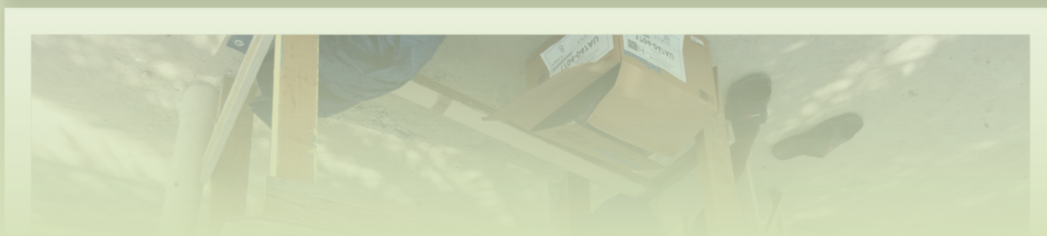


Climate Vulnerability Reduction Program (BL-L1028)

Livelihood Restoration Plan – Preliminary Report

Prepared for the Inter-American Development Bank and the
Government of Belize



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Prepared by: 
Christa Hulse

Approved by: _____
Allan Herrera
Lead Consultant

Consultancy to Undertake an Environmental and Social Assessment of the Climate Vulnerability Reduction Program (BL-L1028).

Register of Revisions

Rev. No.	Comments	Date
1	First Draft of Main Report	September 8, 2017
2	Final Draft of Main Report	September 19, 2017

Address: 1571 Spain Avenue, Belize City
Telephone: 00 501 223 1188
Job No: Nextera/CVRP_LRP

Website: nextera.com.bz
Date Created: September 8, 2017

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ACRONYMS

BCC	Belize City Council
BTB	Belize Tourism Board
BWS	Belize Water and Sewerage, Ltd.
CBA	Central Building Authority
CCVC	Caye Caulker Village Council
CPW	Coastal Protection Works
CVRP	Coastal Vulnerability Reduction Program
CZMAI	Coastal Zone Management Authority and Institute
DOE	Department of Environment
FCW	Flood Control Works
GOB	Government of Belize
IA	Implementing Agency
IDB	Inter-American Development Bank
LRP	Livelihood Restoration Plan
LUA	Land Utilization Authority
MNR	Ministry of Natural Resources
MOH	Ministry of Health
PAP	Project Affected People
PUC	Public Utilities Commission
SI	Statutory Instrument

INTRODUCTION

Introduction

This Livelihood Assessment and Livelihood Restoration Plan (LRP), prepared for the Government of Belize (GOB) as part of the loan requirement for Inter-American Development Bank (IDB) funded, Category B designated projects, provides a situational analysis of the livelihood activities to be adversely impacted by various project components of the Climate Vulnerability Reduction Program (CVRP). In addition, it details the measures to be put in place, where necessary, to compensate and/or support the livelihoods of the persons affected by the program. This LRP covers two projects that fall under Component 2 of the program, namely Flood Control Works (FCW) in Belize City and Coastal Protection Works (CPW) in Caye Caulker (see **Figure 1**).



Figure 1: Map of LRP Focus Sites in Belize

The proponents of the program, the Government of Belize and the Inter-American Development Bank, have committed to meeting international best practice standards in regard to the assessment, restoration and/or support of the livelihoods of those individuals who will be impacted by the construction and operation of the various projects within the program. Livelihood assessment and LRP best practice standards imply that in the first instance, the need for displacement will be avoided and when absolutely unavoidable, the livelihoods of affected individuals must be restored to the equivalent or a higher level than prior to the project.

Objectives of the LRP

This LRP has been developed to respond to the following objectives:

- To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement, by
 - Designing the project to avoid physical displacement.
 - Locating interventions on uninhabited land.
- To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use, by
 - Providing timely compensation for loss of assets.
 - Assisting displaced persons to improve or at least restore their livelihoods and living standards.

Institutional and Legal Framework

The following outlines the institutional and legal framework providing guidance for both projects under the CVRP:

Institutional Framework

Belize City Council

The BCC comprises a mayor and ten councilors. The council is tasked with the general rule and good governance of the town as accorded in the provisions of the Belize City Council Act, CAP 85 (Rev. Ed. 2000) and any laws relating to it. General powers include the control, care and management of public streets, coordination of activities of utility agencies, and administration of safety regulations as it applies to fences adjoining public streets. The BCC also has authority over markets, slaughter-houses, bath-houses and wash-houses; and additionally manages building hazards, the property numbering system, parks, libraries, cemeteries, garbage collection, drain cleaning and ensures the continued maintenance and development of the town's conveniences and amenities.

Caye Caulker Village Council (CCVC)

The CCVC comprises a chairperson and six councilors. The council is tasked with the good governance and improvement of the village and the enforcement of the provisions of the Belize Village Councils Act, CAP 88 (Rev. Ed. 2003) and any laws relating to it. Duties include the registration of births and deaths, recommendations for the appointment of Justices of the Peace and the care and maintenance of public property as well as the property of the council.

Ministry of Natural Resources (Physical Planning Section)

The MNR is the governing body in charge of the coordination, protection and sustainable management of the natural resources of Belize. The physical planning section of the Ministry of Natural Resources is the secretariat of the Land Utilization Authority. Their portfolio includes the subdivision of land, management of the seabed, development and execution of the national land use policy and the issuance of pier license.

Central Building Authority

The CBA was established under the Belize Building Act, CAP 131 (Rev. Ed. 2011) and is responsible for the administration of the Act. The CBA has primary responsibilities over building permits and control, which includes permits to erect or demolish structures, approval or rejection of plans, the power to require removal or alteration of work, issuance of occupancy certificates, and control over moveable dwellings, public buildings, dangerous buildings and hurricane precautions.

Department of the Environment

The DOE was first established in 1989 but became a statutory body through the Environmental Protection Act, CAP 328, 1992. The DOE falls under the Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development and Climate Change. Its mission is to ensure the effective management of the environment leading to sustainable development of the country.

Belize Water and Sewerage, Ltd.

A company incorporated on January 22, 2001. It is the only licensed water and sanitation service provider in Belize. It holds a 25-year license issued by the PUC. BWS is regulated by the Water Industry Act, CAP 222 (Rev. Ed. 2003) (Section 15).

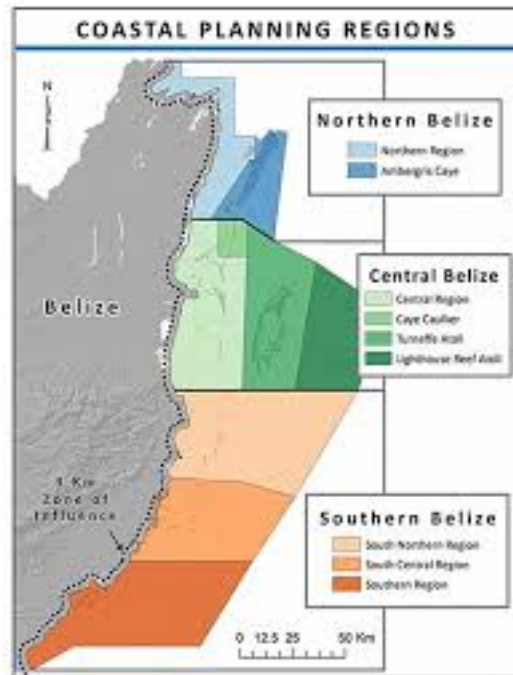
Belize Tourism Board

The BTB is a legislated body formed through the Belize Tourism Board Act, 1990, which governs the tourism industry in Belize. Their primary goal is the socioeconomic development of the country through strategic tourism initiatives and policy (Belize Tourism Board, 2017). Major initiatives of the Board include the development of a national strategic tourism document, the Sustainable Tourism Master Plan 2030; in addition to other policies including those regulating hotel and accommodation standards, the timeshare act, tour operator/guide licensing and the national code of practice for scuba diving among others.

Coastal Zone Management Authority and Institute

CZMAI was formed in 1989 when it was recognized that there was a need for an integrated, holistic approach to the management of coastal resources. Currently the CZMAI oversees 9 coastal regions of Belize (see **Figure 6**). The organization itself consists of two parts 1) an authority, which was established under the Ministry of Agriculture, Fisheries and Co-operatives with functions related to policy development, the elaboration of coastal zone management guidelines, the

commissioning of research, the monitoring of the coastal zone, and the fostering of regional and international integration among others; and 2) an institute, which is the leading marine scientific research organization in Belize (CZMAI, 2011).



Source: CZMAI

Figure 2: Coastal Planning Regions of Belize

Legal Framework

Environmental Protection (Effluent Limitations) Regulations, SI 94/1995

These regulations are intended to control and monitor discharges of effluent into any inland water or the marine environment of Belize. (IA: DOE)

Environmental Protection (Effluent Limitations) (Amendment) Regulations, 2009

Specifically, the concept of Class I and Class II waters were included as designation of areas in Belize with a particular water quality. Class I waters refers to areas that are fragile biologically and ecologically sensitive. Class II are waters other than Class I waters that due to oceanographic, hydrologic, climatic or other factors are less sensitive to the impacts of domestic effluent. (IA: DoE)

Public Health Act, Rev. Ed., SI 40/2000

Under Part VIII of Offensive Trades 128(1)(b), the Minister can make regulations relating to nuisances for the prevention, control or reduction of pollution or contamination of air, soil or water caused by any activity or condition resulting in the emission of a pollutant or contaminant into the environment. (IA:MOH)

Water Industry Act, CAP 222 (Rev. Ed. 2003)

The Act addresses the regulation and provision of water and sewerage services, water abstraction and use, licenses, water pollution control, permits for discharge, and offenses and penalties. (IA: PUC and BWS)

The Act also deals with controlling disposal of wastes generated from sewer treatment. The Act makes provisions with respect to the supply and control of water and sewerage services in Belize. It also establishes the responsibility of private entities to provide facilities for the final disposal of sewerage, taking into consideration section 38 of the Environmental Protection Act, 1/2001. (IA: Minister responsible for Public Utilities)

Belize Tourism Board Act, CAP 275 (Rev. Ed. 2000)

The Act establishes the BTB, an entity responsible to develop all aspects of the tourist industry, advertise and publicize Belize, promote and secure airline and shipping facilities, secure favorable arrangements for entry of tourists, enhance the attractiveness of Belize, undertake research, provide training, classify hotels, and foster understanding within Belize of the economic importance of tourism as well as the importance of environmental protection to the tourism product. (IA: BTB)

National Lands Act, CAP 6/1992 and SI 191/2000

Section 28 specifies that where the sea or any sound, bay or creek is described as forming part of the boundary of any national land to be granted or disposed of, then the high water mark should be considered to be the property boundary.

