Convention on Wetlands of International Importance	1971	To stem the progressive encroachment on and loss of wetlands now and in the future, recognizing the fundamental ecological function of wetlands and their economic, cultural, scientific, and recreational value
International Planet Protection Convention	1951	To promote the protection, conservation and recovery of sea turtle population and the habitats on which they depend

5.0 World Bank Safeguards Applicable to the Project

5.1. Safeguard Measures

It is anticipated that the sub-projects selected at the implementation phase will have varied characteristics, and they will therefore require different environmental protection measures to safeguard against degradation of the natural environment. The World Bank instituted Safeguards Policies, in environmental and social aspects to be applied to all projects financed by the WB. The WB favours preventive measures over mitigatory or compensatory measures, whenever feasible[6]. The safeguard measures serve to ensure that there is sustainable use of the natural resources, transparency in information provided to the public, and to ensure that the impacts of a project are properly assessed so that mitigation measures or alternatives can be adequately formulated. The application of the safeguards does not stop at the end of project implementation, but continues into its operational phase. Once a sub-project is in its operational phase, safeguards are continuously applied and are informed by a comprehensive monitoring and evaluation plan so that corrective measures can be taken at the earliest, if necessary.

Safeguards that will be applied under the Project are determined based on the type of sub-projects that are likely to be approved. These safeguards include: the Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Pest Management (OP/BP 4.09), Indigenous Peoples (OP/BP 4.10), Physical Cultural Resources (OP/BP 4.11), and Forests (OP/BP 4.36). Therefore, all sub-projects submitted for approval by the MAPKBA must be assessed to determine if any safeguards must be applied. In such instance, the necessary steps will have to be taken to address the impacts based on the instructions provided in this document.

[6] World Bank Environmental Assessment safeguard, OP/BP 4.01

The following table presents the common settings under which the safeguards are applied and the rational and objectives of the policies **(Table 6)**. More information on the World Bank Safeguard Policies can be accessed at http://go.worldbank.org/WTA1ODE7T0.

Table 6: World Bank Safeguards Policies

Safeguard	Operational Policy/Bank Procedure No.	Rational and Objectives; Application under the Project
Environmental Assessment	4.01	EA is a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project/activity. EA evaluates a project/activity's potential environmental risks and impacts in its area of influence; examines alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout implementation. The Bank favours preventive measures over mitigatory or compensatory measures, whenever feasible. Derived from the very development objective of the Project, its principal expected environmental impacts are positive. However, as the Project applies an integrated socio-environmental approach to sustainable natural resources management and biodiversity conservation, a part of the Project-financed conservation efforts target improved local livelihoods through community-based sustainable use of ecosystem goods and services that demand socio-environmental management as presented and guided in this document.
Natural Habitats	4.04	Ensures that infrastructure and other development projects take into account the conservation of biodiversity, as well as the numerous environmental services and products which natural habitats provide to human society. The policy strictly limits the circumstances under which any WB supported project can damage natural habitats (land and water areas

		where most of the native plant and animal species are still present). The Project will help rehabilitate, restore, and protect targeted KBA, which are important to preserve local biodiversity and the quality of water resources. Regarding Project-financed sustainable livelihood activities, activities that would lead to conversion or degradation of critical natural habitats or their supporting areas are not eligible.
Pest Management	4.09	Promotes the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides. Regarding promotion of alternative livelihoods on agriculture and/or forestry, the Project will determine the extent of pest use and establish a baseline of existing practices at the sub-projects' site level so that an adequate and effective pest management plan can be developed as needed.
Indigenous Peoples	4.10	Ensures that indigenous peoples are consulted with, participate in and benefit from WB-funded operations in a culturally appropriate way – and that adverse impacts on them are avoided, or where not feasible, minimized, mitigated, or compensated.
Physical Cultural Resources[7]	4.11	Cultural resources are important as sources of valuable historical and scientific information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. The loss of such resources is irreversible, but is often avoidable. The objective is to avoid or mitigate adverse impacts on cultural resources from development projects financed by the WB, and build national capacity for protection of cultural heritage. The Project can involve small structural works and Belize has thousands of Mayan Antiquities buried under the forests and chance finds might occur within the

[7] Defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community (source: http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL/0,,contentMDK:20970737~menuPK:64701637~pagePK:64709096~piPK:64709108~theSitePK:502184,00.html, accessed, May 30, 2013

		Project's direct intervention areas. Belize has a well-developed program for management of Mayan Antiquities in situ and ex situ. If antiquities are encountered during Project implementation, the Institute of Archaeology will be notified immediately, and as the competent authority, it will make the decisions on how any chance find will be managed. Additionally, any activity that could negatively impact any known cultural site is not eligible for Project financing. Further, in case of any difference/gap between the national legislation and the OP/BP 4.11, the stricter approach will prevail.
Forests	4.36	Assists countries to harness the potential of forests to reduce poverty in a sustainable manner, to effectively integrate forests into sustainable economic development, and to protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the WB assists countries with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. Assists countries with the establishment of environmentally appropriate, socially beneficial, and economically viable forest plantations to help meet growing demands for forest goods and services. The Project will support rehabilitation/restoration of critical forested areas (e.g., watersheds) through community-based activities. Regarding Project-financed sustainable livelihood activities, any activity that would lead to clearing or degradation of forests or forest ecosystems is not eligible for Project financing.

5.2. World Bank Project Categorization

In order to apportion an appropriate response, the WB, like Belize's EIA regulations, counts with a project classification system to ensure that they are correctly assessed based on the potential impacts occurring as a result of the implementation and operation of the programme or projects **(Annex III)**. In the WB's system there are four categories of projects. They range from A, being the ones to have the highest impact to C, being those that would cause little to no impact and therefore do not require any environmental assessment. A fourth category is not based on potential impacts but to ensure that projects financed by the WB through an intermediary are also subject to evaluation. In the WB's system the sub-projects will be

generally classified based on the likely outcome of the impact and the potential effects (physical, social, and economical).

Alternative livelihoods initiatives are important in reducing dependency on forest products. Agro/eco-forestry and forest conservation through carbon accounting and trading schemes can provide viable alternatives to resource extraction. These are likely to be a major portion of the sub-projects that will be funded under the Project. Agriculture provides benefits such as self-sufficiency, and supplying local markets near to production point, especially for small land holders, leading to poverty reduction and improving of rural household income. Agriculture empowers many subsistence farmers to earn an income to support their families while being entrepreneurs and having more control over their own employment status. However, agriculture can also have negative consequences, e.g. where a pest that is prevalent in a crop production is a problem. Pest control requires either chemical or biological intervention. Pesticides are substances that can be hazardous and harmful to the environment and/or human or animal health if a proper pest management plan is not in place to appropriately reduce impacts. On the other hand, biodiversity protection through the conservation of forests or reduction of forest degradation and deforestation are viable approaches to improved income with potentially less risks than agriculture.

5.3. Application of the World Bank Forests and Pest Management Policy

The WB does not finance projects/plantations that

- would involve significant conversion or degradation of critical forest areas or other natural habitats;
- contravene applicable international environmental laws; and
- involve any conversion or degradation of critical natural habitats, including adjacent or downstream critical natural habitats.

The WB only finances

- commercial harvesting operations or the purchase of logging equipment in areas that it has determined are not critical forests or related critical natural habitats.
- industrial-scale commercial harvesting operations in areas outside critical forest areas, where such operations are either certified as meeting standards of responsible forest management under an independent forest certification system acceptable to the WB, or adhere to a time-bound, phased action plan acceptable to the WB for achieving certification to such standards

In areas outside of critical forest areas, the WB may finance harvesting operations by small-scale landholders, local communities under community forest management, or entities under

joint forest management. Such financing can be provided where these operations have either achieved a standard of forest management developed with the meaningful participation of affected local communities that is consistent with the principles and criteria of responsible forest management outlined in paragraph 10 of OP 4.36, or adhere to a time-bound action plan to achieve such a standard that has been developed with the meaningful participation of affected local communities and acceptable to the WB. All such operations must be monitored by the client, with the meaningful participation of local people who are affected.

The WB uses environmental assessment to address the impact of all WB–financed investment projects on forests and the rights and welfare of local communities.

The WB ensures that WB–financed investment projects involving the management of forests

- incorporate measures to strengthen the fiscal, legal, and institutional framework in the borrowing country to meet defined economic, environmental, and social objectives that address, among other issues, the respective roles and legal rights of the government, the private sector, and local people.
- give preference to small-scale, community-level management approaches where they best harness the potential to reduce poverty in a sustainable manner.

The WB ensures that the design of WB–financed investment projects that use forest resources evaluate the prospects for the development of new markets and marketing arrangements for non-timber forest products and related goods and services, taking into account the full range of goods and environmental services derived from well-managed forests.

Pesticides can be extremely hazardous and thus a high risk to the environment if they are not properly handled, stored, used, and disposed of. Most commonly used pesticides are complex chemicals that are often difficult to break down in the environment and can therefore persist for many years. Pesticides contaminate water, soil, and air due to direct application and when water runoff into streams, river and lagoons. They are also known carcinogens (cancer causing), if the necessary precautions are not taken in their use. As such, the WB has approved safeguard measures for pesticide use.

5.3.1. Screening for Pesticide Use

Pesticides have a high potential for harm to the environment, and the WB requires that the respective capacities to manage and safely use them be assessed both at the beneficiary country and (sub-) project level. Regarding projects that require or can imply application of pesticides, the Pest Management safeguard ensures that their use is properly assessed and managed from the conception to operation throughout the life of a project. The first, country level assessment requires that a general screening be conducted to determine

capacity of the country to secure appropriate control of pesticide trade and usage, and ideally apply an integrated pest management strategy. Procedural guidelines on this preliminary screening are provided in **Annex IV**.

On completion of the preliminary screening of sub-projects and after a project has been approved, a second level of screening shall occur before implementation of project activities. The purpose is to determine, at the site level, the extent of pest use and to establish a baseline of existing practices so that an adequate and effective pest management plan can be developed as needed. Part II of **Annex IV** provides a questionnaire for determination of pest use at the site level.

In Belize, the pesticide control is well developed and regulated by a Pesticide Control Board (PCB) that was established under the Pesticide Control Act, Chapter 216 of the laws of Belize. The Act gives authority to the PCB to enforce the law and to control the manufacture, importation, sale, storage, use and disposal of pesticides by administering of the following functions to control and monitor the use the pesticides (*Pesticide Control Act, Chapter 216 - Revised Edition 2003 Showing Substantive Laws as at 31st May, 2003*):

- To register pesticides;
- To license persons to import or manufacture pesticides;
- To classify any pesticide as a registered, restricted, or a prohibited pesticide;
- To authorise persons to sell restricted pesticides;
- To register premises in which a restricted pesticide may be sold;
- To authorise pesticide applicators to use restricted pesticides;
- To consider and determine applications made pursuant to this Act and to deal with all aspects of the importation, manufacture, packaging, preparation for sale, sale, disposal, and use of pesticides, and to advise the Minister of Agriculture on all matters in relation thereto;
- To do such other things as may be expedient or necessary for the proper performance of its functions under this Act; and
- To train, or to arrange for the training of persons in the safe use of pesticides.

The PCB maintains a website that provides information on its board of directors and organizational structure, pertinent laws, regulations, and publications highlighting training manuals, booklets, and information pamphlets on pesticide use, management, safe application, and proper disposal of containers. Since the passing of the Act, four regulations have been passed to provide the specifics of pesticide management in Belize as follows:

- Statutory Instrument No. 8 of 1989 - Registered and Restricted Pesticides (Manufacture, Import and Sale) Regulations, 1988

- Statutory Instrument No. 77 of 1995 - Registered and Restricted Pesticides (Registration) Regulations, 1995
- Statutory Instrument No. 30 of 1996 - Registered and Restricted Pesticides (Manufacture, Import, and Sale) (Amendment) Regulations, 1996
- Statutory Instrument No. 112 of 1996 - Restricted Pesticides (Certified User) Regulations, 1996
- Statutory Instrument No. 71 of 1998 - Pesticides Control (Sale and Confiscation) Regulations, 1998
- Statutory Instrument No. 18 of 2003 - Registered and Restricted Pesticides (Registration) (Amendment) Regulations, 2003

The monitoring and control of pesticides is carried out by a team of technicians employed by the PCB that check regularly those that are licensed to sell, buy, and use pesticides. Persons who contravene any of the provisions of the Act are guilty of an offense and liable to a fine that does not exceed $5,000 and/or imprisonment for a period that does not exceed 5 years.

6.0 Application of Local Environmental Instruments and Work Bank Safeguards to the Sub-project Cycle

Sub-projects approved under the Project will be required to pass the requirements set forth both by the local environmental laws and the WB safeguards.

It is clear that the local environmental legislation and WB safeguards consist of similar mechanisms used to ensure environmental and societal protection. The Belize's EIA regulations identify the level of environmental assessment required based on the type and nature of project. On the other hand, WB categorizes projects based on their likely socio-environmental impacts prior to applying mitigation measures. **Table 7** shows the equivalency of the two classification systems. The DOE under the national EIA regulation categorizes projects under three schedules, while the WB utilizes three categories. Therefore, in evaluating a sub-project, both mechanisms will be applied and the one that results in the highest level of protection and transparency will be utilized to guide the process.

Table 7: Comparison of the DOE EIA Regulations and World Bank's Environmental Assessment Safeguard

DOE EIA Regulations (Annex III)	World Bank's Environmental Assessment 4.01 (Annex IV)	Description of Impacts
Schedule I	Category A	Projects of a nature and magnitude that will cause adverse and significant environmental impacts both beyond the local or specific

		site area. Both systems require an Environmental Impact Assessment. Sub-projects falling in this category will not be eligible for Project funding.
Schedule II	Category B	Impacts are in most cases reversible and can be adequately managed.
Schedule III	Category C	Low or no impacts and no form of environmental assessment is necessary.

Impacts may differ dependent on numerous factors including the level of human activities. A good example is the potential impacts of sewage being discharged into a river. This is not in itself automatically a high impact, but will be dependent on the amount and quality of sewage discharge, and the rate and volume of flow of water in the river to dilute the concentration of the waste. The impacts may also vary depending on the location and/or sensitivity of the area. Therefore, sewage, even though it has a relatively high potential for being harmful, cannot be classified as having a high level of impact simply because of intestinal origins. Level of treatment of the waste, ability of receiving water body to dilute and dissipate the waste where the waste is discharged and if other waste sources are in the area will be contributing factors to the potential for pollution and hence the impacts. Thus, it is important that impacts are properly identified based on the different circumstances, cumulative effects and likelihood of it occurring and severity of its consequences. On the other hand, it is imperative that impacts of the sub-projects be equally identified, across the different locations, before commencement of their implementation in order to make certain that the recommended mitigation measures are based on the right characterization of the impact within their specific area of influence.

6.1. Nature of Potential Sub-projects

Since sub-projects will only be identified and located during Project implementation, it is not possible to appropriately address their factual impacts during Project preparation. Therefore, a framework approach to identifying sub-projects' environmental impacts is described below to ensure proper environmental management at the sub-project level. Principles of a framework level assessment can be utilized with the advantage that they can identify cumulative impacts on a waster area to guide the development at each sub-project site.

Based on the Project objective, selected sub-projects are to be low impact without requiring extensive environmental assessment such as an EIA. The sub-projects should be developed with environmental protection consciousness through-out the stages of the sub-project cycle. At the conception or planning stage, the sub-projects will be screened to determine if the activities

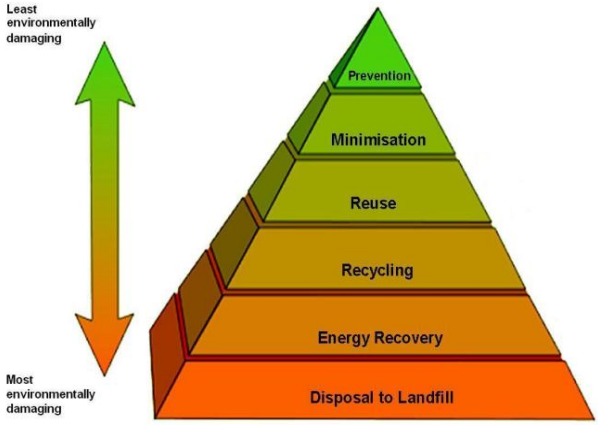
will result in significant environmental impacts and if the location is in a sensitive ecosystem that may suffer irreparable damage. Therefore, during the planning stage, sub-projects will be selected based on key environmental protection principles that, when applied, will reduce the impacts on the environment and ensure sustainable use of resources. The principles are as follows:

- **Sustainability:** Is the sub-project capable of sustaining itself in the long term, beyond Project funding?

- **Compliance with the National Legislation and WB safeguards:** Any sub-project must not only comply with the environmental protection legislation but also with other relevant complementary legislation and the WB safeguards.

- **Consultation and Transparency:** Public education and awareness are important elements in the development of any sub-project. People that are likely to be affected need to be adequately informed through pertinent channels. Communication must be in a format that is specifically targeted at the right people and in the appropriate language. Those with high influence and interest should be the first to address. Depending on the nature of the sub-project and the target group, the type of engagement should be devise to ensure the most effective means of communication with the different communities. Timing and venue are also essential elements of this process.

- **Pollution Prevention and Waste Minimization:** Some minor efforts can have significant impacts through the maximization of resources and waste minimization. Sub-projects should seek to reduce the use of natural resources where possible and find alternate uses for residual materials to reduce the disposal to dump sites. The waste hierarchy should be considered and enforced in utilizing any natural resources[8].



- **Monitoring and Evaluation:** M&E is central to a project's success. Monitoring needs to take place throughout project implementation to ensure that it is complying with the applicable environmental requirements. A monitoring plan needs to clearly define the activities to be monitored

[8] Source: http://upload.wikimedia.org/wikipedia/en/4/44/Waste-hierarchy.png

under each sub-project, including identification of indicators and feasible means of verification. Finally, M & E is to measure the impacts or results of each sub-project.

At no time during the sub-projects' implementation phase ought there be deviation by beneficiaries from the activities approved by the MFFSD-based Project Management Unit (PMU). The conditions laid out in respective environmental compliance agreements shall be strictly enforced and monitored by the PMU. Approval shall only be approved if monitoring plan is completed and approved.

During operation, in many cases the final phase of a sub-project cycle, it is important to properly identify the evaluation activities, targets, and means of verification. More information on M&E is provided in Section 10.

7.0 Analysis of Environmental Impacts

During the preparation activities, several sub-project ideas were identified and a list of eligible investments was developed. Eligible investments under Sub-projects include (i) rehabilitation of degraded sites such as prescribed burning, thinning, monitoring for insect damage and removing trees where pest outbreaks are detected, and reforestation and enrichment planting where necessary, and (ii) sustainable harvesting and marketing of non-timber forest products (NTFPs) and other community-based forestry opportunities such as Xate production, beekeeping, preserves and oil preparation, agro forestry, and cacao production.

These sub-projects, if developed, may have either negative and/or positive impacts on the physical environment or biodiversity: There are a number of variables that will eventually determine the nature and duration of these impacts. These variables include the size and scope of the sub-project, the location, sensitivity of the area, technical capacity and motivational behaviour of the sub-project developers, level and quality of support and supervision of sub-projects' environmental management by the Project and other relevant actors, etc. The sub-project ideas can be grouped into several broad categories and their potential impacts assessed in an overall manner.

Agriculture:

Some of the negative environmental impacts most frequently associated with agriculture include:

- deforestation and loss of habitats;
- uncontrolled fires;
- pollution from pesticide use and runoff;
- soil erosion, particularly on slopes;
- soil degradation and loss of nutrients;
- sedimentation; and

- enrichment of water bodies.

Agro-processing and value adding: The impacts from activities associated with agro/food processing depend to a large extent on the size and location of the operation. At the lower production volumes agro-processing is considered a light industry.

Potential impacts include:

- enriched effluent in water bodies;
- solid and liquid waste disposal issues; and
- air and noise pollution.

Non-timber forest products: The impacts from activities associated with the harvesting of NTFPs depend on the scale to which it is undertaken. Some of the NTFPs that are targeted in Belize include Xate, Palmetto Palm, Cohune, Botan and Bayleaf.

Potential impacts include:

- loss of biodiversity;
- overexploitation; and
- habitat modification.

8.0 Environmental Management Procedures

8.1 Overview of Environmental Management

Environmentally responsible development is essential to the Project success. Potential negative environmental impacts of the Project will result from the implementation of the sub-projects. Therefore, adequate environmental management must take place throughout the sub-project cycle. Enhanced forest and biodiversity protection and management within the target areas being the core Project objectives, it is imperative that the sub-projects on alternative livelihoods conform to the environmental protection principles.

The sub-projects will need to be developed and approved based on the overall Project objective on strengthening NRM and biodiversity conservation in KBAs.

The selection of sub-projects to be funded by the Project under Component 1 will be based on two main activities: 1) determination of a set of options for community based activities from a feasibility and risk analysis of and around the 6 target sites, and 2) needs and priorities identified by the communities around the 6 target areas. Based on this information, there will be a call for proposals from relevant communities and NGOs working in or around the target sites.

Once the Project makes a call for proposals, the Technical Advisory Committee will evaluate the proposals based on the following criteria:

- Objective of Sub-project
- Applicant's Qualifications
- Community Engagement
- Sub-project Implementation, Management and Monitoring Plan
- Sustainability of Sub-Project Results
- Budget Ceiling
- Counterpart Funding
- Sub-project Period

8.2 Environmental Exclusion Criteria

In addition to the overall eligibility criteria presented above, sub-projects will be excluded from consideration based on the following environmental criteria:

1. No environmental scan or analysis was done (sub-project documents are submitted without the applicable environmental management instrument);
2. It is on Schedule I of the EPA Regulations or on Schedule II but requires an Environmental Impact Assessment or Category A of the World Bank Safeguards (See Annexes II and III, chapters 4.1 and 5.2 and Table 7 above); the negative impacts are irreversible and/or would require significant investment to mitigate or repair;
3. Even if temporary, the impacts are sufficiently large to negatively affect nearby communities for an extended period;
4. It is in an area that is considered sensitive by the respective lead agencies, for example core zone of a protected area or a known historical or cultural site;
5. It employs technologies that are considered to be inappropriate for the area or the country; and
6. It introduces non-native species or uses GMOs.

Once these conditions are met, the Technical Advisory Committee (TAC) will determine if the grant size is appropriate for the activity and PACT will manage the fiduciary aspect of sub-projects with the PMU being responsible for monitoring and reporting on sub-projects.

8.3 Overview of Environmental Screening

Each sub-project will be screened for its potential negative and positive socio-environmental impacts. The goal is to enhance the positive impacts while avoiding or reducing the negative impacts. The initial environmental screening will determine sub-projects' environmental eligibility and provide the basic information for the Project Management Unit (PMU) to determine if the sub-project requires further environmental assessment to ensure that the appropriate environmental safeguards are in place and authorization is obtained as stipulated in the EPA or EIA Regulation.

The following steps will be taken to ensure proper environmental management at all stages and levels:

1. There will be careful screening of sub-projects while the project proposals are being developed to ensure that all the necessary safeguards and regulatory requirements are built into the sub-project at the start.
2. Detailed environmental management plans (EMPs) will be developed where they are required.
3. Where a detailed EMP is not required, the Project Officer will guide sub-project proponents to identify and apply the applicable set of good environmental practices and related indicators will be developed and a monitoring framework established.
4. The Project Officer will conduct monthly field visits to support and monitor EMP implementation, focusing especially on the higher-risk sub-projects.
5. The Project Officer will report back to the PMU and the TAC.
6. Specialized technical expertise for example on integrated pest management will be called in when and where it is required.

In identifying impacts, all sub-projects will be screened by the PMU with the assistance of the TAC to assess the impact of activities proposed for funding in order to deem their socio-environmental eligibility and identify adequate mitigation measures that need to be applied to ensure their socio-environmental sustainability and thus compliance with the local environmental and WB protection measures. To make certain that this occurs, all sub-project proposals will need to be accompanied by a preliminary sub-project screening form **(Annex V)**. The intention is to provide a standard format for initial screening of all sub-projects to ensure that assessment takes in the wider system and not only the local sub-project area.

Categorizing of sub-projects is the first important step in properly identifying likely perceived impact on the environment, based on the characteristics of proposed activities and their specific location. Therefore, at this stage a generic impact assessment matrix and guide adopted from an IDB Sustainable Tourism Project in Belize is introduced and recommended for use to properly screen sub-projects **(Annex VI)**. The process of sub-project categorizing is based on the combined likelihood and severity of the consequences and allows for an unbiased and consistent preliminary assessment of sub-projects regardless of their location. This categorizing

carried out by the PMU-DOE will be utilized to identify and assess the major impacts, both negative and positive, at an initial stage of sub-project preparation.

Properly identifying the impacts that a sub-project will have on the environment or vice-versa is critical to plan for an adequate mitigation response. The impact identification matrix will provide the platform on which all impacts will be assessed to ensure that they will be equally quantified across sub-projects and thus all proposed activities shall be vetted using the procedures set out in this EMF. This will facilitate reliable and accurate screening processes and traceability in determining the expected impacts.

The impact identification matrix consists of four levels of consequences and likelihood of those consequences occurring. By corresponding the consequence with the likelihood, three levels of preliminary impacts can be determined: significant, medium, and low **(Annex VI)**. Therefore, the level of risk is determined at the point where the consequence and likelihood of it occurring intersects.

9.0 Mechanism for Application and Responsible Agencies

The purpose of the EMF is to provide a practical and user-friendly guide stipulating the local and WB environmental requirements that must be met before a sub-project can be approved for implementation under the Project. Since the specific sub-projects will be defined during Project implementation, the EMF includes a Project Appraisal and Approval Map **(Annex VII)** that guides the PMU staff regarding the entry points of environmental management throughout the sub-project cycle.

The PMU will be responsible for the overall implementation of sub-projects and activities with the assistance of technical Departments including Forestry, Environment and Agriculture in addition to oversight provided by the members of the TAC. The TAC, will also be able to co-opt members from other regulatory agencies such as Pesticide Control Board on an as needed basis to review and advise on matters pertaining to their area of expertise.

Furthermore, since the DOE is the entity that has the legal mandate to evaluate project proposals on the basis of their environmental suitability geared towards protection, the sub-project proposals will need to also comply with the national environmental screening process to obtain environmental clearance prior to implementation.

9.1. Consultation Process for Preliminary Sub-Project Selection

During the initial stakeholder consultations, it became evident that the Project will entail two types of activities: those geared towards institutional capacity building and strengthening

primarily benefitting the regulatory and licensing agencies, and sub-projects geared towards alternative livelihoods aimed at reducing pressures on KBAs.

Activities to consider for financing under the first segment includes:

- Institutional capacity building and strengthening involving managerial, technical, and financial assessments for managers, technical officers and technicians based on the outcomes from diagnosing needs to determine the existing capacity and training needs or needs to increase available human resources to effectively manage projects.

- Certification for EIA preparers with an aim of increasing the quality of the EA reports.

- ICT training for increased efficiency in monitoring and evaluation of impacts. This will facilitate enhanced adoption of corrective measures at an early stage as needed.

- Consolidation of the EA reports to build scientific database on information collected across the country to build data on time series necessary to predict impact trends due to development plans. The efforts will help to identify and address cumulative impacts and make it easier for the regulatory agencies to verify information through the EA process and other sources. The initiative can also be combined with development trends such as projected population growth and changes in land use (agriculture, tourism, residential, commercial industrial) that can be used to guide higher decision making to meet Horizon 2030 Framework (2010) objectives. These initiatives will require development of institutional memorandums of understanding to help foster the necessary collaborative relationships.

The other segment includes sub-projects on community based alternative livelihoods that will be developed during the Project implementation. Possible sub-projects may include:

- Agro-forestry/ecological farming,
- Reforestation of abandoned milpa to forest status,
- Forest management through controlled burning,
- Small scale pasture and aquaculture initiatives, and
- Local craft development with residual timber and NTFP

However, in order to identify specific activities to be funded under sub-projects, a detailed socio-economic assessment of the target areas and surrounding communities will be conducted by a team of consultants during the first months of Project implementation. The assessment will result in the identification of specific Project activities that could be implemented and the potential socio-environmental impacts that those activities could have, including the livelihood

activities that will be impacted, and the options that the Project could offer as sustainable alternatives. The support of the community leaders and residents will be sought through meetings and discussions to identify those who would be directly impacted by the Project and what actions will need to be taken to ensure positive social and environmental benefits.

10.0 Grievance Redress Mechanisms

The grievance redress mechanism (GRM) is being established in order for the sub-project stakeholders (communities, NGOs, etc.) to be able to voice their concerns, complaints, or dissatisfaction with any part of the environmental management process and seek redress. Complaints can be made concerning principles, rules, guidelines, and procedures to assess the environmental impacts or measures and plans to reduce, mitigate and/or offset adverse impacts that may be included in the sub-project specific Environmental Management Plans.

The GRM is to be presented by project staff to community members during the project inception workshop and community consultations and other communications activities for the project. The project staff will become familiar with the GRM and be trained in conflict resolution to be able to participate in on resolution of minor problems that may arise during project implementation.

Grievance redress will be approached both proactively and reactively:

Proactive approach:

a) Widespread disclosure of project background, potential environmental impacts and mitigation measures.
b) Establishing a mediation committee (made up of community leaders associated with the specific sub-project and staff of the Project Management Unit, PMU), to review any grievances that may result from the sub-projects.

Reactive approach:

a) Settle disputes amicably
b) If disputes arise, they will be documented by the PMU and brought to the attention of the Project Steering Committee (PSC).
c) When a complaint is documented, the PMU will acknowledge its receipt in a correspondence that outlines the GRM and provide the contact information and timeframe for responding to the matter.
d) Subsequent to documenting the complaint, the next step is to determine whether a complaint is eligible for the grievance mechanism, in addition to its seriousness and complexity. The PMU, in the process of identifying the complexity of the grievance should evaluate the situation and utilize the following approach:
    - Hold a meeting with the aggrieved party (ies) to clearly identify the complaint and circumstances surrounding it to present to the PSC for review;
    - Discuss proposed solutions;
    - Defer to a third party for independent recommendations.

e) The PSC will then determine if the dispute can be settled directly or if it is necessary to call upon the mediation committee to review the grievance.
f) If disputes cannot be solved at the local level, they will follow additional tiers of appeal as described below:

Tiers of Grievance Redress Mechanisms	Responsible party	Mechanism	Timeframe to address grievance
First tier	Project Management Unit in consultation with Project Steering Committee to address dispute and/or determine line of action	Oral or written grievance (free of cost)	1 week
Second tier	Local authorities in consultation with local level mediation committee	Written grievance (free of cost)	2 week
Third tier	Ombudsman	Case submission (free of cost)	3 weeks
Fourth tier	Judicial system	Contracting a lawyer (high cost) or use of Solicitor General's Office	Lengthy process and long delays (to be avoided by First through Third tier mechanisms)
Assistance for aggrieved persons belonging to vulnerable groups for accessing legal recourse	Legal Aid Office in Belize City List of other pro bono lawyers in Belize will be provided for low-income population who cannot afford legal counsel	Low cost option	Lengthy process (to be avoided by First through Third tier mechanisms)

11.0 Estimated Budget for the EMF Implementation

The guidance from the EMF will be required over the sub-project cycle from planning to operation. Sub-projects will be monitored in the frequency outlined in respective Environmental Management Plans by the PMU after sub-projects' approval.

The Project Manager, with the assistance of the Project Officer will be responsible for securing sub-project implementation according to the Project Operational Manual and the included safeguards instruments and their monitoring during the sub-project cycle. Therefore, the PMU will be required to have substantive work experience in environmental science, natural resource management or a related field and have a working understanding of the local environmental legislation and the World Bank safeguards.

Component 4 of the Project includes cost for Project management, monitoring and evaluation and as such the cost for PMU site visits and consultations for Project activities. Therefore, implementation of the EMF will be covered from this component, as well as the relevant component under which each activity falls, as needed. Particularly, costs associated with the environmental screening, potential licensing, and monitoring process will need to be included in the budget for the sub-projects.

12.0 Monitoring and Evaluation

The purpose of the following outline on the Project's environmental monitoring and evaluation plan is to guide the PMU throughout the implementation of the sub-project cycle to completion and operation. It will be developed by the PMU based on the actual activities outlined for a sub-project, its aims, objectives, outcomes, outputs, identified impacts, and mitigation and other management measures as applicable. The monitoring will provide feedback in order to determine if a sub-project is in compliance with the requirements for environmental protection set forth in the sub-project document. Regardless if a sub-project requires an environment assessment, its overall M&E must reflect the core environmental activities to be monitored. Since sub-projects have not been developed prior to Project implementation, development of the sub-project-specific EMPs will be used to determine what information to monitor during sub-project implementation. For example, monitoring potential impacts on physical cultural heritage is addressed in **Annex VIII**, Part II B in the EMP checklist and **Annex IX** on the change find procedures.

Final evaluation takes place after implementation of each sub-project to identify whether the expected positive impacts or results were achieved and/or the negative impacts prevented or mitigated. Establishment of applicable baseline values is critical for environmental monitoring, for example in case of sub-projects that can impose a risk on local water quality. The baseline values allow measuring of the changes that occur due to the sub-project implementation.

Overall, indicators for environmental monitoring need to be time bound and the activities completed within the timeframe provided in the work plan. The PMU will be responsible for ensuring that the expected results are achieved during sub-project implementation.

Annexes

Annex I: Stakeholder Consultations

1.1 Inception Workshop

Ministry of Forestry, Fisheries and Sustainable Development Management and Protection of Key Biodiversity Areas Project Preparation Grant

Inception Workshop

List of Participants

Belmopan Hotel

November 23rd, 2012

Name of Participant	Organization/Department
Ricardo Thompson	MNRA
DeadraHaylock	Consultant
Janet Gibson	WCS
Nayari Diaz-Perez	PACT
Angela Usher	PACT
Arnoldo Melendez	F.C.D
Raphael Manzanero	F.C.D
Victoria Cawich	F.D
Yvette Alonzo	GIZ- Selva Maya
Martin Alegria	DOE
Reynold Cal	Runaway Creek Nature Preserve
LeonelRequena	GEFSGP/ COMPACT
Leonide Sosa	DOE
Wiezman Pat	MFFSD
Steven Reneau	B.W.B/A.S.F
Aldo Cansino	DOE

Jorge Franco	DOE
Anthony Mai	DOE
IsaisMajil	Fisheries Department
Tanya Santos	FD
Roan Mcnab	WCS
Amanda Acosta	Belize Audubon
Paul Walker	wild tracks
Cecy Castillo	UB
Jan Meerman	Belize Tropical Foundation Studies
Oswaldo Sabido	Consultant
Rasheda Garcia	FD
Saul Cruz	FD
Name of Participant	**Organization/Department**
Celi Cho	DOE
Dwight Montero	STACA
Valdemar Andrade	Ministry of Tourism & Culture
Elma Kay	ERI-UB
Maarten Hofman	Ya'axché
Emily Aldana	Ministry of Finance and Economic Development
Jose Perez	APAMO
Arlene Maheia-Young	NPAS
Rebecca Foster	PANTHERA
Derric Chan	Friends for Conservation and Development
Ian Morrison	Enviroplan/Consultant
Marion Cayetano	Development /Consultant

Inception Workshop Notes

The overall purpose of the Inception Workshop was to reach out the relevant stakeholders so they could get involved in the project preparation process. Among others, this would allow to ensure the complementarities with other relevant initiatives/projects.[9]

To this end, background materials were sent to the invitees including the draft agenda, a project overview report, and the primary report describing and documenting the key biodiversity areas in Belize[10].

The workshop was conducted by the consulting team. After introductions, presentations were made regarding the project objectives and beneficiaries. Subsequently the three components were outlined with the purpose of opening up discussions on the substantive themes. Then subgroups were established led by the consultants and participant volunteers. Component 1 and 2 were linked together as several themes run across them. Component 3 run on its own. A recorder documented input by participants, and the results follow. The following Agenda was followed.

Agenda:

8:30 a.m. - 9:00 a.m. Registration of workshop participants

9: 00 a.m. - 9: 15 a.m. Welcome and Introductions

9: 15 a.m. - 9: 25 a.m. Workshop objectives

9: 25 a.m. - 9:45 a.m. Overview of Project objectives, outcomes and outputs

9: 45 a.m. - 10:00 a.m. Project Preparation Grant Activities

10:00 a.m.- 10: 15 a.m. BREAK

10:15 a.m. - 11:00 a.m. Activity 1: break out groups (3) to provide feedback on project components, outputs and outcome

11: 00 a.m. - 12:00 p.m. Presentations of results of Activity 1

12: 00 p.m. - 1:00 p.m. LUNCH

1:00 p.m. - 2:00 p.m. Activity 2

2:00 p.m. - 2: 50 p.m. Wrap-up discussion

2: 50 p.m.- 3:00 p.m. Closing remarks

Subgroup Topic 1: Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas. Component 2: Promoting Effective Management of Key Biodiversity Areas (KBAs)

[9] As additional workshops are anticipated, it is important to document the results of the Inception Workshop

[10] Meerman, J. 2007. Establishing a Baseline to Monitor Species and Key Biodiversity Areas in Belize. Critical Ecosystem Partnership Fund. Unpublished report. 15 pp.

The members of the Subgroup considered it useful to discuss the topic in three sub-topics in order to share their perceptions and expectations.

Sub Topic: Status and On-going Activities in the KBAs

A. Forest Protection

Major issues:

- Incursions for extraction especially xate but also wildlife
- Illegal activities from Belizeans in Forest Reserves - agriculture; rosewood and nargusta illegal logging; instructed and supervised in the field by Chinese companies [Rather than singling out nationalities maybe we could use the legal term *alien?*] Among other reasons, Belize, Guatemala, and many others countries are members countries of international organizations. They avoid singling out countries unless the evidence has been established.
- Medina Bank / Deep River facing same issue
- Chiquibul - similar issues with transboundary activities; illegal panning for gold; looting of Mayan sites; poaching - macaws and other species
- Vaca Forest Reserve - local and Guatemalan illegal logging [alien enterprises?]
- Belizeans public knows Chiquibul is under siege; FCD has brought the figures;
- Now there is new evidence of erosion of genetic pool of timber species
- Looking at collaborative effort with CONAP and others
- National Security Issue is rolled into this for all PA into Western Border
- Chiquibul, El Pilar, Vaca, Deep River situation a little different from North
- we cannot stop the situation completely which is why we are looking for ways to containing it
- Currently , police and military cooperation with PA managers need special forces

Challenges and what is needed-

- There is limited man power even with collaboration from other agencies such as police and BDF
- Need more conservation posts for Chiquibul area - two outstanding Valentin and one for Columbia need specialized equipment and training apart from man power; these posts important in curbing illegal agriculture
- Place an authority on the ground
- People change their way of operating illegally
- Conflict between co-managers on the ground. Immunities because enforcement and education being
- done by same so this project can help to work out a new system in which regulatory agency is strengthened but we can also look at formation of NGO or entity just tasked with enforcement
- Forest Governance issues go wider than just enforcement and need to analyze this especially greater transparency
- Lack of resources at regulatory agency but also regulations need to be amended to have higher penalties; need more education of laws...people are not aware....only 10% of 1% of population interviewed do not know who is responsible for enforcement

- Need to empower regulatory agency and take a good look at how co-managers function; need strategies for stewardship/ownership
- FD needs to understand that situation has become so complicated; very unlikely that they will ever have the resources...we can look at a GoB/NGO model as in Honduras; one day we might even move to Community Governance e.g. Local Village Councils; need more decentralization
- If Project can do economic valuation? - communicate value of PAs maybe to encourage politicians to budget more for PA protection and management; just need to educate public on revenue, jobs etc. that PAs bring and sensitize people on this...don't need to do fancy economic valuation
- Strategic for GoB to enter into Landscape Management Program/Strategies at Vaca to promote stewardship - need pilots
- Need long term streams to sustain Management of the system/ business models
- Working with judges and police to make sure prosecution is effective and higher fines; working with communities...some NGOs deal more with engagement of communities and others more with enforcement; signing contracts with communities so they become stewards
- SMART and MIST to track if enforcement is effective - software for testing

Things that project can do:

- Strengthening of FD is a necessary action but this is not sufficient - needs to take a leadership and coordination role; needs to have a community relationship that commands respect; need a decentralized system; FD needs to coordinate partnerships with NGOs etc. to be effective; extension with training, equipment and support from the PACT; need to legally bestow power on NGOs to do enforcement; need legislative reform; clarification of role of FD because they have a key role in enforcement
- Good communication and outreach to public, prosecutors etc. regarding the law but also value of PAs
- legislative reform to ensure transparency and modify fines etc
- research on all forest species and sustainable extraction levels
- Target areas : Columbia and Bladen; Maya Mtn North Forest Reserve and TIDE Private Lands

B. Sustainable Forest Management

Things that the project can do:

- Licensing for logging/ extraction of forest products needs to be looked at including monitoring
- number of short term licenses were minimal and process of applying was harder so cut down from 200 to 50 and in forest reserves only long term licenses; fear that we are causing more illegal activity; checkpoints work
- Need to also look at system for hunting permits etc., hunting seasons....200,000 animals being hunted annually for consumption; 7% of meat consumption is from game meat; need to take a look at the law and how these are enforced; we tend to prosecute small guys in villages rather than the big guys...enforcement across the board....transparency
- Need research - need research on game animals not just charismatic species
- Need to remove discretionary power from Ministers e.g. Living Aquatic Resources Act
- Need to look at non timber forest products and how these can sustain communities

C. Promoting Effective Management of KBAs

Things that project can do:

- Management Effectiveness Training but also Biodiversity Monitoring (Biodiversity Monitoring and National Strategy for Long term Forest Monitoring need to be implemented - biodiversity monitoring is big gap) and need for direct measurement of how effective we have been in stabilizing or reducing illegal activities e.g. national patrol information system
- Need to look at limits of acceptable change
- Need to look at biodiversity integrity

For Sustainability:

- Need linkage with Private Sector needed; need to look at incentives so people are encouraged to do things the right way
- Need business development support for communities; alternative livelihoods; community approach is key...NGOs need to be working themselves out of a job by creating community stewardship....sustainability needs to be for PA not NGO
- Need to look at alternative uses - using it to protected it e.g. via tourism or even oil extraction with proper abatement measures
- Need consolidation - use resources wisely and avoid duplication of resources; this is key as part of sustainability
- Need institutionalized systems - for training, monitoring and research, licenses
- Need good land management - implementation of Sustainable Land Use Policy and need a plan; more sustainable agriculture so need Ministry of Forestry, Fisheries and Sustainable Development to work closely with Ministry of Natural Resources and Agriculture

Subgroup Topic 2: Component 3. Institutional Strengthening & Capacity Building for Enhanced Enforcement of Environmental Regulations

The members of the Subgroup considered it useful to discuss the topic focalizing on specific expected outputs and associated options or suggestions.