Under the Act, the seabed is defined as the land extending seawards from the high water mark or ordinary tides and is national land owned by the GOB under the authority of the National Lands Act. (IA: Ministry of Natural Resources)

Crown Land Rules, SI 60/1939

Under Crown Land Rules (Statutory Rules and Orders 66 of 1939), a 66 feet wide strip of land along all water frontages, measured from the high water mark, is designated as public easement, but land titles prior to 1930 included the land to the high water mark and in some cases, below the high water mark. (IA: Lands and Surveys Department)

Land Development Authority Act, CAP 181 (Rev. Ed. 2000)

This Act established a body corporate with perpetual succession and a common seal who shall have the capacity to purchase, take, hold and dispose of land and other property of whatever kind, to enter into contracts, to sue and be sued in the said name and to do all things necessary for the purpose of this Act. (IA: Belize Land Development Authority)

Land Utilization Act, CAP 188 (Rev. Ed. 2000)

The Land Utilization Act under which the LUA of the Ministry of Natural Resources is established provides for measures to govern the use and development of land, and introduces measures for the conservation of land and watersheds. The Act also controls the subdivision of any public or private land in Belize through the LUA, which makes recommendations on subdivision applications. Finally, the Act also establishes Special Development Areas, which limit the types of development permissible within these zones. (IA: Lands and Survey Department/LUA)

Land Acquisition (Public Purposes) Act, CAP 184 (Rev. Ed. 2000)

This Act allows for the Minister of Natural Resources to acquire lands for public purposes only. (IA: Minister of Natural Resources)

Land Acquisition (Promoters) Act, CAP 183 (Rev. Ed. 2000)

This Act allows for a promoter (corporation, company or person) to acquire land, through application in writing to the Minister of Natural Resources, for a purpose that is likely to prove useful to the public or to a substantial class or section of the public. (IA: Minister of Natural Resources)

IDB Policy on Involuntary Resettlement (OP-710)

The following are the guiding principles of the Flood Control Works, Livelihood Restoration Program:

- Avoid or Minimize Population Displacement – census, consultations, cadastral surveys and site visits were conducted to provide mitigation on a case-by-case basis in Belize City and in the case of Caye Caulker, to make an accurate assessment of the livelihood activities at the Palapa Gardens.
- Ensure Community Participation – several site visits and various means of consultations were conducted to include all stakeholders.
- Regard Resettlement as an Opportunity for Sustainable Development – the FCW project will ensure that all houses in the project immediate area of influence will be allowed to benefit from improved sanitation. In addition, priority for employment in the project will be given to project affected community members. The CPW was designed to enhance the tourism product of Caye Caulker thereby adding to the sustainable development of the island.
- Define Criteria for Compensation
- Provide an Acceptable Level of Housing and Services – the provision of bath/toilet facilities will be done in consultation with the community, taking into account the particularities of each residence.

- Provide Compensation at Replacement Cost
- Compensate the Loss of Customary Rights
- Address Security Issues
- Consider Host Populations in Resettlement Plans
- Obtain Accurate Information – several survey visits were conducted and a wide cross-section of stakeholders consulted to provide for accuracy and qualitative depth.
- Include Resettlement Costs in Overall Project Costs
- Consider Appropriate Institutional Framework
- Establish Independent Monitoring and Arbitration Procedures

Gap Analysis

The following is an outline of the gaps identified between the national regulatory and institutional framework and the guiding principles of the IDB's Policy on Involuntary Resettlement, as it applies to the program:

There are three areas for consideration. These are (following the structure of the IDB principles):

1. Avoid or Minimize Population Displacement – this IDB guiding principle is based on a social justice philosophy and makes up one of the core values of the organization. As such, it is a central piece of the Policy on Involuntary Resettlement. In contrast, Population Displacement, in the regulatory framework of Belize is addressed through the Land Acquisition (Public Purposes) Act, CAP 184 and the Land Acquisition (Promoters) Act, CAP 183 which both stipulate that land can only be acquired for a public purpose. The amount of compensation is agreed between the authorizing officer (Chief Valuer of the Lands and Surveys Department or the Lands Commissioner) and the person(s) claiming compensation. Where there is disagreement between the parties, the case is put to a Board of Assessment to determine compensation, which is usually based on the market value of the property. It is important to understand, in this instance, that only legal title-holders have a right to claim compensation. The minimization of population displacement is not necessarily a core value in Belize but rather an outcome of the fact that the government in most instances does not have the additional finances to acquire land.

2. Establish Independent Monitoring and Arbitration Procedures – in the Belizean context the traditional avenue for arbitration is through the court system. The IDB's Policy in contrast, makes provision for arbitration through third parties.
3. Compensate the Loss of Customary Rights – as was elaborated in #1 above, compensation in the Belize context is tied to ownership of land through the Minister's Fiat Grant or a leasehold interest by way of the Minister's Fiat Lease. The only recognized customary right is that of the Maya customary land tenure. In contrast the IDB's involuntary resettlement policy recognizes all traditional/customary users of land/space.

In regard to the above three areas, the projects in the Coastal Vulnerability Reduction Program will apply the IDB's Policy guidelines as a first step in addressing the livelihood restoration of projected affected people.

BELIZE CITY CASE STUDY

Introduction

Objectives of FCW

The primary objective of the Flood Control Works project is to design and construct infrastructure that will decrease the effects of flooding in the south side of Belize City - an area inhabited by the most vulnerable of the City's residents.

Components of FCW

The main components of the FCW are as follows:

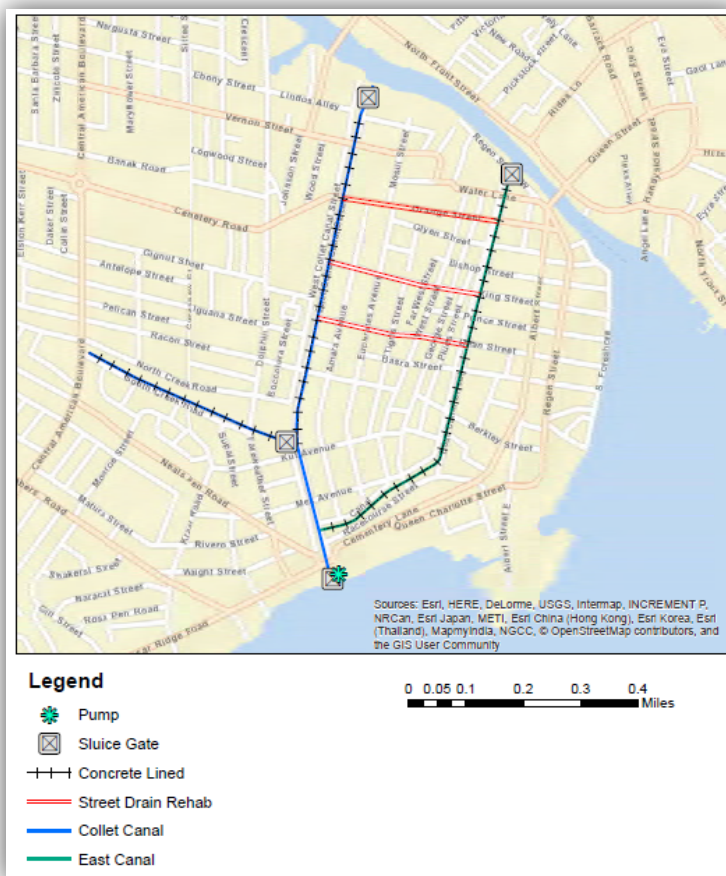
- Installation of an Archimedes screw type pump at the confluence of the Collet Canal with the Caribbean Sea.
- Installation of four sluice type hydraulic gates:
 - Gate 1 beside pump house at the mouth of the Collet Canal.
 - Gate 2 at the confluence of the Haulover Creek with the Collet Canal.
 - Gate 3 at the confluence of the Haulover Creek with the East Canal.
 - Gate 4 at the confluence of West Canal (North Creek) with Collet Canal.
- Dredging and cleaning of Collet and East Canals.
- Rehabilitation of drains on a number of streets that run perpendicular to the Collet and East Canals.
- Lining of 1000 feet (305 m) of the southern portion of Collet Canal from Kut Avenue to Yarborough bridge.

Belize City – Flood Control Works

Flooding, through fluvial, pluvial and coastal means, is a common occurrence in low-lying Belize City. The resultant property losses, contamination from pollution, health risk, not to mention inconvenience has been exacerbated over the past 30 years due to rapid urbanization¹ and the effects of climate change. The Flood Control Works project seeks to mitigate the flooding through the dredging of silt build-up and the cleaning of debris² from two major outlet canals (Collet and East/Southside) in the south side of Belize City. In addition, four sluice type hydraulic floodgates will be strategically installed to isolate each of three canals from the Haulover Creek and from each other, allowing for better control of the flow of water. Finally, an Archimedes Screw type water pump will be installed at the mouth of the Collet Canal to expedite the flow of water from the canals to the Caribbean Sea. The project also proposes to speed up the draining of water from a number of streets that run perpendicular to the Collet Canal, by closing up existing under-cover drains and allowing the water to be freely channeled along either side of the street, via swales and gutters, to the canal (see **Figure 2**).

¹ The population of Belize City has increased about 60% since 1981 (Statistical Institute of Belize, 2010).

² There are some 9,300m³ of sediment buildup within the canals. This according to the project's interim report is the "single largest factor that impairs hydraulic capacity" of the canals (Chentec, 2017).



Source: Chentec 2017

Figure 3: Map of Proposed Flood Control Works in Belize City

Evaluation of Alternatives

In an effort to alleviate the need for resettlement or other forms of displacement there have been several design changes from the initially proposed flood control works. Following is a synopsis of these changes:

- A proposed revetment wall at the confluence of the Haulover Creek with the Collet Canal has been disregarded as this would have required the resettlement of a squatter community in the Conch Shell Bay area as well as fisherfolk who dock their boats along the canal banks. In addition there would have been long-term displacement of fisherfolk using the Conch Shell Bay Fish Market.
- Use of centrifugal pumps at the mouth of the Collet Canal has been changed to Archimedes Screw type pumps, which are less costly and will cause less damage to marine life in the canals.
- An additional sluice type flood-gate has been added at the confluence of West/North Creek Canal with Collet Canal. This is because several other canals, example Lakeview, Prisoner Creek, Partridge Street Canals, also feed into West Canal, thus the

gate will be able to isolate this area from the Collet Canal making for more effective management.

Legal Status of Land in Project Area

There are two areas of land under the flood control works project that warrant legal consideration. These are the squatter communities and the canals themselves. Both areas are crown lands. The squatter communities of Conch Shell Bay and North Creek Alley are within a 66 feet waterways reserve area that is designated an easement under Crown Land Rules, SI 60/1939. Most residents of the two communities however, have indicated that they have been living in their community upwards of 15 years. In addition, they have been recipients of several publicly sponsored assistance programs, including an urban renewal project in 2001 that had intended to rebuild houses and increase the property size; other housing schemes initiated by various politicians; and finally the Belize City Southside Poverty Alleviation Project which dredged and lined the Collet and North Creek Canals and constructed septic tanks for the residents in North Creek. While residents would normally not be able to get land titles for these properties under the above mentioned Crown Land Rules, the proceeding projects indicate a level of acceptance of the squatters within the area.

The canals on the other hand, remain the legal property of the state. The last rehabilitation activity in the area was the dredging and lining of the Collet and North Creek canals in 2013 under the Belize City South Side Poverty Alleviation Project funded by the Government of Belize and the OPEC Fund for International Development.

Baseline Survey and Assessment

ESHS Management Issue

There are two communities of interest situated directly on the banks of the Collet Canal. In the northwest portion of the Collet Canal is an area called the Conch Shell Bay area with approximately six enclosures, comprising various dwellings, located within the buffer zone (66 feet reserve) of the canal. The residents have been squatting there for a number of years. Similarly at the confluence of the West Canal with the Collet Canal, in the North Creek Alley area, there is also a squatter community with ten enclosures and numerous dwellings, within the buffer zone (see **Figure 5**).



Figure 4: Map Showing Location of Project Affected People in Belize City

The project's concern with regard to both communities is that the majority of residents have been discharging raw sewerage or unmonitored effluent into the canals. The Conch Shell Bay area squatter housing is characterized by a majority of night-soil bucket latrines (residences 2, 4, 6, 8-12), one overhanging latrine (residence 1), and one indoor toilet discharging directly into the canal (residence 5) (see **Figure 5**).

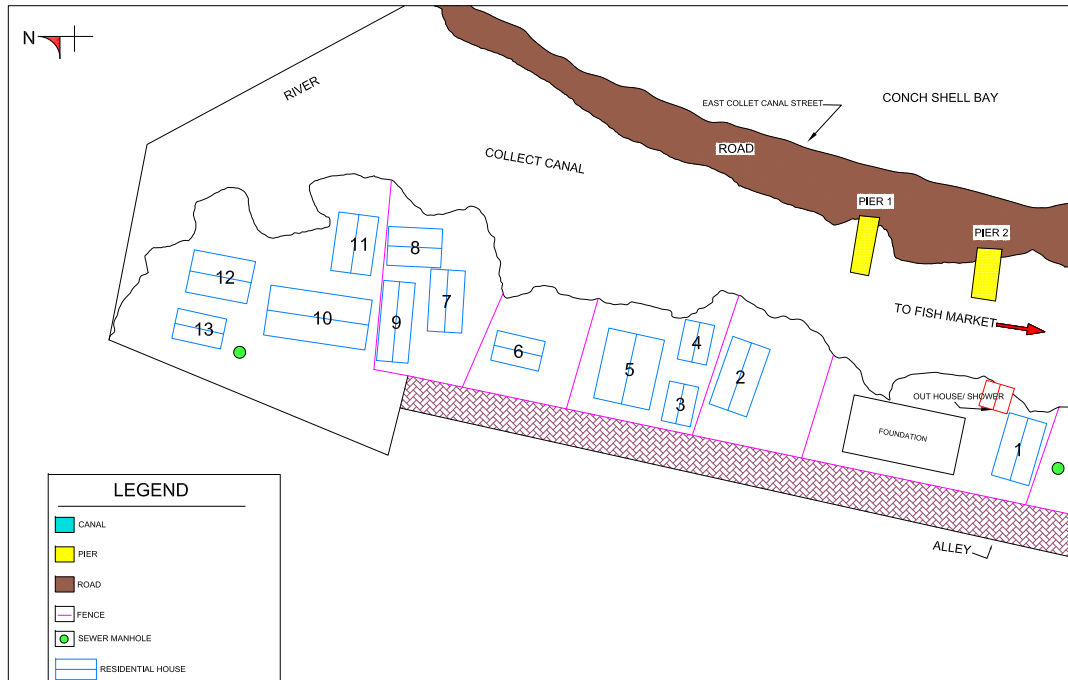


Figure 5: Conch Shell Bay Cadastral Map

The North Creek Alley squatter community benefits from a number of septic tanks (9) built during the Belize City Southside Poverty Alleviation Project. The issue however, is that only three septic tanks are in use (residences 1, 9-11, 18). Of those in use, one is improperly connected (residence 1) essentially rendering the sewerage treatment void. In addition, all three are discharging effluent into the canal in an unregulated manner. The remaining residents are using a combination of indoor toilets with direct discharge into the canal (residences 8, 13, 20), or outhouses (land based) with direct discharge into the canal (residences 2-5, 12, 14, 15-17) (see **Figure 6**). Several residents claim to be using the toilet facilities of neighboring residents, however the project management team must take into consideration that these residents could possibly also be using night-soil bucket latrines since there are no toilet facilities in their residences. These include the residents of 6 and 7, who claim to be using the toilet facilities at residence 8; and the resident at 19, who claims to be using the toilet facilities at residence 18.



Figure 6: North Creek Alley Cadastral Map

While only the overhanging latrine poses a direct obstruction to the dredging works of the Collet Canal, where the removal of which, is classified as temporary displacement within the purview of the IDB's OP-710 policy and the associated LRP; the remaining unsewered properties remain a focus for the project as an Environmental and Social, Health and Safety Management issue, under the IDB's Environment and Safeguards Compliance Policy. They thereby require the installation of proper sewerage connections prior to begin of project construction, and as such are also viewed as *associated facilities* essential for the project to function. Further, the management of these unsewered facilities is commensurate with the IDB's water and sanitation vision, of expanding sanitation access to low-income and vulnerable populations, contributing to the sustainable economic growth of member countries (Inter-American Development Bank, 2017). It is also commensurate with the Millenium Development Goals to which Belize has ascribed as well as a number of Master Plans (Belize City Master Plan, Sustainable Tourism Master Plan, Emerging and Sustainable Cities Initiative), which have received the direct support of the IDB.

Impacts to Assets

As mentioned in the above ESHS Management Issue section, there is one piece of property that will be directly affected by the project. This is the overhanging latrine of residence 1, in the Conch Shell Bay area, which will need to be physically removed (see **Appendix 1**). In addition, there are two private piers on the eastern bank of the Collet Canal directly opposite the Conch Shell Bay area that will require further consideration as they can potentially obstruct the dredging and cleaning works of the canal. The owner of pier #1 has been surveyed, however the owner of pier #2 could not be located. It must be noted that pier #2 is a derelict pier, and according to the neighbors has not been in use for a number of years.

The owner of pier #1 informed the survey team that she uses the pier once, sometimes twice a week, to receive her fish supply for the wholesale market. This most often occurs on a Friday. She had no objections to the temporary removal of her pier or to the possibility of relocating the pier or a dock to the Haulover Creek, which is but a stone's throw away from her residence/business. In fact, she kept reiterating that “we all know progress brings problems,” a common Belizean saying implying that progress bring temporary setbacks, however progress is the priority, thus the setbacks are tolerated.

Impacts to Land

There are six fishermen using the sandbank (from silt buildup) at the mouth of the Collet Canal, near the Yarborough area of Belize City, to dock their small boats. This area is exactly where the project proposes to install the pump house and floodgate #1.

A survey indicated that four of the fishermen are family members who are owners of an adjoining piece of land where a replacement pier could be established. The other two fishermen are brothers and extended relatives to the four family members, however, the survey team was not able to interview them and so an alternative docking solution for them could not be established.

The survey team also learnt that an area of land directly west of the Collet Canal is the property of the Belize City Council. The land is currently empty. In the past it was a park and playground for the area residents however, it was destroyed by Hurricane Richard in 2010. The property also houses an empty fish market on its northern border with the main street.

Mitigating Options and Assessment of Alternatives

ESHS Management Issue

The Belize Water and Sewerage Ltd. was consulted to recommend options for the sewerage management of the residents in both the Conch Shell Bay and North Creek Alley areas. Residents of the Conch Shell Bay area are served with a sewer main running directly in front of their properties. BWS can connect each enclosure to the main at a cost of BZ\$1695.00 (US\$847.50). The connection will advance to three feet within an

enclosure. An additional BZ\$100.00 (US\$50.00) is charged for each residence requiring connection within any enclosure.