- A functional Departmental Steering Committee on conservation to oversee the process established
    - Two models were suggested
        - TOR for NEAC expanded to include additional responsibilities to meet the above expected outcome.
        - A committee parallel to the NEAC be established but with the legislated inclusion of only governmental department s but with the power to call on stakeholders (NGOs, CBOs) depending on the issue

- Staff in the key agencies of the Government of Belize, charged with safeguarding Belize's natural resources, are trained and equipped with the necessary assessment and compliance monitoring tools (e.g., Forest Department, Department of Environment, Geology and

Petroleum, Lands and Survey, Fisheries Department, Coastal Zone Management Authority and Institute, Belize Agricultural Health Authority, etc.).
    - Methodology for "rapid environmental assessment" developed to make training easier for trainers and trainees
- Partnerships with the private sector for monitoring of natural resource use improved
    - Ongoing training extended to the private sector players to ensure that the process is understood and assistance effective
- Collaboration with civil society in natural resource management strengthened.
    - Funding current available from PACT and NPAS project for local NGO's, that do not meet criteria, to build capacity (do not need to be addressed through this project)
- Forest licensing mechanisms that foster the use of forests in a sustainable manner improved
    - This output is better served under Components 1 or 2 for harmonization
- Co-management agreements for PAs modernized and enhanced.
    - Co-management recently signed but ongoing review needed for modernization but not an immediate priority
- Applications designed to automate workflows and registries (including KBAs, PAs, and forest licensing, among others) and (e.g., for tracking of reports and provision of timely feedback about agency response) developed and in use.
    - Training for people based on the function of the agency
- Specialized training provided to agency staff on the use of ICT communication tools developed
    - Alternative training methods for CBO to ensure valuable contribution to database taking into consideration resource and skills availability.
    - Coordinate with ongoing initiatives – sustainable forest management (SFM), National Spatial Data Infrastructure (NSDI), etc.
- EIA preparers' certification program for enhanced environmental compliance established under the DOE
    - Qualitative and quantitative criteria established for address structure, grammar, referencing, guidelines for presentation and unification of impacts, mitigation and monitoring across reports
    - Methodologies for the determination of impacts
    - Review and modification of existing certification programmes locally and regional as a starting point
    - Update of EIA preparers guidelines
- Clear TORs for the NEAC strengthened
    - Elaborate on roles and functions
    - Preparation of an operations manual
- The NEAC's autonomy and transparency of procedures increased by regular updates and publication of the Committee's decisions (on publicly accessible websites)
    - Debriefing on ECP at the community level
    - Communities involved in monitoring
    - Public press release of NEAC decisions
- The discretionary power of the Minister is removed from the EPA and the EIA Regulations
    - This output was addressed in the 2007 EIA amendment regulations with the inclusion of a tribunal but not the same for forestry and fisheries

Other Issues:

- Review of EIA to determine if Socio-economic aspects are being properly addressed in EIA or should be removed to be addressed elsewhere
- Develop comprehensive environmental quality monitoring procedure and compilation of EIA report data to develop data base
- The 2005 NPASP reviewed and updated with relevant climate change issues
    - Better to address this in component 2
    - Ongoing initiatives (Ann Gordon Climate Change Office and CCCCC)

Observations from the Inception Stakeholder Workshop

Structure of the Workshop was geared at offering an opportunity for the participants to offer their views and submit interventions that would guide the development of the PPG and on to the final ProDoc.

Observations:

- ✓ The interventions offered by participants were mostly given during the breakout sessions.

- ✓ Participants appeared knowledgeable and willing to offer their technical knowledge and experiences gained from their individual course of professional work either as public service technicians or managers of protected areas

- ✓ The attitude was fairly positive but it was evident from one-on-one comments the project appeared ambitious and there existed an uncertainty as to whether its implementation timeframe would allow for goals to be achieved. Particularly, the project outcome of removal of Ministerial discretion drew many sighs, smiles indicating a belief that the goal was a bit reaching considering Belize's political environment.

- ✓ The plenary session was not robust as there were no interventions outside what was already offered in the breakout sessions.

It can be surmised that while the attitudes were positive there existed a bit apprehensiveness on the part of the few protected areas managers and environmental/conservation technicians that attended as they seemed to want to wait to see what would come out of the consultancy exercise yielding a final project document.

The structure of the workshop and its activities did not offer much opportunity to test behaviours or attitudes. It was mostly left to be derived from an observation basis.

Contributions from the Stakeholder Representatives that Discussed Component 3 at the Inception Workshop held on November 23rd, 2012

Expected Outcomes	**Expected Outputs**	**Comments/Suggestions**
3.1 Enhanced coordination among Government agencies charged with conservation	3.1.1 A functional Departmental Steering Committee on conservation established	Two models suggested i. TOR for NEAC expanded to include additional responsibilities to meet the outcome of 3.1. ii. A committee parallel to the NEAC be established but with the legislated inclusion of only governmental departments but with the power to call on stakeholders (NGOs, CBOs) depending on the issue
3.2.Strengthened capacity for compliance monitoring and enforcement of key agencies responsible for environment	3.2.1 Staff in key agencies trained and equiped with better assessment and compliance monitoring tools and capacities	Methodology for "rapid environmental assessment" developed to make training easier for trainers and trainees
	3.2.2 Partnerships with the private sector for monitoring of natural resource use improved	Ongoing training extended to the private sector players to ensure that the process is understood and assistance effective
	3.2.3 Collaboration with civil society in natural resource management strengthened	Funding currently available from PACT and NPAS project for local NGO's, that do not meet criteria, to build capacity (do not need to be addressed through the Project)
	3.2.4 Forest licensing mechanisms that foster the use of forests in a sustainable manner	This output is better served under Components 1 or 2 for harmonization
	3.2.5 Co-management agreements for PAs modernized and enhanced	Co-management recently signed but ongoing review needed for modernization, yet not as an immediate priority

Expected Outcomes	Expected Outputs	Comments/Suggestions
3.3 Enhanced effectiveness of the Environmental Impact Assessment (EIA) System	3.3.1 . EIA certification program for enhanced environmental compliance established	• Qualitative and quantitative criteria established to address structure, grammar, referencing, guidelines for presentation and unification of impacts, mitigation and monitoring across reports • Methodologies for the determination of impacts • Review and modification of existing certification programmes locally and regionally as a starting point • Update of EIA preparers' guidelines
3.4 Climate Change mitigation and resilience considerations mainstreamed into the National Protected Areas System Plan (NPASP)	3.4.1 The 2005 NPASP to capture relevant climate change issues reviewed and updated	• Better to address this under Component 2 • Need to consider ongoing initiatives such as the Ann Gordon Climate Change Office and CCCCC

The new frontier is resulting in a shift of the traditional norms and practices in the quest to earning a livelihood for a basic standard of living or to meet commercial demands. With the reduction in the easy access to some raw materials, the methods for extraction are becoming more abrasive, with less regards for the environment and in some instances highly exploitative, registering low on the sustainability gauge. Therefore, new approaches that requires shift in the paradigm for those that have the responsibility for natural resource safeguard for present and future generation to have long term benefits.

Following the stakeholders workshop the team of consultants carries out a one week site visit in the north, west and south of the country. The objective of the exercise was to obtain a better understanding of the environmental issues, the implication of the environmental act, environmental protection regulations and the extent of their engagement with the Department of the Environment, Forest Department, Fisheries Department, Geology and Petroleum Department, Coastal Zone Management Authority and Institute (CZMAI), Belize Agriculture Health Authority (BAHA). The information will be used increase the understanding of the roles of the regulatory agencies in an effort to make it easier to implement environmental protection measures during project implementation and operation.

Sites for visit were selected based on location and land tenure, management and community status to gather as much knowledge on a variety of issues. Areas in the north and west included the largest private and public land holdings, while area in the south captured smaller private and public land holdings in as areas where two indigenous groups exist, lower employment opportunities and co-management agreements with the government of Belize.

The table below summarizes the comments and concerns from some of the stakeholders participated during in the information sharing sessions.

Date Visited	Location	Organization/Person	Comments/Observations
Fri. November 23, 2012	Belmopan	Department of the Environment Martin Alegria (Chief Environmental Officer)	CEO is fully aware of the project activities and benefits and indicated that the preference would be to concentrate on converting all files to electronic data. No emphasis of scientific data compilation for decision making, at this point.
	<u>Toledo</u> Sundaywood Village	Mateo Tosh, Alcalde	
Mon. Nov 26, 2012 -	CriqueSarco Village	Juan Ch'oc, Chairman	Environmental awareness is through engagement with SATIIM. No direct engagement with the DOE
Mon. Nov, 26, 2012 -	TIDE's Office	Toledo Institute for Development and the Environment (TIDE) -Salim Chan, Marine Manager James Lord, Development Director (Port Honduras Marine Reserve, Paynes Creek National Park, TIDE Private Protected Lands along Rio Grande River)	Environmental awareness is through engagement of SATIIM. No direct engagement with the DOE Environment protection is through their environmental conservation initiatives. Director indicated that need did not arise to directly engage the DOE in terms of the Environmental Protection Act (EPA) and
Tues. Nov 27, 2012	YCT's Office	Ya'axché	

Date Visited	Location	Organization/Person	Comments/Observations
		Conservation Trust (YCT), Bladen Nature Reserve and Golden Stream Corridor Preserve - Christina Garcia, Executive Director; Lee McLoughlin, Protected Areas Manager; Gail Stott, Botanist; Tom Pienkowski, Head Development Officer	pollution regulations Have not engaged the DOE directly in the pass for guidance on environmental protection. EP is done intuitively through conservation advocacy and alternative livelihoods programmes. Currently have a court case pending with the GOB/DOE
Tues. Nov 27, 2012	SATIIM's Office	Sarstoon and Temash Institute for Indigenous Management (SATIIM), Sarstoon-Temash National Park (STNP) – Gregory Ch'oc, Executive Director	Similar to Ya'axché
Wed. Nov 28, 2012	<u>Cayo District</u>	Friends for Conservation and Development, Chiquibul National Park - Rafael Manzanero, Executive Director	National issues related to incursion, encroachment and poaching. Extraction of NTFP. Remoteness and limited resources increase difficulties and present more challenging to protect and preserve. Promoting and encouraging alternative livelihoods through farming. Engaging boarding Guatemalan communities by extending invitation to share best practices and low impact techniques by small farmers in Belize.
Thurs. Nov 29, 2012	<u>Orange Walk District</u> San Filipe		
Thurs. Nov 29, 2012	La Milpa Field Station	Mr. Peralta (Principal, San Filipe R.C. Primary School)	

Date Visited	Location	Organization/Person	Comments/Observations
Thurs. Nov 29, 2012	Gallon Jug	Programme for Belize, La Milpa Field Station - BladimirRogrigues, Manager	No need for direct engagement with the DOE. Environmental awareness in the primary school is done through cooperation with PFB with trips to PFB managed access area and representatives of PFB visiting the school at least one per year. According to the rep the outreach can be increased to once per term or TT/Y. Outreach and site visits are mainly for STD IV and V classes
		Gallon Jug - Alistair Macpherson, General Manager	
Fri. Nov. 30, 2012	Belmopan	Department of the Environment, Aldo Cansino, Project Officer	Carries out environmental friendly and sustainable practices to control pollution in the biosphere in its operation. Include logging and milling of timber, agriculture (coffee, sugar cane and cocao) and pasture and eco-tourism destination through tourist accommodations. Did not explore other spinoff consequences in detail, because of the activities, such as fuel storage, waste management, emissions control. Did not engage the DOE or vise-versa. Provided information on data transfer from manual to digital combining files with GIS maps. Discussion on

Date Visited	Location	Organization/Person	Comments/Observations
			information dissemination was not directly budgeted but nevertheless has a strategy that focused on radio, school presentations, and public events such as expo's. GIS analysis was limited since database was being populated. Cooperation with NGO for eyes on the ground promoted as much as possible. Limited consolidation of existing EA's for development of time series data. Extent of progress needs further evaluation. No cross sector access to database but the National Spatial Data Information (NDSI) should help to address this issue. There are a number of related projects in progress (Ozone depleting substances control, Pollutant Release and Transfer Register (PRTR) and Strategic Approach to International Chemical Management (SAICM)).

Recommendations

It was clear and evident from the stakeholders' two forms of projects will be required. The first is type is institutional development that wills benefits mostly regulatory and licencing agencies. The second field of projects are geared towards alternatives livelihoods to reduce pressures on KBA's.

Activities to consider for financing under the first segment includes:

-]Institution Capacity and Development Evaluation involving managerial, technical and financial assessments for managers, technical officers and technicians based on the outcome from diagnosing needs to determine the existing capacity, where training need to be concentrated or the need for increase in human resources to effectively manage projects.

Certification for EIA preparers that will have an aim of increasing the quality of the EA reports

- ICT training for increase efficiency in monitoring and evaluation of impacts. This will help with a higher level of intervention for corrective measures to be taking at an early stage after conclusion of the evaluation.

- Consolidation of EA report to build scientific database on information collected across the country to build time series data necessary to predict trends due to development plans. The efforts will help to develop cumulative impacts that will make it easier for the regulatory agencies to verify information through the EA process and other sources. The initiative can also be combined with development trends such as projected population growth and land use (agriculture, tourism, residential, commercial industrial) that can be used to guide higher decision making helping to meet Horizon 2030 objectives. These initiatives will require the development of institutional memorandums of understanding that would help to foster the relationships.

The other segment is the implementation of community based development projects yet to be fully finalized. These may include those projects that provide alternatives that would prevent project with high impacts on the natural biodiversity of the KBA's identified. Possible projects may include:

- Alternative livelihoods - such as agro-forestry/ecological farming

- Reforestation of abandon milpa

- Forest management through controlled burning

- Small scale pasture and aquaculture initiatives

- Local craft development with residual timber and NTFP

1.2 Field Visits Notes

MANAGEMENT AND PROTECTION OF KEY BIODIVERSITY AREAS (KBA) PROJECT

FOR MINISTRY OF FORESTRY, FISHERIES & SUSTAINABLE DEVELOPMENT (MFFSD)

WITH COORDINATING BODY BEING NATIONAL PROTECTED AREAS SECRETARIAT (NPAS)

FIELD VISITS

TOLEDO DISTRICT

CRIQUE SARCO AND SUNDAY WOOD VILLAGES

NOVEMBER 26TH, 2012

In attendance:

Eduardo Quiroga	Natural Resources Management Consultant/Team Leader
Jeff Waldon	Carbon Accounting Consultant
Ian Morrison	Environmental Management Consultant
Marion Cayetano	Social Development Consultant
Juan Ch'oc	CriqueSarco Village Chairman
Mateo Tosh	Sundaywood Village Alcalde

Absent:

DaedraHaylock	Communications Consultant

Objectives:

The trip was organized in order to complete the following objectives:

- Understand the communities appreciation of protected areas and the key issue areas for the project

- Understand the impact the protected areas have on community life and livelihood
- Understand the communities interest in alternative livelihood opportunities
- Receive a general appreciation of the area and the community life – with some appreciation for cultural practices, behaviors and attitudes as it relates to natural resources

From the Meeting with the Village Chairman Mr. Juan Ch'oc and Village Alcalde Mr. Mateo Tosh, the following were evident:

- The community does have an appreciation of the SarstoonTemash National Park (STNP) as important for biodiversity protection.
- The residents in the community benefit tangibly when the animals wander outside of the protected areas boundaries and allow for hunting.
- The protected areas manager does not provide livelihood opportunities for residents at this time. However, the community believes that it should.
- There is currently no telecommunications signal from SMART Cell in the area and DigiCell service does not work in the area at this time. This limits the community ability to participate in any project intervention that utilizes this technology in the course of the work whether it is geared at communications, protection issues for the protected area or otherwise
    - The community believes that the protected area (STNP) should benefit the community's livelihood but at this time it does not
    - It appears to them that foreign nationals have more access to the resources and protected areas than Belizeans
    - There is heavy illegal logging and hunting by foreign nationals
    - The availability of alternative livelihoods opportunities could assist greatly with managing encroachments on the protected areas
    - Some legal reform can assist alleviating or managing the pressures faced by the protected areas
    - Wood carving is an ideal alternative livelihood project in CriqueSarco but needs market development and management.
    - Any livelihood opportunity identified has to be long term and present real possibilities for maintaining family life
    - Environmental awareness is carried out via engagement with SATIIM

FIELD VISITS

PUNTA GORDA, TOLEDO DISTRICT

TIDE, SATIIM, YA'AXCHE

NOVEMBER, 27TH, 2012

In attendance:

Eduardo Quiroga	Natural Resources Management Consultant/Team Leader
Jeff Waldon	Carbon Accounting Consultant
Ian Morrison	Environmental Management Consultant
Marion Cayetano	Social Development Consultant
Salim Chan	Marine Manager – TIDE
James Lord	Development Director – TIDE
Christina Garcia	Executive Director – Ya'axché
Lee McLoughlin	Protected Areas Manager – Ya'axché
Gail Stott	Botanist – Ya'axché
Tom Pienkowski	Head Development Officer – Ya'axché
Gregory Ch'oc	Executive Director - SATIIM

Absent:

DaedraHaylock	Communications Consultant

Objectives:

The trip was organized in order to complete the following objectives:

- General understanding of the area under the protection of the organizations
- Scope of Work of the organizations in relation to its protected area and buffer communities
- Understand the impacts the buffer communities have on the protected area and vice versa
- Understand the organizations' involvement with the communities either via education projects and/or livelihood opportunities as well as establishing partnership for the protection of the area

Toledo Institute for Development & the Environment (TIDE) is responsible for the management of the Port Honduras Marine Reserve, Paynes Creek National Park and TIDE Private Protected Lands along the Rio Grande River

Ya'axché Conservation Trust (Ya'axché) is responsible for the management of the Bladen Nature Reserve and Golden Stream Corridor Preserve.