The connection of residences within an enclosure however, is a bit more complicated as their needs vary. **Table 1** entails a categorization of needs based on existing sewerage conditions:

Residence	Existing Sewerage Condition	Need	Comments
1	Overhanging latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> Overhanging latrine will be completely removed. House is too small to accommodate indoor bath/toilet facility.
2	Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> House is too small to accommodate indoor bath/toilet facility.
4	Using toilet facilities in residence 5 or possible Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> House is too small to accommodate indoor bath/toilet facility. Enclosure might not have sufficient space for an outdoor facility.
5	Indoor bath/toilet	<ul style="list-style-type: none"> Connection to the main only 	n/a
6	Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Indoor or outdoor 	<ul style="list-style-type: none"> House might be large enough to accommodate indoor bath/toilet facility.
8	Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> House is too small to accommodate indoor bath/toilet facility. Outdoor facility could potentially be shared with residents in #9 who are within the same enclosure. (Current residents of #8 and #9 are related)
9	Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> House is too small to accommodate indoor bath/toilet facility. Outdoor facility could potentially be shared with residents in #8 who are within the same enclosure. (Current residents of #8 and #9 are related)
10	Night-soil bucket latrine	<ul style="list-style-type: none"> Connection to main only 	<ul style="list-style-type: none"> House already has indoor bath/toilet facility.
11	Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor 	<ul style="list-style-type: none"> House is too small to accommodate indoor bath/toilet facility. Outdoor facility could potentially be shared with residents in #12 who are within the same enclosure. (Current residents of #10, #11

			and #12 are related)
12	Night-soil bucket latrine	<ul style="list-style-type: none"> • Complete bath/toilet facility • Outdoor 	<ul style="list-style-type: none"> • House is too small to accommodate indoor bath/toilet facility. • Outdoor facility could potentially be shared with residents in #11 who are within the same enclosure. (Current residents of #10, #11 and #12 are related)

Table 1: Toilet/Bath Needs Assessment within the Conch Shell Bay Area

Final estimated costs can be determined for the building of these associated facilities once the Project Management Team has finalized the number, design and location of facilities to be built.

North Creek Alley does not have a sewer main running anywhere near the area and hence the need for septic tanks. As mentioned before, there are nine existing septic tanks within the area. Here again, the needs of the residents vary. Additionally, while the BWS indicated that it was safe for effluent to be discharged into the canal, the City Planner wanted this process to be done in a more controlled manner. It was decided that all individual effluent discharge pipes should be connected to a header pipe running along the inner side of the canal, with intermittent discharges as determined by the Belize City Council.

Table 2 entails a categorization of needs based on existing sewerage conditions:

Residence	Existing Sewerage Condition	Need	Comments
1	Indoor bath/toilet facility improperly connected to septic tank in neighbor's enclosure	<ul style="list-style-type: none"> Proper connection to septic tank 	<ul style="list-style-type: none"> Might potentially need a septic tank within their own enclosure to avoid conflict with neighbors.
2 - 5	Outhouse (not overhanging), discharging directly into the canal	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor built on top of septic tank 	<ul style="list-style-type: none"> There are 2 septic tanks in this enclosure. Houses are too small to accommodate indoor bath/toilet facility. Houses are too low to allow for the gravitational flow of sullage.
6 & 7	Using toilet facilities in residence 8 or possible Night-soil bucket latrine	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor built on top of septic tank 	<ul style="list-style-type: none"> Houses are too small to accommodate indoor bath/toilet facility. Houses are too low to allow for the gravitational flow of sullage.
8	Indoor bath/toilet facility discharging directly into the canal	<ul style="list-style-type: none"> Connection to the septic tank only 	n/a
9 - 11	Outhouse built on top of septic tank	<ul style="list-style-type: none"> Servicing and rehabilitation of bath/toilet facility and septic tank 	n/a
12	Outhouse (not overhanging), discharging directly into the canal	<ul style="list-style-type: none"> Complete bath/toilet facility Indoor Connection to septic tank 	<ul style="list-style-type: none"> A portion of the house is situated directly above the septic tank. Adjustments might be required to be able to access the tank.
13	Indoor bath/toilet facility discharging directly into the canal	<ul style="list-style-type: none"> Septic tank within the enclosure Connection to septic tank 	<ul style="list-style-type: none"> Enclosure is shared with residence #14.
14	Outhouse (not overhanging), discharging directly into the canal	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor built on top of septic tank Yard fill to make path to bath/toilet facility 	<ul style="list-style-type: none"> House is too low to allow for the gravitational flow of the sullage. Enclosure is shared with residence #13. Enclosure is always under water, requires some land filling.
15 - 17	Outhouse (not overhanging), discharging directly into the canal	<ul style="list-style-type: none"> Complete bath/toilet facility Outdoor built on top of septic tank Reinforcement of septic tank Yard fill to make path to bath/toilet facility 	<ul style="list-style-type: none"> Houses are too low to allow for the gravitational flow of the sullage. Septic tank is sinking slightly on one side due to water retention

			<ul style="list-style-type: none"> in the enclosure. Septic is difficult to access due to water retention in the enclosure.
18	Indoor bath/toilet facility properly connected to septic tank.	n/a	n/a
19	Using toilet facilities in residence 18	<ul style="list-style-type: none"> Connection to septic tank only 	<ul style="list-style-type: none"> House already has indoor toilet/bath facilities.
20	Indoor bath/toilet facility discharging directly into the canal	<ul style="list-style-type: none"> Connection to septic tank only 	n/a

Table 2: Toilet/Bath Needs Assessment within the North Creek Alley Area

Impacts to Assets

The temporary displacement of the members of residence #1 in the Conch Shell Bay area, due to the removal of the overhanging latrine, has been dealt with in the ESHS Management Issues section above. The residents will require a replacement outdoor bath/toilet facility, which will be connected directly to the sewer main.

The level of economic displacement potentially caused by the restricted access to the piers will need to be ascertained once the Project Management Team, including engineers, determine how the piers will be addressed within the operations of the project. There are several mitigating options including, 1) dredging around the pier, 2) temporarily removing the pier, provide for docking arrangements on the Haulover Creek, and then replacing the pier once the dredging and cleaning are completed, 3) relocating the pier/dock to the Haulover Creek, and 4) compensation and rehabilitation for permanent removal of the pier. Residents indicated that they frequently landed their boats on nearby vacant reserve areas around the Haulover Creek when the need arose, such as during hurricanes. Thus temporary arrangements could be made in a similar manner. In addition, it was learnt that there is a boat dock about 100 feet east of the Collet Canal, directly on the Haulover Creek. At the time of the survey, the dock could not be accessed as guard dogs were in the path. Once again arrangements could potentially be made with the proprietors of the dock to temporarily host project affected people during the dredging of the northern most section of the canal. Finally, options 2 and 3 might be the most unfeasible as special permits, contingent on environmental assessments, will be required from the relevant authorities before any pier or dock can be built/rebuilt.

Impacts to Land

There are two families to consider in the displacement of fisherfolks in the Yarborough area of the Collet Canal. One family owns a piece of property approximately 100 feet west of the Collet Canal, on which a pier could be established. While the first family asserts that the second family could share the pier on their property, 1) the project's survey team were unable to reach the second family to confirm such an arrangement, and 2) a legal basis to protect the second family in this arrangement would need to be established.

A second alternative suggested by the engineers of the project, Chentec³, would be to construct an inlet on the available City Council land near the Collet Canal, which would serve as a public, small boat dock.

There are several advantages to the second proposal. A public docking facility would 1) alleviate the issue of having to solidify a legal arrangement for one party as the first proposal would require, 2) allow for the use of an already existing fish market structure on the property, and 3) potentially lead to economic growth in this area of the South side.

All proposals would require the necessary permits and environmental approvals. Proposal two also requires the permission of the Belize City Council.

Restoration Framework

The restoration framework provides the basis for accessing the associated facilities scheme and for restoration or compensation based on loss.

Eligibility

This section outlines the eligibility criteria and the measures undertaken to determine eligibility.

Eligibility Policy

In terms of the ESHS Management Issue, project affected people are eligible to rehabilitation or compensation if they are owners or residents of the various enclosures. Where there is economic displacement due to impacts on assets, such as the case of the piers, eligibility to relocation, rehabilitation or compensation is confined to the owner only. In the case of displacement due to restriction of access, such as to docking on the sandbanks in the Yarborough area of the Collet Canal, eligibility to relocation, rehabilitation or compensation will be made available to traditional users.

Establishment of Entitlement Cut-off Date

In all cases, the date the census was conducted constitutes the cut-off date for entitlements. The census of the Conch Shell Bay and North Creek Alley areas was conducted on August 23, 2017. The census of the Yarborough area was conducted on September 16, 2017 (see **Appendix 1**).

The survey team made every effort to notify project-affected persons in advance of the impending census. In the initial scoping exercises only seven affected properties within the project footprint were identified. However, during the actual census the team learnt that most, if not all, residences within the two communities were directly discharging

³ Private discussion held at IDB's meeting, September 13, 2017, in Belize City.

sewerage into the canal in one way or the other.⁴ Due to the logistical difficulty of getting the team together⁵ it was decided that a census of the additional projected affected people would be conducted on that day without prior notification. In cases where a resident was not available, basic information was solicited from neighbors, most often relatives, within the same enclosure.

In the case of the Yarborough fisherfolk, three attempts were made to locate them. On the first two occasions, the fishermen were all out at sea. On the last occasion the survey team was able to conduct the census of one family and ascertain the names only of the second family.

The survey team also conducted a cadastral survey of the project-affected areas (see **Appendix 1**). The survey is to assist the Livelihood Restoration Steering Committee in deciding compensation, etc., based on the unique lifestyle dynamics of the projected affected communities.

Those persons who believe they will be or were displaced by the project but were not included in the census may submit a grievance through the grievance mechanism discussed below.