Sarstoon and Temash Institute for Indigenous Management (SATIIM) is responsible for the management of Sarstoon- Temash National Park (STNP)

From the meeting with TIDE, the below is evident:

- The forest faces fragmentation pressures
- It is believed the forests should provide more alternative livelihood opportunities for residents of the buffer communities
- TIDE manages its forests using the Reef to Ridge concept.
- The organization does not want to be seen as a land grabber but instead would like to build capacity of the communities to manage lands at the landscape level
- The forest faces logging and hunting pressures. Not many families are involved but they are persistent. The persistence is believed to be owing to the fines not being significant to serve as a deterrent.
- Environmental protection and education is via the environmental conservation initiatives.
- Need has not arisen to directly engage Department of Environment (DOE) in terms of the Environmental Protection Act (EPA)
- The organization is evaluating blue carbon and carbon financing
- TIDE sponsors tourism initiative for livelihoods options

From the meeting with Ya'axché, the below is evident:

- The organization faces similar issues as does TIDE in relation to its protected areas
- The organization is operating agro-forestry activities as part of landscape management. The activities are cacao based. Only meeting 10% of demand. Personnel needed to expand operation. Interested in nursery expansion and establishing a demonstration farm
- Golden Stream Village is growing 10% per year so the potential pressure presented by the community is intensifying.
- The organization is working on honey production
- The organization has completed above ground biomass survey for reserves to evaluate REDD potential. Interested in a REDD project
- The organization would like to expand this project
- Pressures on their lands have eased but maybe owing to the absence of management on Boden Creek Lands.
- The organization in the past has little need to engage DOE in relation to environmental protection. Environmental protection is done intuitively through conservation advocacy and alternative livelihood programs.
- The organization currently has a court case pending against the DOE

From the meeting with SATIIM, the below is evident:

- Equally there exists lots of pressures on the STNP

- The organization has been working with communities to develop sustainable forestry programs but faces lots of barriers to such implementation
- The organization recognizes the opportunities for value added on the sustainable forestry activities or logging activities but the land tenure issues limit the activities of the organization and its ability to help communities
- There is a need for better data management that could benefit all protected areas

FIELD VISITS

CAYO DISTRICT

SAN JOSE SUCCOTZ – FRIENDS OF CONSERVATION AND DEVELOPMENT (FCD)

VACA FOREST RESERVE SITE VISIT

NOVEMBER 28TH, 2012

In attendance:

Eduardo Quiroga	Natural Resources Management Consultant/Team Leader
Jeff Waldon	Carbon Accounting Consultant
Ian Morrison	Environmental Management Consultant
Marion Cayetano	Social Development Consultant
DaedraHaylock	Communications Consultant
Rafael Manzanero	Executive Director – FCD

Objectives:

The trip was organized in order to complete the following objectives:

- General understanding of the area under the protection of the organizations
- Scope of Work of the organizations in relation to its protected area and buffer communities
- Understand the impacts the buffer communities have on the protected area and vice versa
- Understand the organizations' involvement with the communities either via education projects and/or livelihood opportunities as well as establishing partnership for the protection of the area

Friends of Conservation and Development (FCD) is responsible for the management of Chiquibul National Park (CNP)

From the visit with FCD, the below is evident:

- The evidence is strong that the Maya Mountain block is under siege.
- The area is facing a high prevalence of illegal logging (Mahogany and Cedar) and illegal hunting, poaching from foreign nationals
- Farming and fire are also major threats to the protected areas that make up the Maya Mountain block. Chiquibul National Park and Forest Reserve faces much if its challenges and encroachments from foreign nationals, while the Vaca Forest Reserve which is closer to local communities faces illegal hunting and logging on a subsistence level. As well, the reclaiming of lands for farming purposes is a challenge faced from both national and foreign nationals in the Maya Mountain block
- Gold panning is a threat as well and there currently is operated one legal operation of gold mining. The concern with this legal mining is the level of monitoring and oversight by the relevant Government department agency(ies).
- Agroforestry with Xate has a major crop has potential and would need further assessment
- There is need for the identification of sustainable use of the forest options to be identified and implemented. FCD as an organization is trying to examine how it can be the proponent of such programs. Considering that the organization manages public lands, the Forestry Department (FD) would be the gatekeeper to approve any such operations within the protected lands. In the Vaca area on lands already excised from the Vaca Forest Reserve, FCD is playing a role in projects like farming and bee-keeping.
- Enforcement is a major challenge and needs more support from the BDF, Forest Department and Police. The gap presented by the lack of two outpost monitoring stations to complete the network of monitoring stations is a challenge that needs urgent attention.
- National issues related to incursion, encroachment and poaching is rampant and the remoteness of the issue further aggravates the matter and its difficulty to monitor and manage.
- There is a need for more resources for patrols and monitoring activities
- There is need to engage border communities to extend lessons on best practices and low impact techniques for small farmers.

FIELD VISITS

ORANGE WALK DISTRICT

SAN FELIPE, RIO BRAVO CONSERVATION MANAGEMENT AREA (LA MILPA)

AND GALLON JUG

NOVEMBER 29TH, 2012

In attendance:

Eduardo Quiroga	Natural Resources Management Consultant/Team Leader
Jeff Waldon	Carbon Accounting Consultant
Ian Morrison	Environmental Management Consultant
Marion Cayetano	Social Development Consultant
Peralta	Principal – St. Michael's RC School
Bladimir Rodrigues	Manager – La MilpaEcolodge and Research Center
Allistair McPherson	General Manager – Gallon Jug

Absent:

DaedraHaylock	Communications Consultant

Objectives:

The trip was organized in order to complete the following objectives:

- General understanding of the area under the protection of the organization and private landowner and investor
- Scope of Work of the organization and landowner in relation to its protected area and buffer communities
- Understand the impacts the buffer communities have on the protected area and vice versa
- Understand the organization and private landowner's involvement with the communities either via education projects and/or livelihood opportunities as well as establishing partnership for the protection of the area

Programme for Belize is responsible for the management of the private protected area Rio Bravo Conservation & Management Area (RBCMA) which is 3% of the country's land mass

Gallon Jug is a private operation owned and operated by the Bowen & Bowen Group of Companies and currently manages several investment projects on the lands, including ecotourism, coffee cultivation and production, sustainable forestry extraction, along with other activities.

From the meeting with Mr. Peralta and PfB, the below is evident:

- No need for direct engagement with DOE
- Environmental awareness in the primary school is done through the cooperation with Programme for Belize
- Trips are facilitated to the protected area of the RBCMA at least once per year. It is believed the outreach could be increased. The site visits and education awareness is primarily centered on the Standard IV and V students
- The Organization has a detailed management plan
- Conducts ecotourism activities on this area of the RBCMA
- Site management includes a compositing toilet and solar energy generation for the La Milpa and Hill Bank sites
- Ecotourism program includes environmental education and research with international universities.
- Archaeology research conducted on the property via arrangements with a US based university
- All of the employees on the protected area site are drawn from the surrounding communities on either areas of the protected area.
- In the Southern area, sustainable forestry is conducted as well a carbon sequestration project was carried out
- Strong forest fire management program and training for employees
- The organization pursued a REDD using VCS
- Practice of using wild animals has pets have declined due to environmental education in the schools

From the meeting with Gallon Jug, the below is evident:

- Conducts environmentally friendly and sustainable practices to control pollution of the biosphere in its operation
- Including logging, milling of timber and agriculture (coffee, sugar cane and cacao)
- Cattle pasturing is as well conducted as well as is ecotourism activities
- Spinoff effects and consequences of operations were not explored in detailed, i.e. due to fuel storage, waste management and emissions control
- No engagement on either sides with the Department of Environment
- The property has experienced some illegal logging but for the most past the surrounding communities present little conflict
- The Gallon Jug would like to support community development for Sylvester village.
- The property is pursuing a REDD project using VCS and CCBA Standards

1.3 KBAs target areas selection process

The target areas within the KBAs for the Project were selected through a stakeholder engagement process. Two workshops were conducted on February 8th, 2013 and February 22nd, 2013. The first was to select possible sites and the second to validate the selection.

List of participants at working session
February 8th, 2013 - ICT Centre, Belmopan

Name of Participant	Organization/Department
Wilber Sabido	Forest Department
Hannah St. Luce- Martinez	Forest Department
AnselDubon	National Protected Areas Secretariat
Ian Morrison	Consultant
Tanya Santos	Forest Department
Judene Tingling	Forest Department
Saul Cruz	Forest Department
Fernando Tzib	Ministry of Natural Resources and Agriculture
Rasheda Garcia	Forest Department
Arlene Maheia-Young	National Protected Areas Secretariat

List of participants at validation session
February 22nd, 2013 - Ministry of Forestry, Fisheries and Sustainable Development's Conference Room

Name of Participant	Organization/Department
Marion Cayetano	Consultant
Saul Cruz	Forest Department
Fernando Tzib	Ministry of Natural Resources and Agriculture
Carren Williams	Lands Information Centre, Ministry of Natural Resources and Agriculture
Arlene Maheia-Young	National Protected Areas Secretariat
AnselDubon	National Protected Areas Secretariat
Jose Perez	Association of Protected Areas Management Organizations
Anthony Mai	Department of Environment

A set of criteria was developed to rank all the 32 terrestrial protected areas within the KBAs as identified in the KBAs assessment report from 2007. The set of selection criteria was developed by the National Protected Areas Secretariat in consultation with the Forest Department and the World Bank. The criteria were grouped into 6 categories: threats, carbon, management capacity, risk factors, socio-economic, and economic values as detailed below:

1. Threats
   - Deforestation
   - Fragmentation of natural habitat
   - Anthropogenic fire incidence
   - Incidence of illegal activities (hunting, logging)
   - Risk of natural activities (fire, hurricanes)
2. Carbon
   - Carbon sequestration potential
   - High possibility of regeneration
3. Management Capacity
   - Lack of management capacity
   - Lack of human resources for enforcement, conservation and monitoring
4. Risk Factors
   - Resistance of communities to participate in Project
   - Geopolitical factors
5. Socio-economic
   - Poverty levels
   - Local community dependence on resources in the PA (uses: subsistence, income generation activities)
6. Economic Values
   - Watershed catchment/protection
   - Coastal/river bank protection

7. All criteria received equal weight. After the criteria were enumerated, a working session was held to rank all of the protected areas within the KBAs (list of participants is available in the Project files). Following this session, results from the ranking exercise were compiled by the NPAS and Forest Department into a spreadsheet with the criteria and scoring for each PA. Subsequently, the top scores were analyzed and the top ranking PAs were identified (See Table 1). Results we ranked with (highest possible score 45) and without risk factors (highest possible score 39) because the risk factors were agreed to be contentious.

Table 1: Ranking Results for Selection of Target Sites

Results before removing risk factors	Results after removing risk factors

Name of PA	Score	Name of PA	Score
Maya Mountain FR	42	Maya Mountain FR	36
Honey Camp NP	39	Columbia River FR	34
Freshwater Creek FR	39	Freshwater Creek FR	34
Columbia River FR	39	Honey Camp NP	34
Spanish Creek WS	37	Vaca FR	33
Vaca FR	37	AguasTurbias NP	32
AguasTurbias NP	36	Spanish Creek WS	32

8. After the ranking exercise was conducted, the top seven PAs were vetted as potential candidate sites. Five PAs were chosen from Table 3 and one additional PA - Chiquibul National Park – was included based on information from the PA rationalization exercise.

9. Fifteen criteria (Table 2) were used to guide prioritization of the terrestrial protected areas system within the PA rationalization exercise, allocated to four categories. These criteria were developed with input from Forest Department personnel and through feedback from protected area managers asked to 'field test' the assessment, to ensure it provided a valid output. Each of these criteria was rated out of a total possible score of 4, with scores then totaled and averaged per protected area. Prioritization scores ranged from 3.33 out of 4.00 for Columbia River Forest Reserve, considered the highest priority overall within the system, to the lowest score - 1.27 out of 4.00 for Melinda National Park.

Table 2: Terrestrial Prioritization Criteria

1.0 Environmental Values
1.1 Watershed Catchment and Protection
1.2 Wetland Flood Sink Function
1.3 Coastal / River Bank Protection
1.4 Steep Slope Erosion Control
2.0 Biodiversity Status
2.1 Global Recognition for Biodiversity Values

2.2 Value for Under Represented Ecosystems or Ecosystems of Limited Extent
3.0 Socio-Economic Value
3.1 Value for Commercial Extractive Use (timber / non-timber forest products)
3.2 Value for Non-Renewable Resource Extraction - minerals
3.3 Value for Non-Renewable Resource Extraction – petroleum
3.4 Importance for Water Security
3.5 Value for Hydro-electricity Generation
3.6 Traditional Resource Use Dependence
3.7 Tourism / Recreational / Cultural Values
4.0 Key Resilience Features
4.1 Forest Connectivity
4.2 Altitudinal / Lateral Connectivity

10. The highest rated overall, greater than 3.00, were Columbia River Forest Reserve and Chiquibul National Park. Below are examples of major rating criteria.

11. **Watershed Catchment and Protection, Protected Areas rated as *VERY HIGH***
Chiquibul National Park
Columbia River Forest Reserve
Maya Mountain Forest Reserve
Vaca Forest Reserve

12. **Based on Species of Global and National Concern, Protected Areas (Meerman, 2007)**
Columbia River Forest Reserve
Chiquibul National Park

13. **Ecosystems<10,000 acres**
Tropical evergreen seasonal needle-leaved lowland forest, well drained
- Vaca Forest Reserve

14. **Ecosystems<1,000 and <-5,000 acres nationally**
Deciduous broad-leaved lowland riparian shrubland in hills
- Chiquibul National Park
- Columbia River Forest Reserve
- Vaca Forest Reserve

15. **Ecosystems <1,000 and<-5,000 acres nationally**
Tropical evergreen broad-leaved lowland forest, moderately drained, on calcareous soils
- Columbia River Forest Reserve

16. **Ecosystems <1,000 and <-5,000 acres nationally**
Tropical evergreen lower-montane broad-leaved forest
- Chiquibul National Park

17. **Ecosystems <1,000 and <-5,000 acres nationally**
Tropical evergreen broad-leaved lower montane forest with palms
- Chiquibul National Park

18. **Forest Connectivity, Protected Areas rated as *VERY HIGH***

- Columbia River Forest Reserve
- Maya Mountain Forest Reserve
- Vaca Forest Reserve
- Chiquibul National Park
- Freshwater Creek Forest Reserve
- Spanish Creek Wildlife Sanctuary

19. In addition, APAMO also suggested 4 protected areas in greatest need of strengthening: Freshwater Creek Forest Reserve, Vaca Forest Reserve, Spanish Creek Wildlife Sanctuary, and Columbia River Forest Reserve.

20. Subsequently, a validation session was convened to present and discuss the selection process for the 6 proposed target areas (list of participants is available in the Project files).

21. Based on the analyses and validation/ranking exercises, the final consensus list of PAs to be included in the Project were:

a. *Northern Lowlands KBA*
   - Spanish Creek Wildlife Sanctuary
   - Freshwater Creek Forest Reserve

b. Maya Mountains Massif KBA
   - Chiquibul National Park
   - Columbia River Forest Reserve
   - Vaca Forest Reserve
   - Maya Mountain Forest Reserve

1.4 Participants List for Validation Workshop

Ministry of Forestry, Fisheries and Sustainable DevelopmentManagement and Protection of Key Biodiversity Areas Project Preparation Grant

Validation Workshop

List of Participants

May 14th, 2013 – George Price Centre for Peace and Development

	Name of Participant	Organization/Department
1	Ashley Camhi	Consultant
2	Arlene Maheia-Young	NPAS
3	Guadalupe Rosado	NPAS
4	Marion Cayetano	Consultant
5	Ian Morrison	Consultant
6	Christina Garcia	Ya'axché
7	Roberta Pennil	Ya'axché
8	Leonides Sosa	DOE
9	Lee Mcloughlin	Ya'axché
10	Wilber Sabido	FD
11	Arreini Palacio	Belize Audubon
12	Nayari Diaz-Perez	PACT
13	Anthony Mai	DOE
14	Celi Cho	DOE
15	Martin Alegria	DOE
16	Victoria Cawich	FD
17	Edgar Eck	DOE
18	Fernando Tzib	Department of Agriculture
19	Monique	Shipstern

20	Heron Moreno	Shipstern
21	Lynelle Williams	TNC
22	Lester Delgado	Shipstern
23	Rafael Manzanero	FCD
24	Boris Arevalo	FCD
25	Carren Williams	Lands Information Centre, MNRA
26	Weiszman Pat	MFFSD
27	Tanya Santos	Forest Department
28	AnselDubon	NPAS
29	Natalie Rosado	PACT
30	Raymond Reneau	Rancho Dolores Environment and Development Group
31	Colin Mathis	NCCO
	Name of Participant	**Organization/Department**
32	Oswaldo Sabido	Consultant
33	Jose Perez	APAMO
34	Elma Kay	ERI
35	Colin Gillett	CZMAI

The aim of the validation workshop was twofold:

To present an overview of project objectives, components and proposed activities and results framework

To present the Social Assessment including socioeconomic benefits and sustainable livelihoods framework

The workshop participants also engaged in group exercises to identify community based activities within and around the target sites.

Figure 2: Social Development consultant presenting social assessment

Figure 3: Participants at the validation workshop

Worksheet 1 for Community-Based Activities

Target Site: CRFR and MMFR

Output 1: Critical areas (ha) of high conservation value rehabilitated via community-based activities.

Questions:

1. What are the surrounding communities for this target site?

MMFR: Trio, Bladen, Bella Vista, San Pablo

CRFR: Golden Stream, Medina Bank, Indian Creek, Silver Creek, San Miguel, San Pedro Colombia, Nahluan cah, San Jose, Pueblo Viejo, Jalacte

2. What are potential areas for rehabilitation (within target site and/or buffer communities)?

Buffering communities where land/forest has been degraded inside forest reserve.

All require mentoring and support services beyond project life

3. What types of community-based activities would be applicable for these areas?

Agroforestry – Taungya (proposed in 2007) or Cacao based agroforestry

Silvopastoral ??

Community based forestry (growing trees close to community - high value timber)

↳ REDD ? if tenure is taken into account.

Biochar / Pyrolysis (Bamboo / Agricultural waste)

Worksheet 2 for Community-Based Activities

Target Site: MMFR and CRFR

Output 2: Sustainable harvesting and marketing of non-timber forest products (NTFPs) and community based forestry opportunities by local communities in targeted areas increased by 30%.

Questions:

1. What are the potential communities that would be interested in sustainably harvesting and marketing of NTFPs?

All communities mentioned overleaf.

2. What types of new or existing NTFPs would be good for sustainable harvesting and marketing?

Cohune nut oil / Cohune leaf
Pacaya
Cacao (criollo native) – major market
Grafts. – FG
Artisanal wood handicrafts – Rosewood – Adding value

3. What skills, tools, and/or knowledge would be necessary to effectively create a market for these NTFPs?

Artisanal training – adding value in country
Cohune oil – factory/plant?
Cacao – pruning training / marketing / accounting / seedlings / nurseries / pest control
Credit Unions engaged – Micro credit schemes.

Worksheet 1 for Community-Based Activities

Target Site: Freshwater Creek

Output 1: Critical areas (ha) of high conservation value rehabilitated via community-based activities.

Questions:

1. What are the surrounding communities for this target site?

- Santa Martha - New Land Community - Shipyard
- San Esteban - Cayo [illegible]
- Oak Town - Caledonia
- Progresso - Honey Camp
- Little Belize (- San Jose / San Pablo)

2. What are potential areas for rehabilitation (within target site and/or buffer communities)?

- Timber stock
- NTFP stocks

(Much agriculture clearings)

3. What types of community-based activities would be applicable for these areas?

- Agroforestry (within adjacent private lands) Boundary Demarcation
- Nursery Establishments
- Seed Collection
- Replanting
- Labor Force - Monitoring, [illegible] Activities workforce,

Worksheet 2 for Community-Based Activities

Target Site: FWCFA

Output 2: Sustainable harvesting and marketing of non-timber forest products (NTFPs) and community based forestry opportunities by local communities in targeted areas increased by 30%.

Questions:

1. What are the potential communities that would be interested in sustainably harvesting and marketing of NTFPs?

- SANTA MARTHA - HONEY CAMP
- CHUNOX
- SAN ESTEVAN

2. What types of new or existing NTFPs would be good for sustainable harvesting and marketing?

- BAY LEAF
- COMPOSE NUTS
- MEDICINAL PLANTS
- BEE KEEPING

Restoration / Rehabilitation Activities Must be done before any Harvesting Activities

3. What skills, tools, and/or knowledge would be necessary to effectively create a market for these NTFPs?

Worksheet 1 for Community-Based Activities

Target Site: Spanish Creek Wildlife Sanctuary

Output 1: Critical areas (ha) of high conservation value rehabilitated via community-based activities.

Questions:

1. What are the surrounding communities for this target site?

- Lemonal
- Bermudian Landing
- Crooked Tree
- Willoughby Bank
- Flowers Bank
- St. Paul's Bank
- Isabella Bank
- Rancho Dolores
- Scotland Halfmoon

2. What are potential areas for rehabilitation (within target site and/or buffer communities)?

- Riparian System Along Creek / Big River Area
- Broad Leaf Forest (Timber Stock)
- Control of Invasive Species (Algae)
- Hicatee Population
- Spider Monkey Habitat

3. What types of community-based activities would be applicable for these areas?

- Forestry / Agro
- Hicatee Rehabilitation / Restoration / Gibnut / Sapodilla
- Pine Cone

Worksheet 2 for Community-Based Activities

Target Site: SPANISH CREEK

Output 2: Sustainable harvesting and marketing of non-timber forest products (NTFPs) and community based forestry opportunities by local communities in targeted areas increased by 30%.

Questions:

1. What are the potential communities that would be interested in sustainably harvesting and marketing of NTFPs?

SAME

2. What types of new or existing NTFPs would be good for sustainable harvesting and marketing?

- Cohune Nut
- Bay Leaf
- Pimenta Seeds (i.e. Paul Bradley) / Pimenta Palms.
- Medicinal Plant

3. What skills, tools, and/or knowledge would be necessary to effectively create a market for these NTFPs?

- Traditional Knowledge
- Processing Equipment
- MKting & Financial Mgmt Skills
- Transportation

Spanish Creek

- Pig Rearing
- Chicken Farming
- Crop Farming.
- Camping -

- Cultural Activities (Rita Mama)
- Sporting Events.
- Start to Focus on Potential &
Existing Mkt Development
- Preserves

Important Livelihood Activities
(Lobby) - Provision of land for farmers within P.A
- Provision of Skills for the Maximization of Agricultural Yields Per Acre
(Lobbying) - Increased Access & more Equitable Distribution of land for Viable Agricultural initiatives
- Identification & Introduction of new Economic Models

Worksheet 1 for Community-Based Activities

Target Site: Chiquibul National Park

Output 1: Critical areas (ha) of high conservation value rehabilitated via community-based activities.

Questions:

1. What are the surrounding communities for this target site?

San Antonio
Cristo Rey
El Progreso (7 miles)
Barton Creek

2. What are potential areas for rehabilitation (within target site and/or buffer communities)?

- Borderline (agriculture) est. 3,500 ha
  illegal mining sites (legal also)
  Scarlet Macaw nesting sites

3. What types of community-based activities would be applicable for these areas?

These areas require working along with the private sector (legal mining). However, the illegal mining, agricultural incursions, and poaching is being done by Guatemalan communities.

Chiquibul NP

⇒ Private Sector (Resorts/lodges) impact the PA through extraction of resources

⇒ Local communities (surrounding) do not impact the NP but the FR which if not monitored can expand into the NP.

Vaca FR

⇒ needs a diagnostic study to identify an effective restoration program

⇒ FCD has conducted a social assessment with farmers

⇒ FCD has a Landscape Mgmt Strategy which would include acreage.

Worksheet 1 for Community-Based Activities

Target Site: Vaca Forest Reserve

Output 1: Critical areas (ha) of high conservation value rehabilitated via community-based activities.

Questions:

1. What are the surrounding communities for this target site?

Succotz
Benque Viejo
Arenal
San Antonio
Concessioneers (Bullet Tree, Santa Familia
El Progreso

2. What are potential areas for rehabilitation (within target site and/or buffer communities)?

Deforested sites

3. What types of community-based activities would be applicable for these areas?

Honey & Bee-keeping
Cacao growing
Agro-ecological farming
Xate

Worksheet 2 for Community-Based Activities

Target Site: _____

Output 2: Sustainable harvesting and marketing of non-timber forest products (NTFPs) and community based forestry opportunities by local communities in targeted areas increased by 30%.

Questions:

1. What are the potential communities that would be interested in sustainably harvesting and marketing of NTFPs?

San Antonio

El Progreso

2. What types of new or existing NTFPs would be good for sustainable harvesting and marketing?

Xate – market study has been done.

All Spice - new

Apiculture - Min of Agric has a Business Plan

3. What skills, tools, and/or knowledge would be necessary to effectively create a market for these NTFPs?

Strengthening of groups such as Cayo Quality Honey Producers.

Endorsement by FD of extraction of NTFPs

1.4 Belmopan Consultation Workshop

June 3rd, 2014

George Price Center for Peace and Development

Belmopan, Cayo

List of Participants

No.	Participant	Organization/Village
1	Lester Delgado	CSSF
2	Victor Cawich	San Pablo Village Council
3	Marlon Garcia	San Pablo Village Council
4	Elmer Flores	San Esteban Village Council
5	Pascal Walter	CSFI
6	Clinton Rhaburn	Flowers Bank village
7	Rodney Banner	LemonalVillage
8	Arnaldo Melendez	Friends for Conservation &Development (FCD)
9	Davis Valdez	Progresso Village
10	Esther Aiemesseger	CSFI Sartaneja
11	Colleen Joseph	Rancho Dolores Village
12	Heron Moreno	CSFI- Shipstern
13	Ruth Staine-Dawson	National Association of Village Council (NAVCO)
14	E. Alexander	S. V. Council, C.M.
15	Dirk Sutherland	Spanish Creek Wildlife Sanctuary
16	Pedro Wiens	Little Belize Village
17	Patricio Acuna	Santa Martha Village, Orange Walk
18	Joel Diaz	CSFI
19	Sean Nicolas	Bermudian Landing Village
20	TreciaCasasola	St. Pauls Bank Village Council
21	Clifton N.	St. Pauls Bank Chairperson
22	Weisman Patt	MFFSD-SCU
23	Rosalind Joseph	Village Council
24	Gloria Banner	Lemonal Village
25	Darlene Padron	Sustainable Development Unit

26	Aldo Cansino	Department of the Environment
27	Raphael Manzanero	FCD
28	Derrick Chan	FCD
29	Natalie Rosado	Protected Areas Conservation Trust
30	Violet Broaster	S.C.W.S.
31	Jacob Redcoop	Little Belize Village
32	Arlene Maheia-Young	NPAS
33	Aretha Mortis	NPAS
34	Jose Perez	APAMO
35	Natalie Bucknor	BEST
36	Dwight Neal	BEST
37	Lemuel Velasquez	BEST
38	Tanya Santos	FD
39	Emily Aldana	PPU MFED
40	Carlos Monterosso	7 Miles (El Progresso) Village
41	Lin Smith	Rancho Dolores Village/Chair
42	AnselDubon	NPAS
43	Melanie Smith	BEST

An overview of the agenda and workshop objectives was provided by the consulting team.

The first presentation by was conducted by the Program Director of the National Protected Areas Secretariat who outlined the KBA project, its objects, and its components. The various safeguards to be discussed were introduced.

Question: How will the project affect those who use the protect areas? An explanation was provided that the Livelihood Restoration Process Framework has mitigation measures to address this.

The Process Framework presentation presented the communities that were selectedand the selection process. The first interactive discussion revolved around the question of what activities are currently carried out by their communities in the protect areas? The responses were provided by the community representatives according to each of the KBAs.

In the north, the activities ranged from agriculture to fishing. The Mennonite representatives clarified that they do not extract logs from Freshwater creek but do buy lumber from those that have concessions to extract timber from the KBA. The NGO working in that KBA (Corozal Sustainable Future Initiative) also mentioned that despite current believe that the KBA is in a degraded condition, reconnaissance and stocktaking that has been done recently show that the site is better off than previously anticipated. Since the NGO has been working the area, there has been greater compliance by the communities to protect it. However, New Land, a new community being established on the margins of the reserve is undergoing widespread clearing.

The communities of the Spanish Creek Wildlife Sanctuary indicated that a number of communities use the protected area for fishing, birding and extraction of logwood posts. They are concerned that NGO's come into the area and restrict them from their livelihood activities which they have been practicing since the days of their ancestors. It is a relatively small KBA and the number of persons living in and around it makes it difficult to monitor and comply. However, of recent demarcation and signage has been improving.

Chiquibul National Park is being co-managed by Friends for Conservation and Development (FCD). FCD also works with farmers in the Vaca Forest Reserve. There were a wide range of issues and challenges facing these two KBA's. The Vaca is more used by communities since it is most accessible. The Chiquibul however face another set of threats most of which are imposed by the Guatemalan communities across the Belizean border. It is very difficult to monitor due the geographic layout and expanse of the National Park and the fact the it bordered by the ElijioPanti National Park, the Vaca Forest Reserve, Chiquibul Forest Reserve, the Mountain Pine Ridge and the Caracol Archeological Site. Persons who use the Vacafor extraction of timber resources (concessionaires) come as far away as Santa Familia, Bullet Tree and Calla Creek in the western part of the Cayo District. The Vaca,Challillo and Mollejon Dams are also threats to both of these reserves.

The presentation continued with an overview of what activities will be carried out? Who will it affect? Mitigation Measures. Community leaders were asked to relate their experience using the protected areas, when management projects are carried out, how did it affect their livelihood and what measures were put in place to ensure that they had alternative livelihood.

The participants shared that projects seldom ask for their input and they are often not consulted from the beginning. In the case of the Spanish Creek Wildlife Sanctuary, the rangers would meet them within the reserve and they would be accompanied out. If they were consulted from the beginning they would know what the rules and rationale for them, and they would comply as they too want to preserve the wildlife and habitat. Also, if they were consulted they would be able to share information about nesting sites, seasons for extraction of animals and plants and they too could serve as community forest rangers.

Those from the Vaca Forest Reserve shared that they were given eviction notice by the Forest Department but with assistance from FCD they conducted a series of negotiations and special consideration was given to them to continue cultivating within the reserve. The formalized their group as a farming cooperative and received extension services and project funding to grow their crops using eco-friendly pesticides and eco-farming techniques. They now have a stable market and high quality produce.

The presentation continued by outlining the positive and negative impacts of the project. Thereafter, those who would be eligible to obtain benefits from the project were discussed. The participants were pleased to see that a wide range of persons and groups were being considered.

The discussion then moved on to the measures to assist affected persons, an extended discussion regarding persons who are conducting illegal activities in the KBA should not be eligible since a project should not give benefits to people who break the law. A question was asked about whether or not Guatemalans would be eligible. While the Social Assessment exercise will determine how communities use the site and what type of access will be allowed and/or restricted, it was explained that under the World Bank guidelines they would still be considered eligible users. It is important not to discriminate users based on their nationality. However, it was stated that the involvement of Government agencies such as the Immigration Department needs to be consulted on this matter.

The Grievance redress mechanism was presented next. It was agreed that these are steps that must be taken. A question was posed as to how to address a grievance if it is against the Project Management Unit. The response was that the second tier allows for that to occur and that the person/group or community could request their local representatives to address the issue.

Finally, the involuntary resettlement policy was briefly discussed as the project did not expect that anyone would have to be resettled unless the activities were not in compliance with the designation of the protected area.

After the break, the presentation moved on to the The Indigenous Peoples Planning Framework (IPPF). The first question posed was regarding the name of the document. Why IPPF not

Community Planning Framework? The name suggested that it will focus only on indigenous people when in fact all ethnic groups must be consulted and given the same courtesy. BEST shared how they came about with their safeguard document and how they holistically addressed community consultations but emphasized indigenous community planning in line with World Bank guidelines. The presenter mentioned that the names of the document can be changed and that the documents will be adapted to address the issues raised as a result of the consultation. Furthermore, the social assessments will determine a final list of communities and exactly how they impact the KBA.

As the presentation progressed to discuss the adjacent communities a discussion emerged on what criteria was used to select the communities, discussion on what an adjacent community is. It was important to establish this so that community representatives could confirm that those who appear on the list were actual adjacent communities. The definition was refined and accepted to mean those who are proximate, are traditional users and have access to the KBA's. Furthermore, it was suggested to divide the groups into primary users and secondary users with the latter being those who are not geographically proximate but use the resource occasionally or own land or concessions within the KBA.

The Legal and Institutional framework was presented followed by the consultation Principles. A definition of Free, Prior and Informed consultation was provided. Inclusion as a guiding principle was also mentioned. The objectives and benefits of community consultations closed of the presentation.

In the afternoon session, the Environmental Management Framework was presented. The presentation included forest department legislation, safeguard measures, potential subprojects and mechanism for implementation and responsible agencies. The role of the community in monitoring and evaluation of all aspects of the project was discussed. Questions emerged regarding how the subprojects will be selected? It was explained that PACT will provide the financing but a Steering Committee will review the proposals. The proposals will be formulated by the communities and the type of project to be implemented will be decided by the community or group of persons.

The day concluded with a summary of the concerns and overview of the project objectives. The participants were reminded that the documents will be online by June 10th 2014 at the websites of the NPAS and World Bank and will be available electronically from the NGO's working with their community. Any comments and suggestions will be appreciated.

1.5 Toledo Consultation Workshop

June 6th, 2014

Nazareth Retreat Center

Forest Home Village, Toledo District

List of Participants

No.	Name	Position	Organization/Community
1	Rodolfo Morales	Chairperson	Trio Village, Toledo District
2	Maximilano Makin	Chairperson	San Pablo Village, Toledo District
3	Juan Rax	**Alcalde**	San Pablo Village, Toledo District
4	Pablo Choc	Chairperson	Indian Creek Village, Toledo District
5	Linus Choc	Chairperson	Silver Creek Village, Toledo District
6	Domingo Teul	Vice-Chairperson	Silver Creek Village, Toledo District
7	Alfredo Teul	Treasurer	Silver Creek Village, Toledo District
8	Pedro Cal	Chairperson	San Vicente Village, Toledo District
9	Sebastian Cab	Alcalde	San Vicente Village, Toledo District
10	Rafael Tzub	Alcalde	San Jose Village, Toledo District
11	Diego Oh	Chairperson	Na LuumCaj Village, Toledo District
12	Rudolfo Oh	Alcalde	Na LuumCaj Village, Toledo District

13	Abelino Zuniga	Vice-Chairperson	Medina Bank Village, Toledo District
14	Orlando Chan	Alcalde	Bladen Village, Toledo District
15	Zulma Portillo	Community Member	Bella Vista Village, Toledo District
16	Elmer Requena	Terrestrial Biologist	Toledo Institute for Development and Environment (TIDE), Hopeville Area, Toledo District
17	Mark Miller	Executive Director	Plenty Belize, Jose Maria Nunez Street, Punta Gorda Town, Toledo District
18	Christina Garcia	Executive Director	Ya'axché Conservation Trust, 2 Alejandro Vernon Street, Punta Gorda Town, Toledo District
19	Roberta Pennell	Development Officer	Ya'axché Conservation Trust, 2 Alejandro Vernon Street, Punta Gorda Town, Toledo District
20	Zee McLoughlen	PA Manager	Ya'axché Conservation Trust, 2 Alejandro Vernon Street, Punta Gorda Town, Toledo District
21	BartholomewTeul	Programme Manager	Ya'axché Conservation Trust, 2 Alejandro Vernon Street, Punta Gorda Town, Toledo District
No.	Name	Position	Organization/Community
22	Pantaleon Escobar	Project Coordinator	Humana People to People
23	Mario Chavarria	Executive Director	Toledo Development Corporation, Punta Gorda Town, Toledo District
24	Thomas Tillett	Project Coordinator	Toledo Cacao Growers Association, George Price Street, Punta Gorda Town, Toledo District
25	Tomas Caal	Chairman, Pro-tem Committee	Friends of Lu Ha, Punta Gorda Town, Toledo District

26	Christoper Nesbitt	Director	Maya Mountain Research Farm, San Pedro Columbia Village, Toledo District
27	Celini Logan	Farm Coordinator	Maya Mountain Research Farm, San Pedro Columbia Village, Toledo District
28	Yanira Pop	Forest Officer	Forest Department
29	Raul Chun	Forest Officer	Forest Department
30.	Aretha Mortis	Office Administrator	National Protected Areas Secretariat, Ministry of Forestry, Fisheries and Sustainable Development
31.	Guadalupe Rosado	Communications Officer	National Protected Areas Secretariat, Ministry of Forestry, Fisheries and Sustainable Development
32.	Arlene Maheia-Young	Program Director	National Protected Areas Secretariat, Ministry of Forestry, Fisheries and Sustainable Development
32.	AnselDubon	Program Officer	National Protected Areas Secretariat, Ministry of Forestry, Fisheries and Sustainable Development

The consultation in the Toledo District included both non-indigenous communities representing the Maya Mountain North and indigenous communities representing Columbia Forest Reserve (CRFR).

The consultation was conducted in four languages: English, Kekchi, Mopan and Spanish.

Figure 4: Mayan Translator conveying message in Kekchi for the community representatives

The Toledo Cacao Growers Association took the opportunity to give an overview of their organization as Cacao is considered a viable option for alternative livelihoods. The purpose of presentation was also to give community participants the idea of how community agro-forestry helps in maintaining biodiversity while promoting sustainable livelihoods.

The presentation highlighted that there is a huge local and international (export) market for Belizean cacao. -Buyers want 1 million pound of dried cacao but TCGA is only supplying 250,000 pounds. In 2013 an outbreak of disease caused a reduction in production by half.

25 % of locally produced cacoa goes to local markets and the rest goes to international markets. Price has increased from 8 cents a pound to 2.65 cents for dried cacao beans. Exports are based on seasonal contracts 85% and the contracts are negotiated on world market price. TCGA is getting prices above world market.

The TCGA representative stated that cacoa is a family friendly crop since children and adults participate and benefit. The current focus is on product quality and expansion. The organization intends to improve yield through technology. It has drying facilities in several villages; expanding drying facilities in villages (to facilitate drying from farmers in other villages). Some of the villages adjacent to the KBA are already involved in cacao growing and other expressed interest.

An overview of the KBA project was conducted by the Program Director.

A concern from San Vicente was that it has expanded after the designation of the protected area and stated that they need land for agriculture and wanted to know if they will be able to have activities within the protected areas, not only cacao but also crops like corn, etc.

It was explained that through the project, there may be opportunities such as those that exist in Vaca Forest Reserve for small farmers; however this would have to be done after the development of a community sustainable forest management plan for the area.

-Mr. Requena from TIDE stated that such a project should have come about from 1990s. “It is great initiative where government, NGOS and community people are coming together to plan and better use the PAs”. There is broad support the plans for the project but there is need for engagement with communities currently using the resources. The project has identified the challenges but there is need for prior communication.

Figure 5: Representative from TIDE expressing his support for the project

Nah LumKa- some community members are lease owners near the Columbia River forest reserve.

Question: Will the project open the lines for the protected areas-meaning clearly demarcate the boundary?

It was explained that the project activities include clear demarcation of the boundaries of the protected areas.

Trio Village- these are important facts for them because they also are very close to the Maya mountain forest reserve and use the area for fishing, agriculture crops such as pineapple and extraction of house posts.

A presentation was conducted on the Livelihood restoration framework by the Consultant.

-The new definition was discussed and all were in agreement that the definition adequately reflects what an adjacent community is.

As part of the presentation an extended discussion was conducted on which communities have direct access to the protected areas?

Columbia River Forest Reserve:

Nah LumKa-very close to Columbia River Forest Reserve

Santa Elena/Santa Cruz communities manage the Rio Blanco National Park which is very close to CRFR and they have a vested interest in it.

Pueblo Viejo-does not have immediate access but should be considered as people use the FR occasionally.

San Antonio-portion of Columbia River FR de-reserved. The representative mentioned that Crique Jute should be included since they also use the reserve.

Concern-Indian Creek farmers are within the protect areas boundary due to the boundary curving. Community involvement is essential since they know exactly which areas they are using. It is essential to involve when the social assessment and community mapping is done and to conduct activity to demarcate the protected area.

Figure 6: Alcalde of Indian Creek voicing his concern regarding demarcation of protected areas boundary

Golden Stream is only 15 minutes away from the protected area. Big Falls village, Hicatee and Silver Creek are also users. The project needs to take closer look at communities that may be using the areas. It was explained that social assessments will be conducted to determine level of use and final listing.

San Pedro Columbia-30 persons using the area as primary source of water.

San Miguel-next to CRFR and Jalacte should be included.

Maya Mountain Forest Reserve:

Trio, Bella Vista, San Pablo, San Isidro, Bladen (Toledo) and a new Mennonite called Roseville (behind Redbank) all use the MMN. There is also a private land owner in the area-12,000 acres-Stoufer estate.

Concern-how will the project address issue of de-reservation?

Concern - the problem of political interference-Maya mountain forest reserve under high threat from de-reservation.

Response-through the system wide impacts- ensuring the implementation of the NPAS bill and development of regulations for processes such as de-reservation as outlined in the National protected areas system plan. Impact for 2.1a-this will impact success of the project as de-reservation will negatively affect communities using the areas.

As part of the presentation, a discussion regarding livelihood required blocks of communities to discuss: From your experience using the protected areas and when projects relating to protected areas management has been implemented: How has your livelihoods been affected? What measures were put into place to ensure that you have alternative and sustainable livelihoods? Group work collected.

Presentation continued to discuss livelihood options and sub-projects.

Question: What does small scale pastures have to do with protect areas management? Small scale-sheep and deer and gibnut can be used along with agroforestry systems; rather than hunting deer-small scale pasture can support diversification of income.

Include lands and agriculture departments in the project that may be promoting other initiatives that are not in compliance with the project.

- Establish Guidelines for silvipastoral systems.

Villager of San Pedro Columbia stated that agro-ecology can include conversion of land to forested land with medicinal plants. Really liked that the project is addressing conversion of abandoned milpa to forested areas

The villager further stated that concerns are not static concerns; they are vital due to growth in population where PAs will be under increased threats due to land for agriculture; address bad agricultural practices-from citrus, milpa etc. They are open to supporting the project. San Pedro Columbia –reiterates that they fully support the project. Good initiatives for sub project-community need to decide what is needed.

Recommendation –to Plan follow up community consultation on the safeguards.

Only alcalde/chairpersons are invited at national level but at the local level the communities need to be consulted directly.

Consider needs of the communities to have livelihood opportunities in the project area. The communities know what they need. The project needs to look at communities at a larger scale-access roads, local development perspective and whole picture of the community. Management system for communal land needs to be clearly outlined.

Presentation of Community Consultation process framework: Preparation of documents and need to get document in format and level that they can understand and comprehend (technical).

Language and complexity-documents should be summarized and translate (there are no recognized written forms of the Maya languages).

Transportation-bus should be chartered to mobilize communities or leaders so that they do not have to limit their participation time to be on schedule with the village transportation where it exists.

Discussion: What is the culturally appropriate way to consult communities adjacent to MMFR and CRFR?

Trio village chairperson- Congratulate and applauds the approach Ya'axché takes in working with their communities-near MMFR. They come and meet the people in the community. Ya'axché representatives mentioned that they do not have an official consultation protocol- they only have reports on the consultations. It is done as due diligence with trio and Bella vista to see if community forest concession can be established in Maya Mountain North.