Entitlements

In regard to the ESHS Management Issue, the nature of entitlement to a bath/toilet facility will be determined by the Project Management Team. In general terms the projects seeks to provide all project affected residents within the Conch Shell Bay and North Creek Alley areas with access to proper bathroom facilities. Depending on the living arrangements and the nature of the structures within each enclosure, a final decision can be made in terms of entitlement. This is, in this instance however, case specific. At a minimum, each enclosure within the Conch Shell Bay area will be entitled to a sewer connection to the main and at least one indoor or outdoor bath/toilet facility. In the North Creek Alley area, similarly each enclosure should be entitled to at least one septic tank. The number and nature of bath/toilet facilities in this area are yet to be determined.

It is recommended that the piers of owners in the Conch Shell Bay area be left as is and that the owners be compensated for the loss of income only if access to the pier is denied on a day in which the owner customarily uses the pier.

⁴ Initial scoping exercises were conducted on August 8, 2017. Projected affected people were notified of the impending census on August 22, 2017 and the census was conducted on August 23, 2017.

⁵ The census was delayed about 1 ½ weeks since IDB policy stipulated that a representative of the municipality needed to accompany the team, however, the city councilor in charge of flood mitigation and the area was out of office, and so an accompanying representative could not be confirmed.

Yarborough fisherfolk would be entitled to docking in a public docking facility (inlet) located near the Collet Canal in the Yarborough area. They would also be entitled to the use of the project rehabilitated Yarborough fish market.

Estimation of Eligible Project Affected People

In the Conch Shell Bay area there are 10 residences, with approximately 25 residents, related to the ESHS Management Issue that will require intervention (see **Table 3**). In addition there are two piers, owned by two individuals, requiring attention.

Residence	Complete bath/toilet facility		Connection to main only
	Indoor	Outdoor	
1		1	
2		1	
4		1	
5			1
6		1	
8		1	
9		1	
10			1
11		1	
12		1	
10 Residences		8	2

Table 3: Eligible Project Affected People in the Conch Shell Bay Community

In the North Creek Alley area there are approximately 12 residences, with approximately 66 residents, that will require intervention (see **Table 4**).

Residence	Servicing	Complete bath/toilet facility		Connection to septic tank only	Septic tank and connection
		Indoor	Outdoor		
1					1
2 - 5			2		
6 & 7			1		
8				1	
9 - 11	1				
12		1			
13					1
14	1		1		
15 - 17	1		1		
18					
19				1	
20				1	
12 Residences	3	1	5	3	2

Table 4: Eligible Project Affected People in the North Creek Alley Community

In the Yarborough area of the Collet Canal, there are 6 fishermen who will be eligible to entitlements.

The following table provides an overview of the number of project affected people:

Project Area	Project Affected People
Conch Shell Bay Community	25
Conch Shell Bay – Pier Owners	2
North Creek Alley Community	66
Yarborough Area - Fisherfolk	6
Total	99

Table 5: Number of Project Affected People in each Area of the FCW

Institutional Arrangements

It is recommended that there be a Livelihood Restoration Steering Committee comprised of high level stakeholders to serve as a regulatory and strategic board with oversight and policy development responsibilities. The Steering Committee should comprise representatives from the Belize City Council, the IDB, the Implementing Agency, Ministry of Tourism & Civil Aviation, Ministry of Natural Resources, Ministry of Human Development, Ministry of Fisheries, Department of Environment, Central Building Authority, the Area Representatives Offices, and the project affected population. In addition, a Livelihood Restoration Working Group should be established which will work directly with the implementing agencies to execute the Livelihood Restoration Plan. The Working Group will be the interface between the Steering Committee, Implementing Agencies, contractors, and affected people.

Cost Estimate

The following is a cost estimate for the intervention in the Conch Shell Bay area:

Activity	Number	Cost (BZ\$/US\$)	Total (BZ\$/US\$)
Connection from main	6 (enclosures)	\$1,695.00 ⁶ /\$847.50	\$10,170.00/\$5,085.00
Connection fee	10 (residences)	\$100.00 ⁷ /\$50.00	\$1,000.00/\$500.00
Bath/toilet facility	8 (residences)	\$4,375.00 ⁸ /\$2,187.50	\$35,000.00/\$17,500.00
Connection to main only	2 (residences)	\$2,187.50 ⁹ /\$1,093.75	\$4,375.00/\$2,187.50
Total			\$50,545.00/\$25,272.50

Table 6: Estimated Cost of Interventions in the Conch Shell Bay Community

Below is a cost estimate for the compensation of possible economic loss to be incurred by pier owners in the Conch Shell Bay area. The estimation assumes one week of restricted access, however if this restriction can be limited to one day only, preferably on a Sunday, then there will be no loss of income incurred by the pier owners.

Pier	Duration of restricted access	Estimation of income loss	Total income lost (BZ\$/US\$)
1	1 week	Sale of 300lbs of fish @	\$1,200.00/\$600.00

⁶ Connection cost charged by Belize Water and Sewerage, Ltd.

⁷ Connection fee charged by Belize Water and Sewerage, Ltd.

⁸ Liberal estimate using a \$125.00/ft² construction cost applied to a standard 5 x 7 bathroom.

⁹ Cost of running pipes to the main estimated at ½ the construction cost of a bathroom.

		BZ\$4.00/lb.	
2	1 week	None (derelict pier, not in use)	none
Total			\$1,200.00/\$600.00

Table 7: Estimated Compensation for Income Loss of Pier Owners in the Conch Shell Bay Area

The following is a cost estimate for the intervention in the North Creek Alley area:

Activity	Number	Cost (BZ\$/US\$)	Total (BZ\$/US\$)
Servicing	3 (residences/enclosures)	\$500.00/\$250.00	\$1,500.00/\$750.00
Bath/toilet facility (indoor)	1 (residence)	\$4,375.00/\$2,187.50	\$4,375.00/\$2,187.50
Bath/toilet facility (outdoor)	5 (residences/enclosures)	\$4,375.00/\$2,187.50	\$21,875.00/\$10,937.50
Connection to septic only	3 (residences)	\$2,187.50/\$1,093.75	\$6,562.50/\$3,281.25
Complete septic tank with connection	2 (residences)	\$5,250.00 ¹⁰ /\$2,625.00	\$10,500.00/\$5,250.00
Header pipe	11 (septic tanks)		\$15,000.00/\$7,500.00
Total			\$59,812.50/\$29,906.25

Table 8: Estimated Cost of Interventions in the North Creek Alley Community

Cost estimate for the resettlement and rehabilitation of Yarborough Fisherfolk is as follows:

Activity	Cost (BZ\$/US\$)
Construction of Docking Inlet (excavating, dredging, lining & installation of boat slips)	\$55,000.00/\$27,500.00
Rehabilitation of Yarborough Fish Market	\$20,000.00/\$10,000.00
Total	\$75,000.00/\$37,500.00

Table 9: Estimated Cost of Intervention in the Yarborough Area of Collet Canal

The following table provides the total estimated cost of livelihood restoration for the Flood Control Works in Belize City:

Project Affected People/Communities	Estimated Livelihood Restoration Costs (BZ\$/US\$)
Conch Shell Bay Community	\$50,545.00/\$25,272.50
Pier owners (Conch Shell Bay)	\$1,200.00/\$600.00
North Creek Alley Community	\$59,812.50/\$29,906.25
Yarborough Fisherfolk	\$75,000.00/\$37,500.00
Total Costs	\$186,557.50/\$93,278.75

Table 10: Total Estimated Cost of Livelihood Restoration for Flood Control Works in Belize City

Estimated Calendar of Activities

IDB's OP-710 policy requires that all livelihood restoration activities be completed before the commencement of project construction. Assessment of the project timeline for

¹⁰ Cost of septic tank servicing max. 8 people, with CBA prescribed dimensions of 7 x 3.5, at a construction cost of \$125/ft² is \$3,062.50. An additional \$2,187.50 is added for the house to septic connection cost.

construction activities, indicate that all livelihood restoration activities will need to be completed in the 4th quarter of 2017 (see **Table 11**).

Activity	2017	2018			
	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
Installation of Pump house					
Installation of Gate 1					
Installation of Gate 2					
Installation of Gate 3					
Installation of Gate 4					
Dredging					
Street & Drain Rehabilitation					
Lining of Collet Canal					
Conch Shell Bay Intervention					
Pier owners Compensation (Conch Shell Bay)					
North Creek Alley Intervention					
Yarborough Fisherfolk Intervention					

Table 11: Estimated Livelihood Restoration Timeline Compared to Timeline for Project Construction Works - FCW

Grievance Redress Mechanism

*Grievance mechanism*¹¹ – A complaint or grievance can be submitted via a grievance form or verbally.

A grievance form may be submitted in any of the following ways:

- To the office of Livelihood Restoration Steering Committee (address on form).
- To the office of the Livelihood Restoration Working Group (address on form).

Verbal complaints may be made to the Working Group leader, via email, telephone or face-to-face. The Working Group's leader contact information will be provided to stakeholders.

*Grievance response mechanism*¹² – Grievances and complaints will be dealt with in the following manner:

- All grievances received will be recorded in a register.
- If grievance can be corrected with an immediate action, complainant will be immediately informed, action will be taken, date recorded and case closed.
- If grievance requires long term action, complainant will be informed of proposed action or why no action is required (within 30 days), action will be implemented (if applicable), follow-up will be carried through, complainant will once again be informed, date recorded and case will be closed.