Each time they asked what people would like to know and they followed up and kept in constant contact with villagers.

Best way to send information:

Reach out to the chairperson and Alcalde – at least 21 calendar days in advance-before the meet with the end of the month-set time. Some community conduct communal cleaning (fajina) done every three months and conduct meeting after.

Indian creek and San Jose villages meet end of every month; this is combined with collection of water fees. After or during-they give information on the community; this is a good way of keeping people informed.

Bladen village -meet once a month on the last Sunday of every month due to community working on farms etc.

Most Chairpersons and Alcalde have cell phones; San Vicente and Jalacte have Guatemalan cell service.

It was mentioned that information can be sent through organizations such as Humana gets information to communities because they have structures in communities. Radio-discussion shows to discuss and explain to broader communities. Working through the NGO community has been a plus. BEST has community coordinators. TCGA-has a network for farmers through drying centres– extension officers, farmer leaders. Weekly meeting with members -producing cacao.

At the village level, first contact should be the two leaders-Alcalde and chairpersons. Meet with elected leaders 2-3 weeks prior to consultations.

Question: What is the most effective way to reach out to the women?

PulcheriaTeul-gives very useful information. In Bladen-go through the chairperson-Ms. Pauuis female and she contacts the females. In communities where male chairpersons-women and men are invited together. In San Vicente-mostly men having meeting.

If women's meeting the facilitator must be a female. Female school principals can be used. Indian creek-more women starting to come out of the shyness in attending meetings. Medina Bank has a female Alcalde.

Women groups-let them know the project will benefit women also. Certain issues may be considered –male or female relations. Livelihood activities for male or female can be discussed separately. Focus on activities for families

Discussion on Grievance mechanism

Local level committee –not only for grievance but also for the general implementation of the project. Might need to be looked at along with rural development due to sustainability after the project.

Question: who is the final authority in villages? Community, alcalde or chairman? The Alcade but in consultation with the Chairman. In 2015 –new alcaldes will be selected (2 years) ; 3 years for village councils (1 more year-2015).

It is important for projects to exist beyond the political structures of the villages. Most of the time there is loss of information due to change in leadership; session with interest groups and broader community; important point-some persons may have agenda-but the community would be able to buffer against individual positions or interest.

Communities to see how the project fit into the community-community development plans and project fit into overall plan-where community wants to go. Often times, plans are developed but not implemented. It is important to have local representatives at decision-making level.

Decentralized management of projects; involve communities in decision-making throughout the process and meaningfully. Recommendation is to have NAVCO on TAC or to have local level committees to provide advice on the sub-projects.

Presentation continued on how local committees will be established; and its functions including addressing grievance. It was reiterated that issues must be addressed at the local level-first.

The day concluded with a summary of the concerns and overview of the project objectives. The participants were reminded that the documents will be online by June 10th 2014 at the websites of the NPAS and World Bank and will be available electronically from the NGO's working with their community. Any comments and suggestions will be appreciated.

1.6 Indigenous Leaders Consultation

June 27th, 2014

Toledo Institute for Development and Environment's (TIDE) Conference Room

Hopeville Area, Toledo District

List of Participants

No.	Name	Position	Organization/Community
1.	Pablo Mis	Programme Coordinator	Maya Leaders Alliance; Toledo Alcalde Association
2.	Martin Chen	Chairperson	Maya Leaders Alliance
3.	Candido Cho	Leader	Maya Leaders Alliance
4.	Adriano Mas	Member	Maya Leaders Alliance
5.	Alfonso Cal	**Second Alcalde** **President**	Golden Stream Village, Toledo District Toledo Alcalde Association
6.	Ignacio Sho	**First Alcalde** **Deputy Leader**	San Marcos Village, Toledo District Toledo Alcalde Association
7.	Vicente Sackul	First Alcalde Member, Executive Board	Laguna Village, Toledo District Toledo Alcalde Association
8.	Louis Pop	**First Alcalde**	Golden Stream Village, Toledo District
9.	Jose Che	**First Alcalde**	San Pedro Columbia Village, Toledo District

10.	Bartholomew Teul	Programme Manager	Ya'axché Conservation Trust, 2 Alejandro Vernon Street, Punta Gorda Town, Toledo District
11.	Ronald Neal	Intern	Maya Leaders Alliance
12.	Timoteo Mesh	Intern	Maya Leaders Alliance and Toledo Alcalde Association
13.	Natalie Bucknor	Consultant	BEST
14.	Melanie Smith	Consultant	BEST
15.	Dwight Neal	Consultant	BEST

The meeting was attended by a total of 12 participants including leaders from the Maya Leader Alliance and the Toledo Alcalde Association. The meeting was conducted in English and Maya and a translator was present to translate from English to Ketchi and vice versa.

The project description, objective, components and selected KBA's were presented from the Environmental Management Framework. The presentation continued with the Livelihood Restoration Framework. A question was asked by TAA, what the involvement does the Ministry of Forestry, Fisheries and Sustainable Development have in project? The response was that the Ministry of Forestry, Fisheries and Sustainable Development will be implementing the project and is currently preparing for the project to begin. The question was asked regarding why they are doing a consultation on the documents? It was explained that World Bank funding require that projects have applicable safeguards in place before the project begins. The TAA representative then stated that the Ministry is basically obligated by the World Bank to develop the framework but this is not normally how they [the Ministry] do their work.

The adopted definition of adjacent community was discussed. There were no concerns or comments.

The presentation continued with the potential impact of the project and the mitigation measures. The first concern regarding activity 1.1a was presented by Pablo Mis of the Maya Leader Alliance. The legislation on land tenure will be revised but there are various difficulties with that aspect since there is no documentation of land distribution and land use is not properly document, so it would be difficult to use that as a basis for how the land tenure legislation revision.

When asked by the consulting team how is the land distributed and used in communal lands, since at this point the system is not clear. For example, it is difficult to determine how someone becomes a communal land user? Why would a user lose their benefits? What are the rights and responsibilities of the users? Is there documentation anywhere on that? The respondents

indicated that that reflects the position of the Prime Minister. He has expressed the same things. It is clear that the document is saying one thing and the government's position is something else. The genuine position of the Maya communities is to have established boundaries of the Maya community. Currently a lot of communities now keep their boundaries clean. Even so, the Maya never gave up their rights to the Protected Areas.

The MLA representative also informed the team that the TAA had drafted the Alcaldes Jurisdiction Bill 2011, a document which articulates the requirement for land use and it also responds to the other questions. However, no response has been received from local government since 2011 when it was submitted.

A question was posed by the consulting team to the participants about how communities who currently use the protected areas will be affected by the project especially since not all communities use the PA communally? The response was that the Alcaldes Jurisdiction Bill articulates the governance and process of how the system works but that has not been embraced by the government. These were the same issue brought up in the REDD+ process, they stumbled on it. It is not so much how communities will be affected but more that threats can be mitigated when government and Maya communities are able to sitand work something out. The Government does not recognize communal land use. The Government does not talk about Maya land rights. Therefore, the Maya people believe that government is not accountable, so, this and any other framework is not binding. The way to mitigate threats to the communities is to recognize communal land use.

When the discussion moved to 1.2 another concern was lodged. How would the project ensure that the sub-projects or funding actually benefit the community? Mr. Caal, the President of the TAA, shared that he has a lot of experience with projects that are implemented spending millions of dollars and the community did not benefit. (a few were discussed). He further stated that they identify key development areas but these do not benefit. The presentation skipped to the measures to assist affected persons component to show the project will ensure input from the onset. It was also mentioned by the facilitator that the project is yet in the planning stage and it is at this stage that the foundation must be set to ensure that communities benefit and that they have input on how the project will be implemented.

Returning to the project components- it was highlighted in the section on other restrictions that in the "case that indigenous users of forest resources are affected, free, prior and informed consultation leading to broad community support will be required for Livelihood Restoration Framework Operation Policy 4.12". The main concern was that the term free, prior and informed consultation should read, consultation and CONSENT. The participants stated that in their experience the government consistently uses consultation to mean that it was presented and marks it off on their checklist. Consent is more binding; it means that there is more serious commitment. Consultation does not give a solid establishment. In the case of Canada's indigenous peoples, they are based on consent. Consent mean agreement, consultation merely indicates that you were informed and your concerns were noted. The current court case of SATIIM vs. US Energy shows how consultation and consent are two different things.

Component 2.1 was presented. The participants mentioned 2.1a-declaration, re-alignment and de-reservation of PAs is very good, since communities want to keep the area under protection. The Alcalde of Santa Cruz asked if any of the projects will help communities to demarcate their boundaries. The response was that it was not known, since the projects have to be community-driven, so once it falls under any of the components then it will be eligible. The presentation was skipped to possible sub-projects to give an overview of what type of sub-projects would be implemented.

On the same topic, the consulting team was reminded by the participants that the Maya communities are still using organic customary practices and their practices already have some built in environmental safeguards.

The first presentation concluded with a review of eligibility, the grievance redress mechanism andmention that if necessary the involuntary resettlement plan will come into effect.

A presentation on the community consultation framework followed. At the onset of the presentation, it was explained that the document has two components: Section 1 discusses how adjacent communities in general will be consulted and section 2: discusses how indigenous communities in particular will be consulted. It was also explained that in the Belmopan consultation the concern that the document focuses only on Indigenous Peoples when in fact there were other ethnicities participating in the project led to the restructuring of the document.

The Legal and Institutional framework was mentioned. The only inputwas that even though there are two types of local leaders both leaders try to find equity and equal rights.

The presentation moved on to the adjacent communities identified by the various consultation. The only concern was that Big Falls should be a primary user not a secondary user, therefore, should be moved from Table 3 to Table 2.

The presentation then moved onthe indigenous people's consultation process,the TAA presented the consulting team with a copy of their approved consultation protocol which outlines the process and protocols for getting participation from the indigenous Maya of the south. The consultants assured the TAA that the document will be updated to ensure that they align as much as possible with both Government policies and the TAA's consultation protocol.

The presentation continued with the planning process, the disclosure mechanism and a quick reminder that there is a grievance mechanism in place. The floor was open for additional comments. The main concern centered around two main issues: consultation and commitment.

The first issue was that their experience working with Government has not been positive. It is not clear how binding Governments decisions will be in this project. There was no indication of what will happen if GOB does not adhere to its agreements with the communities.

Another question was asked about how the REDD+ will support the project. The consultants shared that this project has various components that will support the REDD+. It is unclear if the

REDD+ will happen and similarly they went through the same exercise with the communities as the KBA project is now doing.

A concern was brought up regarding equal representation. It was noted from the literature that there is a steering committee made up of CEO's and technical people. Where is the community representation on that committee? The consulting team mentioned that a representative group such as APAMO has been considered to sit on the PSC. However, the participants stated that they [APAMO] represents the environmental community. There should be representatives of communities as well as 'indigenous communities'. This will ensure that Mayan concerns are highlighted at that level. When government and technical persons do not agree with Maya Leaders then there is discouragement on the part of leaders.

The document states that there will be a mediation committee at the community level? How inclusive will that be? What representation will they have on the Steering Committee level? For example, the REDD SC is a body of key stakeholders to advise project management unit not just CEO's.

The final and very extensive discussion revolved around the issue of consultation. The participants felt that even with the consultations that have been done, the indigenous communities have not been adequately represented. Communities need to understand the project. They need to discuss how they will contribute to making it work and how projects will affect/benefit them. One Alcalde asked if there will be individual consultations in communities and he would like to see consultation done at community level.

The consultants were reminded that even though documents were sent to the MLA and TAA not all Alcalde were able to access it electronically and some had only seen the document prior to the meeting. As a result, the documents have not been digested. One suggestion was to have a focus group working session be conducted with leaders and community members of the adjacent communities. Another suggestion proposed that the meeting be with all Executive members of the MLA & TAA since not all were able to come because of it being a work day and because of flooding of some rivers. This meeting should include representatives of adjacent communities. An all-day session should be held. Saturday is better day for meetings. Letter will be sent to head of TAA & MLA. Letter will be sent to head of TAA & MLA. The continuous consultation is important so that everyone is aware. At the community level, there are community meetings. Once the leaders consult with their people andback to the project then freeproper and consultation would not be another checklistinstead it will be dialogue.

Mr. Caal mentioned that projects can be successful if they ensure wide and equal representation. Some of their members don't fully understand what the KBA project is about sothat when they leave the assemblythey go backtheir community with the correct information. He did not feel that with the discussion throughout the morning was extensive enough to provide them with the information to go back to their community.

Next session should be a full working day so as to receive feedback on documents for adjustments. It was suggested that the next consultation could be done as early as July 26th 2014, in Golden Stream or San Pablo. It was further suggested that this meeting be done with

the Ministry so that there is dialogue between government and the Maya communities. This is especially important so that when the project begins there has been already certain level of commitment between both.

Principles of the Toledo Alcades Association Consultation Framework

The consultation framework applies to policy initiatives, legislative proposal, administrative measure, development, economic project, or any other action that may affect the lands, territories or well-being of the Maya people.

- Process must be culturally appropriate, timely, meaningful, in good faith and meet international normative standards, particularly the requirement of free, prior and informed consent.
- Consultation must begin at the planning stage and continue throughout the life cycle of the proposed action or activity.
- Customary rules must be respected, including deliberative communication methods, it includes, but 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 must be provided at the earliest time possible.
- Maya people reserve the right not to accept any of the initiatives or other action that contravenes their consultation framework.

- The TAA/MLA Consultation framework makes it abundantly clear the making contact and exchanging information with the Indigenous Leaders does not mean consent. After receipt of 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.

- At the Toledo Alcaldes Association, the General Assembly is the fundamental authority for decision making. The executive body carries the decision of the assembly. The individual Alcaldes register their vote on an issue based on the directive of the village meeting on a specific issue.

- Where relocation or settlement becomes necessary as part of a mitigate measure the ESCEI must include a clear Settlement Action Plan and Livelihood Restoration Plan of the affected village.

Figure 8: Participants who attended consultation

1.7 Summary of Concerns from all consultations & Response

#	Stakeholder concern	Response/action
1	In the Belmopan consultation held on June 3, 2014 there was a concern about how the communities were selected/or would be selected as beneficiaries? This was an important question since it would determine whether or not the list of adjacent communities adequately reflected the communities who use the PA.	It was suggested that 'adjacent communities' should mean communities that are geographically proximate and/or have traditionally used the PA, and/or have direct access to the PA. As a result, it was agreed to use the definition and to also differentiate communities in a listing of primary and secondary users. It was also reported that soon after project implementation and before management plans are prepared, detailed social assessments will be conducted for each protected area. The Social assessments will result in a final list of communities selected as beneficiaries. Furthermore, specific tasks to be undertaken in the social assessment are included but not limited to those listed on page 23 of the IPPF.
2	The land tenure legislation component was questioned since it can be assumed that it means the current land tenure process will be reviewed. (landowners tax incentives)	At the workshop, Forest Department personnel clarified that the project implicitly states that the part of the legislation to be reviewed is the taxation system or specific clauses in the legislation which act as disincentives for persons who maintain forest cover and the current system of taxing landowners' high rates if they leave the land 'undeveloped'.

		Project Component 1.1a states: one key factor driving deforestation in Belize is the existing land tenure legislation, which requires that titled lands be cleared by owners to be considered 'developed'. This creates incentives for landowners to clear the land in an effort to meet the requirements of 'development' without which landowners are charged a higher land tax.
3	Participants discussed the practice of projects coming into communities to enforce laws without their knowledge of the new laws and without their consent. They also shared experiences regarding projects being implemented where the agencies predetermine what will be done and who will participate. These project works with communities on a 'trial and error' system making it difficult for communities to be open to other projects. The Alcades Association was concerned that there is a precedence of projects destined for development areas but in reality the funds does not reach the communities. A concern was brought up regarding equal representation. It was noted from the literature that there is a steering committee made up of CEO's and technical people. Where is the community representation on that committee? The consulting team mentioned that a representative group such as APAMO has been considered to sit on the PSC. However, the participants stated that they [APAMO] represent the environmental community. There should be representatives of communities as well as 'indigenous communities'. This will ensure that Mayan concerns are highlighted at that level. When government and technical persons do not agree with Maya Leaders then there is discouragement on the part of leaders.	During the workshop, it was communicated that the project is still in the design phase and that the consultation process will be throughout the project cycle and based on the consultation protocol outlined for the project and the communications strategy. It was also identified that the sub-projects will be community driven to address needs identified at the local level. The MFFSD has agreed to establish local level committees (identified in the grievance mechanism) that will serve as working groups with membership from the adjacent communities for each protected area which may be affected by project interventions. It will also include, but not be limited to, representatives from the District Association of Village Councils (DAVCO). The Local level committees to be established for the two southern sites, Colombia River Forest Reserve and Maya Mountain Forest Reserve will include representatives from the Indigenous communities to be identified by the TAA and/or MLA. The local level committees will serve as a formal group to advise not only on the project issues, but issues related to land tenure and project issues and to foster dialogue. This is similar to what has been established for the REDD+ project. Additionally, and to further engage the local level communities, the Technical Advisory Committee will meet with the local level communities to address specific issues that may arise.
4	A recurrent topic was that of livelihoods disruption.	Through the presentations it was clarified what mitigation measures will be taken into consideration and what type of projects would be eligible under the alternative livelihood and forest community management sub-projects. Furthermore, the Livelihood Restoration Framework, which will be implemented through the project, was prepared to mitigate impacts on livelihoods. As a result, affected parties will be eligible for support from the livelihood subprojects.
5	The Indigenous Leaders were not in agreement with the principle of	The Government of Belize, due its ongoing litigation with the Maya Land Rights case is not in a position to require consent

	consultation. They felt that it should read consultation and CONSENT[11] as this is seen as more binding for both parties. The example between SATIIM vs. US Energy below is outlined.	from Indigenous groups or communities as part of the overall consultation framework. However, the Government is committed to meaningful consultation and the inclusion of all relevant comments and recommendations from communities. The plan is to do this at all levels for the overall project and the sub-projects we intend to implement.
6	The title of the Safeguard document Indigenous People Planning Framework was questioned at the Belmopan consultation since it implied that it will focus only on indigenous peoples when in fact the project was serving most of the ethnic groups in Belize.	Suggestions were made to rename the document to reflect that it is a community consultation process. The example of BEST's culturally appropriate community consultation document was expressed and it was agreed to adopt the name.
7	The TAA/MLA explained that at the community level, there are community meetings. Once the leaders consult with their people and back to the project then free proper and consultation would not be another checklist instead it will be dialogue.	The Ministry, through the RPP process has communicated to the MLA and TAA that projects like REDD+ and KBA will have added benefits such as improved dialogue and collaborative planning, social and environmental safeguards, improved land use, forest and land governance reforms which are needed. However, for us to realize benefits we need to make investments in time, effort and financial resources during project implementation. Therefore, specific community level consultation will be pursued during implementation before project activities/components are carried out.
8	A recommendation was made for a full working day so as to receive feedback on documents for adjustments. It was suggested that the next consultation could be done as early as July 26th 2014, in Golden Stream or San Pablo. It was further suggested that this meeting be done with the Ministry so that there is dialogue between government and the Maya communities. This is especially important so that when the project begins there has been already certain level of commitment between both.	At the start of project implementation the Ministry will seek to engage a Community Liaison for non-indigenous communities and an Indigenous Peoples' Liaison, with financial support from the project to work with the communities and IP groups such as MLA and TAA to ensure effective participation and representation during project implementation. As indicated in the workshops with the communities, the safeguard instruments are not static documents and they will be revised as necessary. Furthermore, as stated above in response to comment # 7, at the start of project implementation, the Project Unit will work with communities, NGOs and TAA/MLA to organize specific community meetings to discuss the overall project and update the communities on the social and environmental safeguard documents.

[11]The Declaration on the Rights of Indigenous Peoples requires States to consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them (article 19). States must have consent as the Objective of consultation before any of the following actions are taken: • The adoption of legislation or administrative policies that affect indigenous peoples (article 19) • The undertaking of projects that affect indigenous peoples' rights to land, territory and resources, including mining and other utilization or exploitation of resources (article 32)

The Ministry of Forestry, Fisheries and Sustainable Development remains committed to maintaining and strengthening the dialogue and finding solutions to forest loss and degradation that is in the best interest of both indigenous peoples and the national government. However, achieving this will no doubt require further dialogue and maintaining a commitment to sustainable development for all citizens. Therefore, the Ministry will ensure that the structures and methodology employed in the project will include broad participation and employ the most culturally appropriate system to obtain community and stakeholders support.

Annex II: EIA Regulation Schedule, Belize

SCHEDULE I

The following shall be considered as Schedule I projects:

An Environmental Impact Assessment shall be completed for any project, program, undertaking or activity with the following purposes:

1. Aquaculture Projects

(a) Any research or commercial scale aquaculture project within wetland and floodplain areas.

(b) Construction or expansion of an aquaculture research or commercial facility with production capacities of 75 Tons Per Annum or more of unprocessed aquaculture produce.