Monitoring and Evaluation

¹¹ Source: WSP Group (2013)

¹² Source: WSP Group (2013)

In order to ensure that interventions in projected affected communities are carried out as planned and that the required long-term impacts are attained, a monitoring system will need to be implemented. The system should include but not be limited to the following:

Performance Indicators	Data Source	Frequency
Overall spending against the budget	Financial Statements	Monthly
Detailed inputs against LRP procurement	Information Management System	Monthly
Detailed outputs against LRP deliverables	Information Management System	Monthly
Number of residences benefitting from intervention	Information Management System	Monthly
Number of PAPs working in the project	Human Resource	Monthly
Number of public meetings or engagements conducted	Information Management System	Monthly
Number of stakeholder engagements	Information Management System	Monthly
Average time for grievance processing	Grievance register	Monthly
Number of open grievances	Grievance register	Monthly
Number of closed grievances	Grievance register	Monthly
Impact Indicators	Data Source	Frequency
Waste in canal after intervention	Observation of canals	Monthly
PAPs use of compensation	Consultation with PAPs	Six months after compensation

Table 12: Sample LRP Monitoring System, which provides for LRP Performance and Socio-Economic Impact Indicators

CAYE CAULKER CASE STUDY

Introduction

Objectives of CPW

The primary objectives of the Coastal Protection Works project are as follows:

- Reduce the erosion of the placed beach fill and consequently increase the longevity between beach nourishment required at Palapa Gardens
- Reduce vulnerability of the infrastructure behind the Palapa Gardens area, and
- Enhance the tourism product through beautification of the beach area.

Components of CPW

The main components of the FCW are as follows:

- Construction of a groyne structure
- Construction of a beach berm
- Vegetation of the new groyne and berm to reduce climate vulnerability

- Planting of shade trees and vegetation on the beach to reduce erosion

Caye Caulker – Coastal Protection Works

The Caye Caulker project is concerned with Coastal Protection in the face of Climate Change. The area targeted is known as the Palapas Garden, a small plot of beach located on the east side of Caye Caulker Village (see **Figure 3**). Caye Caulker is a small, low-lying, sandy island, some 21 miles (34 km) northeast of Belize City. The island was probably formed when ocean currents carried sedimentation from the nearby reef and deposited it at a node, presumably where two currents converged. This continual process eventually created the small island of Caye Caulker. Being of low-elevation however, Caye Caulker's only protection from tidal waves and flooding is the Belize Barrier Reef located approximately one mile east of the island. The corals on the barrier reef are slowly dying however, due to several factors including the effects of climate change. The Caye Caulker project thus seeks to provide some coastal protection, using small-scale, nature-based solutions, in an area often used by the Village Council for public events. The proposed plan calls for a groyn in the northeastern portion of the Garden, which will break incoming waves before they reach the island and also slow the northward movement of sand towards the Split (a literal split) located in the middle of the island. In addition, native shade trees and vegetation will be planted in the middle and southeastern parts of the area, respectively. The trees are to provide shade for beach goers, as well as hold the beach sand in place. The small vegetation will also serve the purpose of preventing erosion. Finally, the project proposes to build a sand berm along the western length of the Garden with native grasses and shrubs planted on top. Berms are natural protective features of coastal areas providing a barrier during tidal waves (see **Figure 4**).



Figure 7: Location of Palapas Gardens in Caye Caulker



Source: Albada 2017.

Figure 8: Map of Proposed Coastal Protection Works in Caye Caulker

Evaluation of Alternatives

There were numerous design changes to the proposed coastal protection works in the Caye Caulker area as a consequence of mitigating against adverse social and economic impacts. These include eliminating the proposal for 600 meters of beach nourishment, which would have required resettling a large number of small vendors; leaving private shore protection works and incomplete piers in tact, as many owners have gotten or are in the process of getting the necessary permits to construct; and finally, working with the Village Council and the BTB to align an envisioned Artisan Center with the coastal protection works, which includes rehabilitating vulnerable artists within the Palapa Gardens area.

Legal Status of Land in the Project Area

The Palapa Gardens is a plot of land on the beach, which is within a 66 feet beach reserve. All land in waterway reserves are considered Crown Land and are under the permanent authority of the Government of Belize through the Ministry of Natural Resources. Private and public entities can have legal access to portions of reserve land, by waterways, through temporary and conditional leases, which may be renewed. The Caye Caulker Village Council however, which is already an entity of the Government of Belize, would not require a lease to administer the area but would need to negotiate a Memorandum of Understanding (MOU) or a Management Agreement with the Ministry of Natural Resources in order to formalize their authority as well as the scope.

While the Village Council has been exercising some authority over the Palapa Gardens area since its inception in 2001, there has been no formal legal arrangements made with the Ministry to do so. In the interim, private individuals have taken advantage of the new opportunity to lease reserve land and have slowly been encroaching the original Palapa Gardens area, with the Village Council unable to halt them. In early 2017, the Village Council approached the Ministry of Natural Resources to present its intention for the area and to discuss the possible avenues for the formalization of the Council's authority over an Artisan Center project combined with Coastal Protection Works. On September 13, 2017, at an IDB special mission in Belize City, the IDB pledged the CVRP's support in assisting the Village Council to garner the necessary formal administrative arrangements for the area and its projects. For the purpose of this project, the Nextera team physically walked the open and available area of the Garden, mapping its coordinates using a GPS device.



Figure 9: Palapa Gardens Showing Previously Available (blue & red) and Currently Available (red) Areas

Finally, the legal status of the land also affects a number of artists and vendors who have been renting booths in the Garden from the Village Council. A number of artists have already been displaced by the aforementioned private individuals, who have garnered the legal force through their leases to do so. In an effort to secure the livelihood of this group of people who are considered socially and economically vulnerable, to contribute to the island's sustainable tourism development initiative and to establish the Palapa Gardens area as a protected public space, stakeholders have determined that it is necessary to proceed with the original plans to construct coastal protection works in this area, rather than relocate the project because of the area's contentious nature.

Baseline Survey and Assessment

Introduction

The survey, census and cadastral mapping exercises in the Palapa Gardens area of Caye Caulker, on August 24, 2017, revealed the potential for displacement to the following groups of people:

Caye Caulker Village Council/Belize Tourism Board – Proposed Artisan Center

According to stakeholder consultations, the Palapa Gardens area came in to use as a public space (Garden) with several Palapas erected on it sometime around 2000, created by the then Village Chairman. Since that time, the Garden has been used by the Village Council to host public events, such as the famous Caye Caulker Lobster Fest. Stakeholders also indicated that several years after the inception of the Palapa Gardens, the Veteran's Football Club, undertook an initiative to build booths for rent to local artists, which would provide an additional source of revenue for the Village Council. Those booths have since been destroyed by hurricane or are in severe disrepair, causing the artists to rebuild their own structures that are mostly below standard.

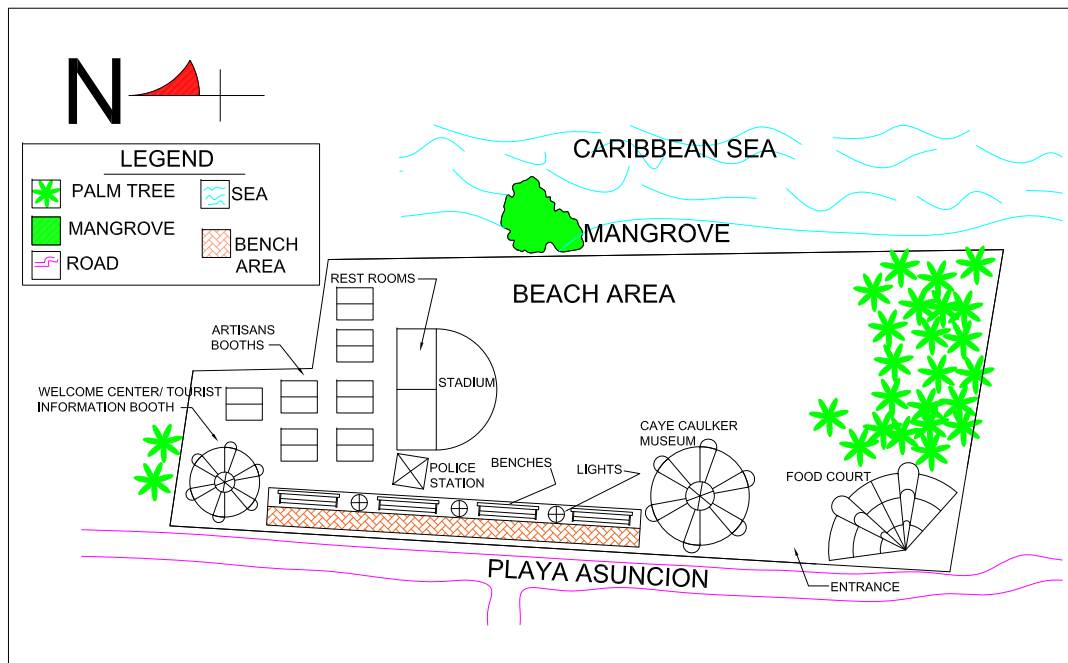


Figure 10: Design of Proposed Artisan Center

The Village Council thus, is currently in negotiations with the Belize Tourism Board to remedy the situation by erecting an Artisan Center in the Gardens, which would permanently house the artists and be able to host the Council's public events (see **Figure 8**). As can be seen from the figure, the proposed center would encompass the entire area and therefore would conflict with the design of the coastal protection works (see **Figure 9**).