(c) Any seabed-based marine culture or fresh water cage culture aquaculture facility to be established within 15 acres of production area for the purpose of producing any aquaculture produce.

(d) Any marine aquaculture facility to be established within 5 miles radius of the Belize Barrier Reef or any major coral reef system.

(e) Any aquaculture facility or operation involving the culture of any aquatic flora or fauna not native or not commercially cultured in Belize.

(f) Any freshwater aquaculture facility either utilizing a total pond production area of 50 acres or more, or a total daily water abstraction rate greater than 5 million gallons per day.

2. Cement

(a) Production of cement.

3. Chemical Industry

(a) The treatment of intermediate products and production of chemicals (insecticides, fungicides, herbicides and other pesticides).

(b) The production of pesticides or pharmaceutical products, paints, varnishes, elastomers or peroxides.

(c) The production of industrial carbon.

(d) The production of alkalis.

(e) The installation of electrochemical (metallic sodium, potassium and magnesium chlorides, perchlorates and peroxides) plant.

(f) The production of electro-thermal products (artificial abrasive, calcium carbides).

(g) The production of phosphorous and its compounds.

(h) The production of nitrogenous compounds (cyanide, cyanamide and other nitrogenous compounds).

(i) The production of halogens and halogenated compounds (chlorine, fluorine, bromine and iodine).

(j) The production or storage depots of explosives (including industrial explosives, detonators and fuses).

(k) The production of any hazardous substances listed in Part I of the Schedule to the Act.

4. Dams and Waterworks

(a) Major waterworks: alteration of river banks and shoreline, alteration of ground water, diversion of water courses, modification of stream flows.

(b) Construction of large dams, impoundments or other installation designed to hold water or store it on a long-term basis.

(c) Large irrigation works.

(d) Construction of Large drainage canals.

5. Drugs and Pharmaceuticals

(a) Manufacturing of drugs and pharmaceuticals including vitamins and antibiotics.

6. Energy Generation and Distribution Projects

(a) Any large installation for the production of 15 megawatts of electricity or other forms of energy.

(b) A large industrial installation for the storage of natural gas, or more than 10,000 barrels of fuel/petroleum products.

(c) Any major project involving the transmission or distribution of energy by overhead or underwater project outside of an existing corridor.

7. Housing/Subdivisions

(a) Large scale housing developments or a subdivision on mainland involving the proposed construction of more than 300 houses.

(b) Housing developments of more than 50 houses on the Cayes or Islands.

8. Infrastructure Projects

(a) The construction of industrial estate developments for heavy industries.

(b) The construction of new national highways, and other roads of more than 10 miles in length.

(c) The construction of new townships.

(d) The construction of a large harbour, a marina, shipping port, trading port, an inland waterway which permits the passage of vessels or a port for inland waterway traffic capable of handling such vessels.

(e) A waste-disposal installation for the incineration or chemical treatment or disposal of waste, or installation designed solely for the temporary storage of waste.

(f) Any airport having an airstrip of 2,000 metres or longer.

(g) Any major installation of transmission lines by overhead, underground, or underwater cables or other methods of installation.

(h) Construction of hotels, resort facilities and golf courses within or in close proximity of the boundaries of a protected area or a World Heritage Site.

9. Land Reclamation and/or land Creation

(a). Dredging for land reclamation and/or creation of projects utilizing a volume of material of more than 50,000 cubic yards along the coast, cayes and ecologically sensitive waterways.

(b) Any land reclamation or creation project in excess of ten

(10) acres along the coast or within a wetland.

10. Mining and Industrial Processing of Ores

(a) Any large installation for the processing of mineral ores.

(b) An installation for the processing of metallic ores (including smelting, electro-plating, refining, drawing or rolling).

(c) Any large- scale mining of minerals.

11. Paper Industry

(a) The manufacturing of paper for writing, printing and wrapping.

(b) The manufacture of newsprint paper.

(c) The manufacture of wood pulp (mechanical, chemical including dissolving pulp).

12. Petroleum

(a) Petroleum development and production.

(b) Petroleum refining.

13. Rubber Industry (natural and synthetic)

(a) The manufacture and treatment of elastomer-based products.

(b) Production of natural and synthetic rubber.

(c) Production of tires and tubes.

(d) Production of surgical and medical products including prophylactics and latex products.

(e) The manufacturing of Footwear, and other rubber goods.

14. Other Projects

(a) An integrated chemical installation, that is to say, an industrial installation or group of installations where two or more linked chemical or physical processes are employed.

(b) Lease or sale of more than five hundred (500) acres of National Lands.

(c) Any logging operation within a forest reserve.

(d) Logging or conversion of forest land, employing the clear fell method covering more than 300 acres.

(e) Logging operations of more than 100 acres adjacent to any protected area declared under the National Parks Systems Act.

(f) Any Large - scale agro-processing plant.

(g) Clearing of more than 300 acres of land.

(h) Clearing of more than 10 acres of mangroves in ecologically sensitive areas.

(i) Ground water abstraction works of more than 5 million gallons per day.

(j) The establishment of Commercial Free Zones (CFZ)

(k) The establishment of an Export Processing Zones (EPZ).

(l) Any proposed development project, undertaking or activity within any protected area (terrestrial and marine).

SCHEDULE II

The following projects may require an environmental impact assessment or limited level environmental study depending on the location and size of the project:

1. Aquaculture

(a) Construction or expansion of a marine aquaculture research or commercial facility with production capacities of less than 75 Ton Per Annum of unprocessed aquaculture produce.

(b) Any seabed-based marine aquaculture facility which will utilize less than 15 acres of production area for the purpose of producing any aquaculture produce.

(c) Any aquaculture facility or operation involving the culture of any aquatic flora or fauna already under commercial production in Belize.

(d) The establishment of any processing facility in Belize for the processing of any aquaculture commodity.

(e) The establishment of any hatchery facility in Belize for the purpose of producing freshwater and marine seedstocks either for aquaculture or restocking purposes.

2. Agriculture

(a) Commercial poultry-rearing.

(b) Commercial pig-rearing of more than 10 sow breeding herd.

(c) Planting and cultivation of agriculture plots of more than 200 acres (e.g. citrus, banana, sugar cane, vegetable).

(d) Cultivation of cotton (Gossypium spp) in a plot larger than 50 acres.

(e) Cultivation of high agrochemical input commodity (e.g., bananas for export) on plots larger than 50 acres or near to sensitive water resources.

(f) Post-harvest treatment utilizing radiation energy.

3. Chemical Industry

(a) The storage of any petroleum, petrochemical or chemical products.

4. Dredging and Land Reclamation schemes

(a) Dredging for land reclamation and/or creation for projects utilizing a volume of material of less than 50,000 cubic yards along the coast, cayes and ecologically sensitive areas.

5. Energy Industry

(a) The surface storage of natural gas, coal or lignite on a large scale commercial basis.

(b) The underground storage of combustible gases.

(c) The storage of fossil fuels of 5,000 gallons or more.

(d) The industrial briquetting of coal or lignite.

(e) Any installation for the production of electricity, steam and hot water.

6. Fertilizers

(a) Production of Nitrogenous fertilizer.

(b) Production of Phosphatic fertilizer.

7. Fisheries

(a) Construction of fishing harbours or large fishing piers.

(b) Expansion and restoration works for fish processing plants, harbour or large piers involving 50 percent or more in fish landing capacity per annum.

8. Food Industry

(a) The manufacture of vegetable or animal oils or fats.

(b) The packing or canning of animal or vegetable products.

(c) The manufacture of dairy products.

(d) Brewing or malting.

(e) Confectionery or syrup manufacture.

(f) An installation for the slaughter of animals and/or subsequent processing activities related thereto.

(g) An industrial starch manufacturing installation.

(h) Any citrus processing installation.

9. Forestry

(a) Conversion of hill forest land (with slopes greater than 25 degrees) to other land use.

(b) Logging or conversion of forest land use within the catchment area of reservoirs used for municipal water supply, irrigation or hydro-power generation or in areas adjacent to national parks or protected areas.

(c) Logging or conversion of forest land adjacent to national parks, nature reserve, wildlife sanctuary, archeological sites or any protected area declared under the National Park Systems Act.

(d) Logging or conversion of forest land, employing the clear fell method, covering areas between 100 and 300 acres.

(e) Clearing of fringing mangrove vegetation on islands or adjacent to marine or forest reserves for industrial, housing or agricultural use.

10. Glass or Ceramic Making

(a) The manufacture of glass or ceramics.

11. Housing

(a) Large scale housing developments or subdivisions involving the proposed construction of more than 100 houses but less than 300 houses.

(b) Housing developments, subdivisions, agricultural developments or any other type of developmental project that could affect established biological corridors.

12. Infrastructure Projects

(a) An urban development project of less than 300 acres.

(b) The construction of a road, or airstrip or an airport of less than 2000 meters in length.

(c) Canalization or flood relief works.

(d) A dam or other installation designed to hold water or store it on a long-term basis.

(e) An oil or gas pipeline installation of less than 5 miles in length.

(f) A long-distance aqueduct.

(g) The lease or sale of less than 500 acres of National Land.

(h) Any activity involving stream alterations or diversions.

13. Medical Facilities

(a) The construction of hospitals.

14. Mining and Processing of Minerals

(a) Any small scale mining and processing of minerals

(b) Extracting minerals such as marble, sand, gravel, shale, salt, phosphates and potash.

(c) Mining of river sand and gravel of volumes greater than 15,000 cubic yards.

15. Paper and Pulp (including Paper Products)

(a) Paper board.

(b) Paper for packaging (corrugated papers, craft paper, paper bags, paper containers and the like).

(c) Sanitary paper.

(d) Cigarette paper.

(e) Other paper products.

16. Petroleum

(a) Petroleum exploration activities such as seismic surveys.

17. Resort and Recreational Development

(a) Construction of hotels, golf courses or large scale coastal resort facilities.

(b) Development of tourist or recreational facilities in or adjacent to national parks or protected areas.

(c) Development of tourist or recreational facilities on cayes or islands.

18. Textile, Leather, and Wood Industries

(a) A wool scouring, de-greasing and bleaching factory.

(b) The manufacture of fiber board, particle board for plywood.

(c) A fibre-dying factory.

(d) A leather tanning or leather dressing factory.

19. Water Abstraction (Ground and Surface Water)

Annex III: World Bank Project Categorization for Environmental Assessment (World Bank, 2012)

Category	Potential Impact	Description/Response
A	Likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented (A potential impact is considered "sensitive" if it may be irreversible (e.g., lead to loss of a major natural habitat) or raise issues covered by OP 4.04, *Natural Habitats*; OP/BP 4.10, *Indigenous Peoples*; OP/BP 4.11*, Physical Cultural Resources* or OP 4.12, *Involuntary Resettlement)*	• EA for a Category "A" project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance • The borrower is responsible for preparing a report, such as normally an EIA (or a suitably comprehensive regional or sectoral EA) that includes, as necessary, elements of the other instruments such as Strategic Environmental and Social Assessment (SESA), environmental audit, hazard or risk assessment, environmental management plan (EMP) and environmental and social management framework (ESMF).
B	Potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats--are less adverse than those of Category "A" projects. (When the screening process determines, or national legislation requires, that any of the environmental issues identified warrant special attention, the findings and results of Category "B" EA may be set out in a separate report. Depending on the type of project and the nature and magnitude of the impacts, this report may include, for example, a limited environmental impact assessment, an environmental mitigation or management plan, an environmental audit, or a hazard assessment. For Category "B" projects that are not in environmentally sensitive areas and that present well-defined and well-understood issues of narrow scope, the Bank may accept alternative approaches for meeting EA requirements: for example, environmentally sound design criteria, siting criteria, or pollution standards for small-scale industrial plants or rural works; environmentally sound siting criteria, construction standards, or inspection procedures for housing projects; or	• These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category "A" projects. • The scope of EA for a Category "B" project may vary from project to project, but it is narrower than that of Category "A" EA. • Like Category "A" EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. • Findings and results of Category "B" EA are described in the project documentation (Project Appraisal Document and Project Information Document

Category	Potential Impact	Description/Response
	environmentally sound operating procedures for road rehabilitation projects)	
C	Likely to have minimal or no adverse environmental impacts	• Beyond screening, no further EA action is required.
F1		A proposed project is classified as Category "F1" if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.

Annex IV: Pest Management Screening Framework[12]

The purpose of this document is to provide a strategic framework for the integration of best agricultural and pest management considerations in the planning and implementation of the activities to be implemented within the sub-projects.

This document has been prepared as a guide for initial screening of the sub-projects for positive and negative impacts that would require attention and/or mitigation prior to their implementation.

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1. In assisting borrowers to manage pests that affect either agriculture or public health, the Bank supports a strategy that promotes the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides. In Bank-financed projects, the borrower addresses pest management issues in the context of the project's environmental assessment

- Does the project assist the borrower in any form of pest management?
- What type of assistance is provided?

	Assessment	YES	NO
1.1	Strengthening of extension systems which cover pest management		
1.2	Strengthening of vector control		
1.3	Funding of pest management related research		
1.4	Direct pesticide purchasing		
1.5	Strengthening of pest management policy issue		

- Will the implementation of the project have an indirect effect on (or influence) pest management?

	Assessment	YES	NO
1.6	Promotion of agricultural intensification		
1.7	Promotion of credit systems that may result in increased pesticide use		
1.8	Promotion of agricultural irrigation with impact on public health issues		

- Which level of EA is required for the project?

	Assessment	YES	NO
1.9	Has an EA been made?		

[12] Provided by the World Bank.

1.10	See World Bank BP 4.01 Annex C for more specific assessment issues on the need for a comprehensive Pest Management Plan and the Screening of Pest Control Products.		

- Does the project support / promote the use of biological or environmental control and reduce the reliance on synthetic chemical pesticides? (See under 4 for more specific questions) Yes_____ No_____

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2. In appraising a project that will involve pest management, the Bank assesses the capacity of the country's regulatory framework and institutions to promote and support safe, effective, and environmentally sound pest management. As necessary, the Bank and the borrower incorporate in the project components to strengthen such capacity.

- Has an assessment been made (in the PAD or other official project appraisal document) of the country's capacity to regulate pest management?

	Assessment	**YES**	**NO**
2.1	Is a pest management legislation is in force in the country?		
2.2	Is related legislation in force that influences pest (and pesticide) management? (e.g. environmental, economic, health, ….)		
2.3	Is legislation operational and effectively being enforced?		
2.4	Is legislation effective?		
2.5	What are the gaps in legislation and enforcement compromising provision 2 of OP 4.09? _____ _____ _____ _____ _____		

In case gaps have been identified, what activities have been included in the project to improve pest management legislation and enforcement?

- Is the timeline of these activities in comparison with the pest management activities in the project (e.g. does it allow large scale pesticide use before legislation is effective?) Yes _____ No_____ if yes, explain why.

_____
_____
_____

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3. The Bank uses various means to assess pest management in the country and support integrated pest management (IPM) and the safe use of agricultural pesticides: economic and

sector work, sectoral or project-specific environmental assessments, participatory IPM assessments, and adjustment or investment projects and components aimed specifically at supporting the adoption and use of IPM.

Which means have been used, in preparing the project, to assess pest management issues in the country?

Which means have been proposed or used, in preparing and executing the project, to support IPM and safe use of pesticides.

- What data were assessed before project implementation, and have been collected during project execution, on :

	Assessment	YES	NO
3.1	Agricultural productivity of the crops covered by the project?		
3.2	Crop losses due to agricultural pests?		
3.3	Use of pest management practices, including pesticides?		
3.4	Impact of project activities on agricultural productivity?		
3.5	Impact of project activities on crop losses?		
3.6	Impact of project activities on pesticide use or other pest management practices?		
3.7	Impact of project activities on farmer revenues?		
3.8	Environmental and health impact of pest management practices?		

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4. In Bank- financed agriculture operations, pest populations are normally controlled through IPM approaches, such as biological control, cultural practices, and the development and use of crop varieties that are resistant or tolerant to the pest. The Bank may finance the purchase of pesticides when their use is justified under an IPM approach.

Which pest management approaches will be developed, promoted or used in the project?

- What technical recommendations and/or extension packages will be developed in the project? What is their (potential) impact on pest management (practices).
- Have any surveys been carried out by the project to assess farmer needs and requirements? What type of pest management problems do they encounter?
- What farmer (demonstration) field trials have been or will be carried out? Were pest management techniques involved?
- What research has been or will be carried out within the framework of the project? What is its (potential) impact on pest management (practices)?

Will pesticides be financed (directly or indirectly) by the project?

- Is the proposed financing/procurement of pesticides or other pest control products justified under an IPM approach?
- **See Part II** – Questionnaire on Pesticides and IPM for more detailed screening

Part II: Pesticide Use Screening Questionnaire[13]

Project:	**Year:**
Interviewer:	Date:
Comments:	

General information for the farmer		
Name:	**Age**	**Occupation:**
GPS Coordinates:	**Cluster ID**	**Dist. to Homestead:**
District:	**Division:**	**Group name:**
Location:	**Sub-location:**	**Village:**

1) **Pest Control practices**

a) Do you use any pesticides to control pests (insects, diseases, weeds) of crops/livestock?

Yes ☐ No ☐

If yes, complete the table below

[13] Provided by the World Bank.

CROP/ LIVESTOCK	**PESTS (**insects, diseases, weeds**)** **Stage of Pest**	**PESTICIDE USED** **(Brand, common and chemical names)**	**GROWTH STAGE**	**No. OF TIMES USED**	**DATES WHEN USED**	**QUANTITY USED**

If Not applying why?

……

b) If you use any of the above pesticide, do you keep records of the;

Application location / area / animals (sprayed) Yes ☐ No ☐

Pesticide product trade name: Yes ☐ No ☐

Operator name: Yes ☐ No ☐

If not why? ……

c) When do you decide to use the pesticides (tick all that apply)?

☐ Use pesticides at regular intervals throughout the season (calendar)

☐ Use pesticides when pests are seen in the field/on livestock (control)

☐ Use pesticides after field sampling and finding a certain number of pests or a certain level of damage (scouting)

☐ Told by someone to apply (Verify who?) ……

Others (specify) _____

d**) Do you use a sprayer?** Yes ☐ No ☐

- If yes, do you own it? Yes ☐ No ☐
- Do you rent **it?** Yes ☐ No ☐
- Do you borrow it? Yes ☐ No ☐

Was there any pesticide(s) which was not effective at all after spraying?

- Yes / No
- If yes, name the pesticide(s): _____

- **e) From your experience, are there any negative effects of using pesticides?**

Yes ☐ No ☐

If yes, list the negative effects:

1_____

2 _____

3 _____

4 _____

5 _____

f**) Do you use any kind of protective clothing while applying or handling pesticides?**

Yes ☐ No ☐

If no why? _____

If YES, what kind? _____

2. Knowledge of pesticide handling and storage (tick one in each row)

Activity	Sometimes	Always	Never
Do you read labels on the pesticide container before using?			
How often do you wear protective clothing and other accessories like nasal mask, hand gloves, eye goggles and boots while applying pesticides?			
Do you mix pesticides with your hands? Where do you mix pesticides? Where do you rinse your sprayer and mixing equipments?			
Do you observe pre- harvest intervals and pre- entry intervals (Waiting periods after applying pesticides)			
Do you wash your hands after spraying? Yes / No If yes, with: water only / use soap / use soil			

e) What do you do with the pesticide container after the pesticide is finished?

☐ Burn

☐ Burry

☐ Dispose in Latrine

☐ Wash and use e.g drinking water, storing salt.

☐ Use to make tin lamps

Annex V: Guidelines for Preliminary Screening of Sub-Projects[14]

Section 1: General Information

Preparer: _____ Date of Assessment: _____

Submitted by (Company/Person): _____

Section 2: Sub-Project Details

Sub-Project Name: _____

Location (District/City/Town/Village):

_____

General Sub-Project Description (200 words):

_____
_____
_____
_____
_____

List of Major Activities:

_____
_____
_____

In what area of the Government National Development Plan does the sub-project contribute (e.g. Agriculture, Education, Public Utilities, Infrastructure)

_____

_____

_____

[14] Developed by the consultant.

_____

_____

Identify the following for the sub-project with respect to environmental management:

Strengths:

Weaknesses:

Opportunities:

Threats:

Section 3: Classification of Project

Note: The classification resulting in the highest level of assessment will take precedence in terms of EA required

Department of the Environment (Annex I) World Bank (Annex II)

Schedule I: ____ Schedule II: ____ Cat A: ____ Cat. B: ____ Cat. C: ____
Schedule III: ____

If a sub-project falls under Schedule 1 for DOE or Category A for World Bank, it will not be considered eligible under the MAPKBA project.

Will the sub-project form a part of a development programme or existing activity for the area or is likely to significantly increase pollutant release? If yes, go to Section 4. If no, state the influence area of the sub-project below.