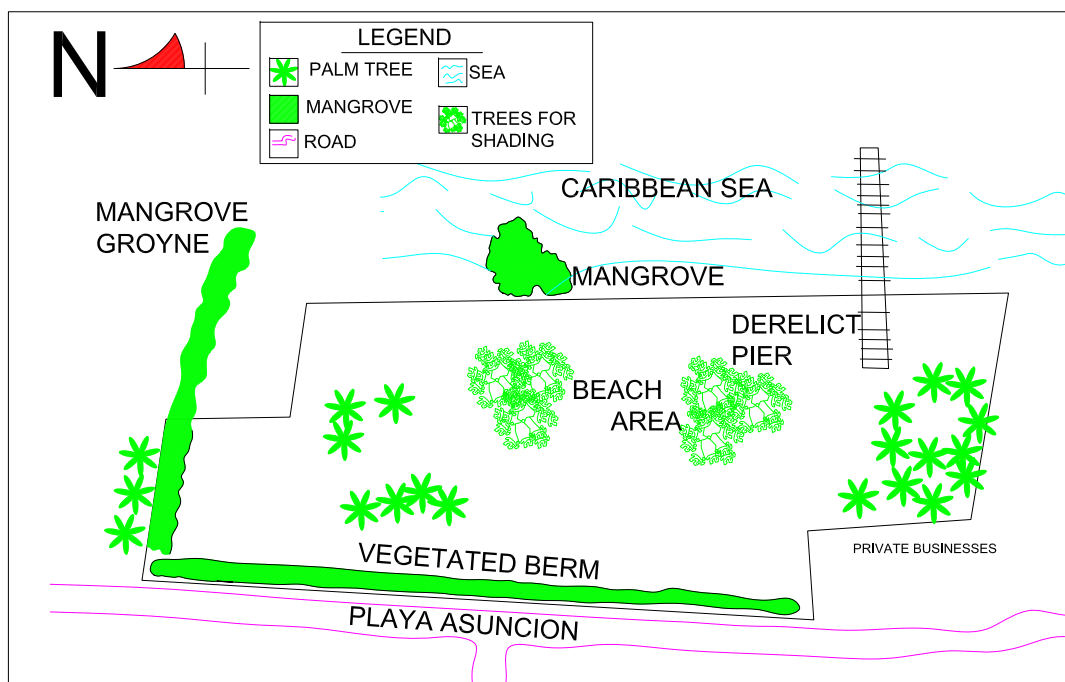


Figure 11: Design of Proposed Coastal Protection Works

Artisans/Small vendors

As indicated above, Artisans have been occupying the Palapa Gardens for approximately 15 years now. Currently, there are 14 artists (2 unavailable during the census) and 2 small vendors in the Gardens (see **Figure 10**). The artists constructed various ramshackle booths after the last hurricane destroyed the booths provided by the Council/BTB¹³. The Village Council indicated that the booths were rented at BZ\$100.00/month, however, most artists are very far in arrears.

All artists expressed their anxiety and fears in having to vacate the Gardens, during our consultations with them. While we had provided prior notification of our impending census, most artists misunderstood our mapping activities and thought we were conducting some construction activity that would require their eviction. Fortunately the team was able to correct the misunderstanding.

The Artisans and vendors are the most vulnerable of interest groups in the area. All made a very meager living off their crafts and services (see census in **Appendix**). In addition, their income is seasonal. From our observations, a few of them seem to be living in their shacks. We also learnt that most of their craft booths were family ran.

¹³ At one point the BTB also donated booths for the artists. According to the Chairlady however, the booths were made of entirely of sheet metal and thus were not comfortable in the sun. A number of them still existed at the time of our site visit.

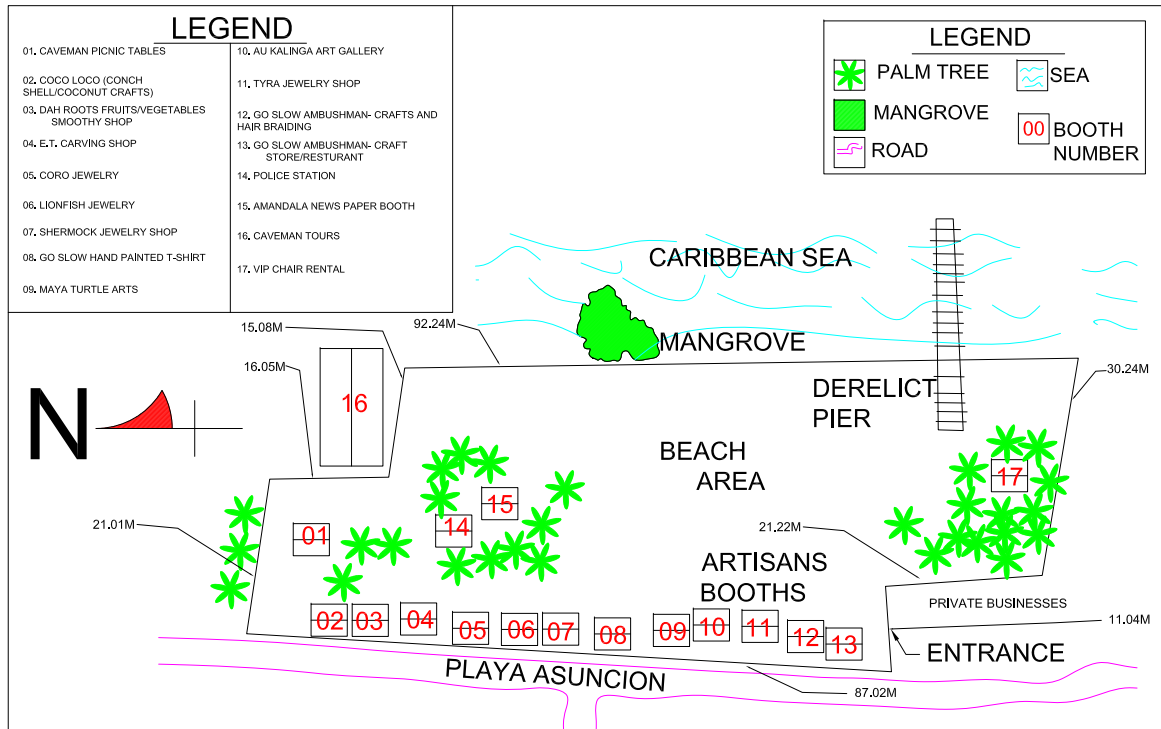


Figure 12: Existing layout of Palapa Gardens

Businesses/Private Individuals

While there are a number of large business owners who have gotten temporary leases to portions of the original Palapa Gardens area or who have expressed interest in leasing the still legally available area, there are only two business individuals who occupy or have property erected within the area of the Garden that is still available. In the north end, the proprietor of Caveman tours has placed picnic tables in front of his business for the convenience of his guests and in the south west area, there is a derelict pier belonging to the owner of the property that houses the three private businesses in the south west area of the Garden.

Impact Matrix of CPW

The proposed CPW would displace the following people within the Palapa Gardens:

Design Structure	Negative impacts/displacement created	Project Affected People
Groyne	<ul style="list-style-type: none"> Would be too close to Caveman Tours' pier, potentially obstructing docking and causing sediment buildup. Displace numerous artists and structures on the northern portion of the beach (currently). 	<ul style="list-style-type: none"> Caveman Tours (pier, picnic tables #1, view of property) Sunrise Boat Tours & Charters (pier and view) Artist booths #2-5 and 14 CCVC/BTB Artisan Center

	<ul style="list-style-type: none"> Displace northern portion of Artisan Center (future). 	
Berm	<ul style="list-style-type: none"> Displace all artists along the western length of the Garden (currently). Displace western portion of the Artisan Center (future). Obstruct view from businesses across the street (currently). 	<ul style="list-style-type: none"> Artist booths #2-13 CCVC/BTB Artisan Center Jeremiah's Inn Vega D Real Macaw Asian Grocery Store
Vegetation on groyne & berms	n/a	n/a
Shade trees and vegetation planted in the middle of the Garden	<ul style="list-style-type: none"> Public events attendants 	<ul style="list-style-type: none"> CCVC/BTB

Table 13: Impacts of Proposed CPW

Mitigating Options and Assessment of Alternatives

Caye Caulker Village Council/Belize Tourism Board – Proposed Artisan Center

Since the plans for the Artisan Center has been revealed, proponents of the CVRP have been consulting with the CCVC and the BTB to redesign the coastal protection works so that it will align with the needs and desires of the Village Council. Feedback will also be solicited from the artists as to the revised design proposal, prior to the submission of final designs.

Finally, the IDB and key stakeholders have pledged their commitment in assisting the Village Council in obtaining the necessary legal administrative authority over the proposed infrastructure.

Artisans/Small Vendors

To accommodate the coastal protection works within the Palapa Gardens, 14 artists, 2 vendors and their businesses will need to be resettled. While the artists/vendors will remain in the Gardens, they will be relocated to newly built booths that form part of the Artisan Center concept. Initial proposal for booths are in keeping with the objectives of the climate vulnerability reduction program by calling for coastal resilient type structures, which would include pile foundations and elevated floor plans.

Currently, 16 individual booths will be required at a minimum 8x8 dimension. In considering that booths will require piles however, it might be more feasible to build a larger structure with individual sections for each artist/vendor. It must be mentioned however, that this will detract from the artistic quaintness of individual booths.

Businesses/Private Individuals

The picnic tables belonging to the Caveman Tour business will need to be removed from their current area to accommodate Artisan booths. An option for mitigating requires that chairs be built near the Caveman Tour business or directly on the business' existing deck

for the convenience of customers. It must be noted that customers will also have access to the Artisan Center and its conveniences, including resting areas.

In the case of the derelict pier, mitigating alternatives include designing around the pier so as not to remove it or removing it and providing compensation. In keeping with IDB policy OP-710, the former option will be exercised.

Restoration Framework

Eligibility

This section outlines the eligibility criteria and the measures undertaken to determine eligibility.

Eligibility Policy

In terms of the resettlement of Artisans/Vendors, eligibility is restricted to owners of small businesses only, as established by the census. Where there is economic displacement due to impacts on assets, such as the case of the piers or the removal of picnic tables, eligibility to relocation, rehabilitation or compensation is confined to the owner only.

Establishment of Entitlement Cut-off Date

In all cases, the date the census was conducted constitutes the cut-off date for entitlements. The census of the Palapa Gardens area was conducted on August 24, 2017. (see **Appendix 1**). Users of the Garden were notified of the impending census on August 23, 2017. Three of these individuals notified were not available on the day of the census. While we could not get any information on two of them, the survey team was able to collect basic information on the last individual, the proprietor of Caveman Tours, who owns a number of picnic tables within the currently available area of the Garden.