Yes ____ No ____

_____
_____
_____

Section 4: Project Influence (Cumulative Impacts)

Other related development or activity in the area:

Name: _____

Type/Nature: _____

Distance away: a. < 5 miles ____; b. 5-10 miles ____; or c. > 10 miles ____)

Say if the location of the above activity is in relation to typical wind or natural river flow direction (e.g. upstream or downstream, cardinal directions or town/village/etc.)

N ____ NE ____ NW ____ S ____ SE ____ SW ____ E ____ W ____

State the part of the biosphere that is likely to be affected by emission of pollutants generated as a result of the implementation of the proposed sub-project:

Land _____ Water _____ Air _____

State the type and likely quantity of Greenhouse Gasses that will be emitted or saved in metric tons or gigagrams.

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EIA required ( ) project rejected

EIA not required ( ) proceed to identify level of assessment necessary (Annex I and II)

_____

Other World Bank safeguard policies that are likely to apply:

Natural Habitats _____ Pest Management _____ Physical Cultural Resources _____

Forests _____

If any of the above safeguard policies are likely to apply, state the appropriate action to be taken before final approval is given. For example, preparation of a pest management plan (see Annex IV for screening and a questionnaire), Environmental Monitoring Plan (see Annex VIII, Part C), or Forest Management Plan, etc.

_____

_____

_____

_____

Identify environmental impacts using **Annex VI**.

No.	Major Activities*	Impacts	Level of risk (Annex VI)			Mitigation Measure
			Significant	Medium	Low	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

Note:
* More impacts can be added if necessary.

Once the above table is completed, the proposed mitigation measures will be assessed and the proponent will be informed if to submit a sub-project proposal for full screening by the NPAS/PMU and DOE.

Annex VI: Impact Assessment Matrix and Guide

Based on specific issues, a matrix was adopted and customized to assess the level of risk according to the likelihood and consequence of the impact occurring at a given sub-project site and its surroundings. The impacts to be assessed are both individual and cumulative based on the location of the project.

Guidelines for assessment are as follows:

LIKELIHOOD: What is the likelihood that the assessed activity will have an impact on the environment?

Certain Will occur at a frequency greater than every week if preventative measures are not applied.

Likely Will occur more than once or twice but less than weekly if preventative measures are not applied.

Unlikely May occur once or twice during the sub-project construction/operation if preventative measures are not applied.

Rare Unlikely to occur during a sub-project construction/operation even if controls were missing.

CONSEQUENCE: How severe will the potential impact be?

Catastrophic Significant damage or impact on environment or community on one or several aspects as listed below:

- severe and/or persistent waterway/water source/storm-water pollution
- death of fauna/flora
- widespread and/or significant changes to ecosystems
- soil contamination over an area > 10 m^2, contamination of off-site soil or contamination of soil with prescribed or hazardous materials
- widespread community impact resulting in illness, injury or inconvenience
- loss or destruction of archaeological/heritage places, sites or objects
- receiving a fine/s is a certainty or works will be halted

Major Major adverse environmental or social impacts on one or several aspects as listed below:

- medium-term, noticeable/measurable change in waterway/water source/storm-water quality
- isolated deaths of non-vulnerable fauna/flora species
- noticeable, localized changes to ecosystems
- soil contamination over an area $1m^2 – 10\ m^2$ (excluding contamination of offsite soil or contamination of soil with prescribed or hazardous materials)
- annoyance or nuisance to community
- frequent, partial damage or off site movement of archaeological/heritage places, sites or objects
- fining likely or works may be halted

Moderate Moderate undesirable environmental or social impacts on one or several aspects as listed below:

- localised, short term noticeable/measurable change in waterway/water source/storm-water quality
- short term, minor changes to ecosystems
- soil contamination over an area $< 1\ m^2$ (excluding contamination of offsite soil or contamination of soil with prescribed or hazardous materials)
- some annoyance or nuisance to community
- isolated, partial disturbance or movement of archaeological/heritage places, sites or objects
- fines unlikely

Minor No or minimal adverse environmental or social impacts as listed below:

- no measurable effect on waterway/water source/storm-water quality and ecosystems
- no or isolated community complaints
- no or isolated events where areas of soil $< 1m^2$ is contaminated (excluding contamination of off-site soil or contamination of soil with prescribed or hazardous materials)
- no or unlikely impact on archaeological/heritage places, sites or objects
- no likelihood of being fined

The table below will be used to determine the level of risk based on the likelihood of occurrence and the potential severity of a consequence.

Consequence	Likelihood			
	Rare	Unlikely	Likely	Certain
Catastrophic	Medium	Significant	Significant	Significant
Major	Medium	Significant	Significant	Significant
Moderate	Low	Medium	Significant	Significant
Minor	Low	Low	Medium	Medium

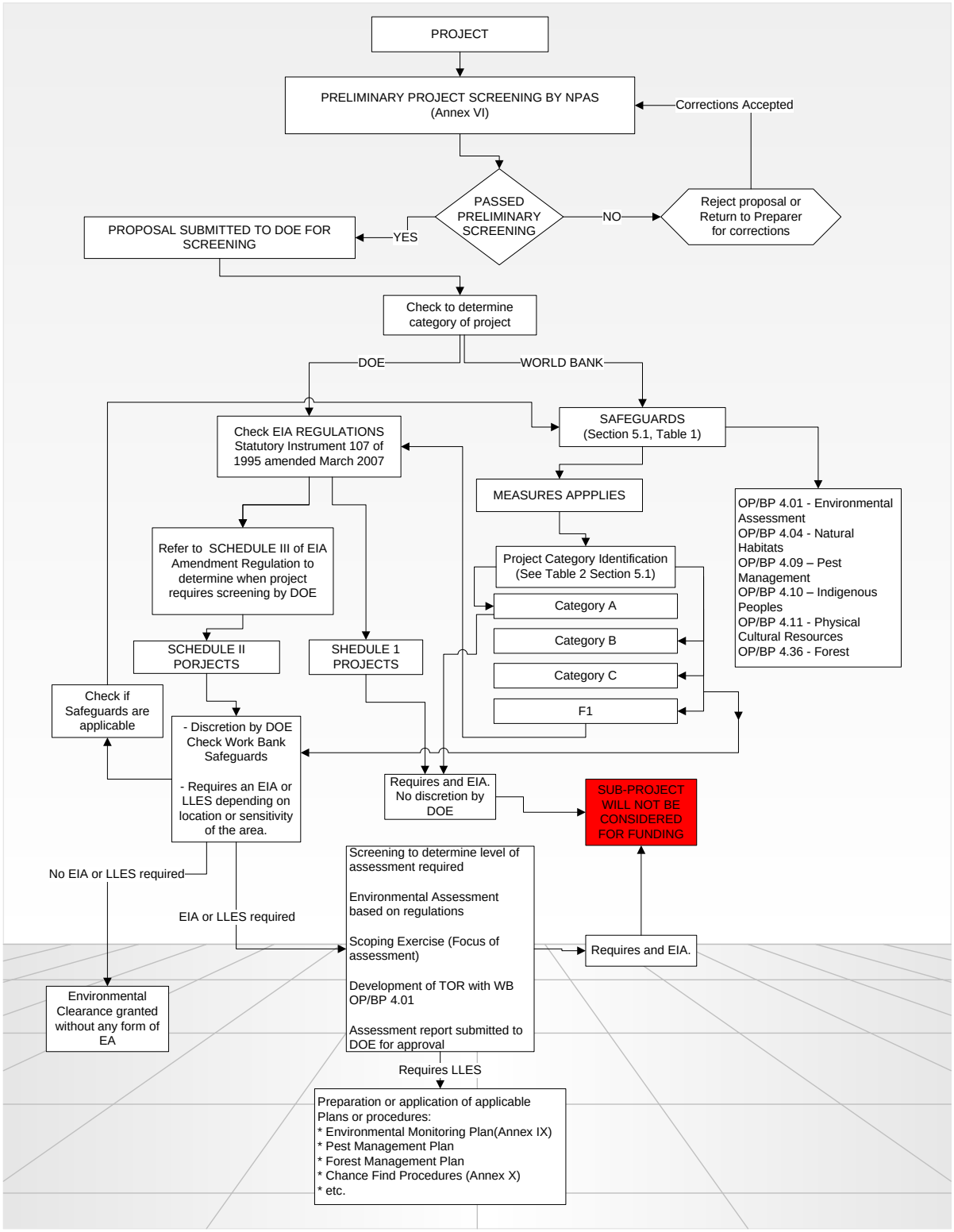
The level of risk indicated is a guide to determine the type and amount of environmental protection measures required on-site as follows:

Significant Risk
Where a significant risk to the environment has been identified, environmental protection measures are a priority and must be implemented to reduce the risk to an acceptable level.

Medium Risk
Where a medium risk has been identified, practicable best management measures need to be implemented if these can further reduce risk.

Low Risk
Where the impact has been assessed as a low risk, best management practices should be followed where feasible.

Annex VII: Project Appraisal and Approval Map[15]



[15] Developed by consultant.

Annex VIII: Environmental Management Plan Checklist and Format for Low-risk Topologies[16]

This Environmental Management Plan (EMP) checklist applies to sub-projects below Schedule I for DOE and Category A for the World Bank OP/BP 4.01. The goal is to provide a more streamlined approach to preparing EMPs. This checklist-type format ("EMP Checklist," **see Part II**) has been developed to provide "pragmatic good practice" and designed to be user friendly and compatible with safeguard requirements. A blank sample is attached as part **(b)**.

The checklist-type format attempts to cover typical mitigation approaches to common low-risk topologies with temporary localized impacts. It is anticipated that this format provides the key elements of an EMP to meet World Bank Environmental Assessment requirements under OP 4.01 (**part (a)**).

The EMP **part (b)** format has two sections:

- **Part I:** constitutes a descriptive part ("site passport") that describes the project specifics in terms of physical location, the institutional and legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process. This section could be up to two pages long. Attachments for additional information can be supplemented if needed.
- **Part II:** includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity and the monitoring plan for activities during project construction and implementation. It retains the same format required for standard World Bank EMPs.

Application of the EMP-Checklist

The practical application of the EMP-checklist would include the filling in of **Part I** to obtain and document all relevant site characteristics and activities. In **Part II** the type of foreseen works, as obtained from the design documents, would be checked and the resulting provisions listed below highlighted (e.g. by hatching the field or copy pasting the relevant text passages into the special provisions of the tender documents.

The whole filled in tabular EMP is additionally attached as integral part to the works contract and, analogous to all technical and commercial terms, has to be signed by the contract parties.

For the monitoring of the Contractor's safeguards due diligence, the designated environmental officer works with **Part C** of the EMP Checklist, the **Monitoring Plan**. This should be developed

[16] Provided by the World Bank.

site specifically and in necessary detail, defining clear criteria and parameters which can be included in the works contracts, which reflect the status of environmental practice on the construction site and which can be observed/measured/ quantified/verified by the inspector during the construction works.

Part C would thus be filled in during the design process to fix key monitoring criteria which can be checked during and after works for compliance assurance and ultimately the Contractor's remuneration.

Part (a) Documents generally required by World Bank's Safeguard Policies

Policy No.	Topic	Documents / deliverables required during		
		preparation	implementation	operation
OP 4.01	Environmental Screening / Assessment (EA)	EA process, including EMF, EIA, EMP, MP	EMP / MP	(EMP) / MP
OP 4.04	Natural Habitats	included in EA under OP 4.01	compensation plan, included in EMP + MP, OP 4.01	included in EMP + MP, OP 4.01
OP 4.09	Pest Management	included in EA under OP 4.01	Pest Management Plan (PMP)	(reference in ISR/ICR)
OP 4.10	Indigenous Peoples	social assessment, IPP	IPP / RAP	(reference in ISR/ICR)
OP 4.11	Physical Cultural Resources	included in EA under OP 4.01	PCR management plan (part of EA)	(reference in ISR/ICR)
OP 4.12	Involuntary Resettlement	RAP (and other instruments)	RAP (and other instruments)	(reference in ISR/ICR)
OP 4.36	Forest	included in EA under OP 4.01	included in EMP + MP, OP 4.01	included in EMP + MP, OP 4.01
OP 4.37	Safety of Dams	dam safety report (DSR), TOR for PoE	DSR & emergency preparedness plan (ERP)	DSR & emergency preparedness plan[17], dam instrumentation & monitoring plan
OP 17.50	Disclosure	SIR	SCR, disclosure of	contd. information

[17] This is commonly not released to the Public.

		ESIA & EMP	& consultation
OP/BP 7.50	International Waterways	notification of all affected riparian states	
OP/BP 7.60	Disputed Areas	legal / political negotiations	

Fields hatched in grey: no specific documents required at preparation stage

Acronyms:

DSR	dam safety report	EA	environmental assessment *process*
EIA	environmental impact assessment *report*	EMF	environmental management *framework*
EMP	environmental management *plan*	ESIA	environmental / social impact assessment
ERP	emergency response plan	IPP	indigenous peoples plan
ICR	implementation completion report	MP	monitoring plan
ISR	implementation status report	PoE	Panel of Experts
PCR	physical cultural resources	RAP	resettlement action plan
SCR	stakeholder consultation report	SIR	stakeholder identification report

Part (b): Format for Environmental Management Plan

Environmental Management Plan (EMP)
[Title]

[Country]

(Date)

PART I: Activity Description

1. Introduction
2. Project Objective
3. Project Description
4. Environmental Footprint
5. Policy, Legal and Administrative Framework
6. Relevant World Bank Policies
7. Implementation Arrangements
8. Environmental Screening, Assessment and Management
9. Potential Environmental Impacts
10. Environmental Management Approach
11. Monitoring and Reporting

Part II: EMP Checklist for Activities

PART A: INSTITUTIONAL & ADMINISTRATIVE				
Country				
Project title				
Scope of project and activity				
Institutional arrangements (Name and contacts)	WB (Project Team Leader)	Project Management	Local Counterpart and/or Recipient	
Implementation arrangements (Name and contacts)	Safeguard Supervision	Local Counterpart Supervision	Local Inspectorate Supervision	Contactor
SITE DESCRIPTION				
Name of site				
Describe site location			Attachment 1: Site Map [ ]Y [ ] N	
Who owns the land?				
Geographic description				
LEGISLATION				
Identify national & local legislation & permits that apply to project				

activity	
PUBLIC CONSULTATION	
Identify when / where the public consultation process took place	
INSTITUTIONAL CAPACITY BUILDING	
Will there be any capacity building?	[ ] N or [ ]Y if Yes, Attachment 2 includes the capacity building program

PART B: ENVIRONMENTAL /SOCIAL SCREENING

Will the site activity include/involve any of the following potential issues and/or impacts:	**Activity and potential issues and/or impacts**	**Status**	**Additional references**
	1. Building rehabilitation • Site specific vehicular traffic • Increase in dust and noise from demolition and/or construction • Construction waste	[ ] Yes [ ] No	See Section **B** below
	2. New construction • Excavation impacts and soil erosion • Increase sediment loads in receiving waters • Site specific vehicular traffic • Increase in dust and noise from demolition and/or construction • Construction waste	[ ] Yes [ ] No	See Section **B** below
	3. Individual wastewater treatment system • Effluent and / or discharges into receiving waters	[ ] Yes [ ] No	See Section **C** below
	4. Historic building(s) and districts • Risk of damage to known/unknown historical or archaeological sites	[ ] Yes [ ] No	See Section **D** below
	5. Acquisition of land[18] • Encroachment on private property • Relocation of project affected persons • Involuntary resettlement • Impacts on livelihood incomes	[ ] Yes [ ] No	See Section **E** below
	6. Hazardous or toxic materials[19] • Removal and disposal of toxic and/or hazardous demolition and / or construction waste • Storage of machine oils and lubricants	[ ] Yes [ ] No	See Section **F** below

[18] Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

[19] Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

PART B: ENVIRONMENTAL /SOCIAL SCREENING			
	7. Impacts on forests and/or protected areas • Encroachment on designated forests, buffer and /or protected areas • Disturbance of locally protected animal habitat	[ ] Yes [ ] No	See Section **G** below
	8. Handling / management of medical waste • Clinical waste, sharps, pharmaceutical products (cytoxic and hazardous chemical waste), radioactive waste, organic domestic waste, non-organic domestic waste • On site or off-site disposal of medical waste	[ ] Yes [ ] No	See Section **H** below
	9. Traffic and Pedestrian Safety • Site specific vehicular traffic • Site is in a populated area	[ ] Yes [ ] No	See Section **I** below

ACTIVITY	PARAMETER	GOOD PRACTICES MITIGATION MEASURES CHECKLIST
A. General Conditions	Notification and Worker Safety	(a) The local construction and environment inspectorates and communities have been notified of upcoming activities (b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works) (c) All legally required permits (to include not limited to land use, resource use, dumping, sanitary inspection permit) have been acquired for construction and/or rehabilitation (d) All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment. (e) Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) (f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow.
B. General Rehabilitation and /or Construction Activities	Air Quality	(a) During interior demolition use debris-chutes above the first floor (b) Keep demolition debris in controlled area and spray with water mist to reduce debris dust (c) Suppress dust during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site (d) Keep surrounding environment (sidewalks, roads) free of debris to minimize dust (e) There will be no open burning of construction / waste material at the site (f) There will be no excessive idling of construction vehicles at sites
	Noise	(a) Construction noise will be limited to restricted times agreed to in the permit (b) During operations the engine covers of generators, air compressors and other powered mechanical equipment should be closed, and equipment placed as far away from residential areas as possible

PART B: ENVIRONMENTAL /SOCIAL SCREENING		
	Water Quality	(a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Waste management	(a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. (c) Construction waste will be collected and disposed properly by licensed collectors (d) The records of waste disposal will be maintained as proof for proper management as designed. (e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)
C. Individual wastewater treatment system	Water Quality	(a) The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities (b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment (c) Monitoring of new wastewater systems (before/after) will be carried out
D. Historic building(s)	Cultural Heritage	(a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation (b) Ensure that provisions are put in place so that artifacts or other possible "chance finds" encountered in excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds **(See Annex VIII)**.
E. Acquisition of land	Land Acquisition Plan/Framework	(a) If expropriation of land was not expected and is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the bank task Team Leader is consulted. (b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented
F. Toxic Materials	Asbestos management	(a) If asbestos is located on the project site, mark clearly as hazardous material (b) When possible the asbestos will be appropriately contained and sealed to minimize exposure (c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust (d) Asbestos will be handled and disposed by skilled & experienced professionals (e) If asbestos material is be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately (f) The removed asbestos will not be reused

PART B: ENVIRONMENTAL /SOCIAL SCREENING		
	Toxic / hazardous waste management	(a) Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information (b) The containers of hazardous substances should be placed in an leak-proof container to prevent spillage and leaching (c) The wastes are transported by specially licensed carriers and disposed in a licensed facility. (d) Paints with toxic ingredients or solvents or lead-based paints will not be used
G. Affects forests and/or protected areas	Protection	(a) All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities. (b) For large trees in the vicinity of the activity, mark and cordon off with a fence large tress and protect root system and avoid any damage to the trees (c) Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to hay bales, silt fences (d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.
H. Disposal of medical waste	Infrastructure for medical waste management	(a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to: ▪ Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal: a. Clinical waste: yellow bags and containers b. Sharps – Special puncture resistant containers/boxes c. Domestic waste (non-organic): black bags and containers ▪ Appropriate storage facilities for medical waste are in place; and ▪ If the activity includes facility-based treatment, appropriate disposal options are in place and operational
I. Traffic and Pedestrian Safety	Direct or indirect hazards to public traffic and pedestrians by construction activites	(b) In compliance with national regulations the contractor will insure that the consruction site is properly secured and construction related traffic regulated. This includes but is not limited to ▪ Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards ▪ Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. ▪ Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement ▪ Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public. ▪ Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public.

PART C: MONITORING PLAN							
Phase	**What** (the parameter to be monitored)	**Where** (location of the parameter to be monitored)	**How** (methodology to monitor the parameter)	**When** (define the frequency of monitoring/ continuous)	**Why** (reason for monitoring the parameter)	**Cost** (if not included in project budget)	**Who** (responsible for monitoring)
During activity **preparation**							
During activity **implementation**							
During activity **supervision**							

Annex IX - Chance Find Procedures[20]

This should be incorporated into the EMP and civil works contracts.

1. If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

    a. Stop the construction activities in the area of the chance find;

    b. Delineate the discovered site or area;

    c. Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the National Institute of Culture and History (NICH) administration take over;

    d. Notify the supervisory Project Environmental Officer and Project Engineer who in turn will notify the NICH immediately (within 24 hours or less);

2. The NICH will take charge in protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the NICH. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, namely the aesthetic, historic, scientific or research, social and economic values.

3. Decisions on how to handle the finding shall be taken by the NICH. This could include changes in the layout (such as when finding irremovable remains of cultural or archaeological importance) conservation, preservation, restoration and salvage.

4. Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities.

5. Construction work may resume only after permission is given from the responsible local authorities or [Culture Department of Province] concerning safeguard of the heritage.

[20] Provided by the World Bank.

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