Entitlements

The CPW project, under the CVRP, has established the following commitments in its relationship with the Caye Caulker Village Council and the Palapa Gardens area:

1. To work with both the CCVC and the BTB to develop a coastal protection design that enhances the Artisan Center concept within the Palapa Gardens area.
2. To provide funding to accommodate the resettlement of 16 Artisan businesses within the Artisan Center concept.
3. To support the CCVC in ascertaining from the Ministry of Natural Resources, the necessary legal administrative authority over the Palapa Gardens area and its infrastructure.

Artists/vendors will be entitled to relocation in the Artisan Center. The proprietor of Caveman Tours will be entitled to replacement compensation in the form of seating for customers, in an area near the business as agreed by the proprietor.

Estimation of Eligible Project Affected People

The following is an estimation of project affected people in the Palapa Garden area:

Affected Group	Proprietor	Employee	Total
Artists	17	2	19
Vendors	2		2
Businesses	1		1
Total			24

Table 14: Project Affected People in the Palapa Gardens Area

Institutional Arrangements

It is recommended that there be a Livelihood Restoration Steering Committee comprised of high level stakeholders to serve as a regulatory and strategic board with oversight and policy development responsibilities. The Steering Committee should comprise representatives from the Caye Caulker Village Council, the IDB, the Implementing Agency, Ministry of Tourism & Civil Aviation, Ministry of Natural Resources, Department of Environment, Central Building Authority, the Area Representatives Offices, and the project affected population. In addition, a Livelihood Restoration Working Group should be established which will work directly with the implementing agencies to execute the Livelihood Restoration Plan. The Working Group will be the interface between the Steering Committee, Implementing Agencies, contractors, and affected people.

Cost Estimate

The following is a cost estimate for the intervention in the Palapa Garden area:

Activity	Number	Cost (BZ\$/US\$)	Total (BZ\$/US\$)
Construction of Artisan Booths	16	\$12,000.00 ¹⁴ /\$6,000.00	\$192,000.00/\$96,000.00
Replacement chairs (Caveman Tours)		\$5,000.00/\$2,500.00	\$5,000.00/\$2,500.00
Total			\$197,000.00/\$98,500.00

Table 15: Estimated Costs of Interventions in the Palapa Gardens Area

Estimated Calendar of Activities

IDB's OP-710 policy requires that all livelihood restoration activities be completed before the commencement of project construction. Assessment of the project timeline for construction activities, indicate that all livelihood restoration activities will need to be

¹⁴ 8x8 booth at BZE\$125.00/ft² and an estimated BZE\$4,000.00 for pilings

completed in the 4th quarter of 2017 and no later than the 1st quarter of 2018 (see **Table 11**).

Activity	2017	2018			
	4 th quarter	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
Further technical studies and design					
Construction, including supervision					
Construction of Artisan booths					
Replacement chairs (Caveman Tours)					

Table 16: Estimated Livelihood Restoration Timeline Compared to Construction Timeline - CPW

Grievance Redress Mechanism

*Grievance mechanism*¹⁵ – A complaint or grievance can be submitted via a grievance form or verbally.

A grievance form may be submitted in any of the following ways:

- To the office of Livelihood Restoration Steering Committee (address on form).
- To the office of the Livelihood Restoration Working Group (address on form).

Verbal complaints may be made to the Working Group leader, via email, telephone or face-to-face. The Working Group's leader contact information will be provided to stakeholders.

*Grievance response mechanism*¹⁶ – Grievances and complaints will be dealt with in the following manner:

- All grievances received will be recorded in a register.
- If grievance can be corrected with an immediate action, complainant will be immediately informed, action will be taken, date recorded and case closed.

If grievance requires long term action, complainant will be informed of proposed action or why no action is required (within 30 days), action will be implemented (if applicable), follow-up will be carried through, complainant will once again be informed, date recorded and case will be closed.

Monitoring and Evaluation

The following table contains performance indicators, which will guide the monitoring and evaluation of the Livelihood Restoration Plan for the Palapa Garden area.

Performance Indicators	Data Source	Frequency
Overall spending against the budget	Financial Statements	Monthly
Detailed inputs against LRP procurement	Information Management System	Monthly

¹⁵ Source: WSP Group (2013)

¹⁶ Source: WSP Group (2013)

Detailed outputs against LRP deliverables	Information Management System	Monthly
Number of residences benefitting from intervention	Information Management System	Monthly
Number of PAPs working in the project	Human Resource	Monthly
Number of public meetings or engagements conducted	Information Management System	Monthly
Number of stakeholder engagements	Information Management System	Monthly
Average time for grievance processing	Grievance register	Monthly
Number of open grievances	Grievance register	Monthly
Number of closed grievances	Grievance register	Monthly
Impact Indicators	Data Source	Frequency
Number of completed artisan booths	Observation of project outputs	Monthly
Effectiveness of replacement chairs	Consultation with PAPs	Six months after compensation

Table 17: Performance Indicators for the Monitoring and Evaluation of Livelihood Restoration in Palapa Garden Area

References

Albada, E. (2017, July). *Feasibility and preliminary designs of small scale, nature based coastal protection works in Caye Caulker and Goff Caye, Belize: Interim Report*.

Trinidad: E. Albada.

CHENTEC. (2017, June). *Updating and detailed designs of flood control works in Belize City: Interim report*. Belize: CHENTEC.

Coastal Zone Management Authority and Institute (CZMAI). (2016). *Caye Caulker coastal zone management guidelines*, Belize Integrated Coastal Zone Management Plan. Belize: CZMAI

WSP Group. (2013). *Stakeholder engagement plan: Highway 20 rehabilitation project BT-20 Cui Long*. London: Ian Williams.

Summary of Engagement Activities

Engagement Activity	Objective	Participants	Comments
Meeting with Caye Caulker Village Council (CCVC) Chairlady – Enelda Rosado (July 18, 2017)	<ul style="list-style-type: none"> • To gain an understanding of the needs of Caye Caulker within the context of coastal protection. • To conduct a site reconnaissance. 	<ul style="list-style-type: none"> • Enelda Rosado – Chairlady CCVC • Edward Albada – CVRP, Coastal Engineer • Allan Herrera – Environmental Consultant, Nextera • Christa Hulse – Social Consultant, Nextera 	<ul style="list-style-type: none"> • The Palapa Gardens area was identified as the most suitable site for the intervention.
Caye Caulker, stakeholder pre-consultation meeting (July 18, 2017)	<ul style="list-style-type: none"> • To introduce the project. • To solicit initial thoughts as well as ideas. 	<ul style="list-style-type: none"> • Enelda Rosado • Edward Albada • Allan Herrera • Christa Hulse • Caye Caulker Stakeholders 	
Telephone Conversation with CCVC, Chairlady (August 7, 2017)	<ul style="list-style-type: none"> • To confirm plans for an Artisan Center in the Palapa Gardens area 	<ul style="list-style-type: none"> • Enelda Rosado • Christa Hulse 	<ul style="list-style-type: none"> • Ms. Rosado confirmed that the CCVC were in discussion with BTB to build an Artisan Center at the Palapa Gardens.
Belize City, initial scoping (August 8, 2017)	<ul style="list-style-type: none"> • To identify project affected people. 	<ul style="list-style-type: none"> • Nextera team 	<ul style="list-style-type: none"> • 6 properties with illegal sewer discharge and 2 piers were initially identified
Telephone Conversation with BTB, Noriko Gamero (August 14, 2017)	<ul style="list-style-type: none"> • To advise the BTB of the CVRP plans for CPW at the Palapa Gardens. • To be appraised of the Artisan Center project. • To solicit the design plans for 	<ul style="list-style-type: none"> • Noriko Gamero • Christa Hulse 	<ul style="list-style-type: none"> • Ms. Gamero indicated that the BTB did commit to developing an Artisan Center, however, the project was only in its infancy and there was only a concept and no

	the Artisan Center.		complete design plans as yet.
Telephone Conversation with NEMO, Col. Shelton DeFour (August 14, 2017)	<ul style="list-style-type: none"> • To gain an understanding of the effects of hurricanes on the Southside area of Belize City. • To request a copy of the Hurricane Earl Assessment Report. 	<ul style="list-style-type: none"> • Col. Shelton DeFour • Christa Hulse 	
Meeting with Ministry of Human Development, CEO Judith Alpuche (August 21, 2017)	<ul style="list-style-type: none"> • To gain an understanding of the social context of south side Belize City. 	<ul style="list-style-type: none"> • Judith Alpuche • Christa Hulse 	
Belize City, Distributed notification of upcoming census (August 22, 2017)	<ul style="list-style-type: none"> • To notify project affected people that a census will be conducted with them, in compliance with IDB OP-710 policy. 	<ul style="list-style-type: none"> • Nextera team 	<ul style="list-style-type: none"> • 5 of the initial 8 project affected people were reached. These included: <ul style="list-style-type: none"> ○ Jacqueline Campbell ○ Rosita Rivero ○ Kevin Gordon ○ Shantel Meighan ○ Dwight Palacio
Belize City, Census conducted in Conch Shell Bay area & North Creek area (August 23, 2017)	<ul style="list-style-type: none"> • To conduct a census of project affected people. 	<ul style="list-style-type: none"> • Nextera team – Christa Hulse & Ruben Tulcey • Belize City Council – Carla Patnett & Glenn Leslie 	<ul style="list-style-type: none"> • The census/survey team learnt that all the residences directly on canal side (15 enclosures in total) had illegal sewer discharges into the canal.
Caye Caulker, Distributed notification of upcoming census (August 23, 2017)	<ul style="list-style-type: none"> • To notify project affected people that a census will be conducted with them, in compliance with IDB OP-710 	<ul style="list-style-type: none"> • CCVC 	<ul style="list-style-type: none"> • The following individuals were notified: <ul style="list-style-type: none"> ○ Harrison Cadle ○ Sherman Murillo ○ Sherlock

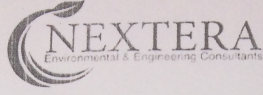
	policy.		Belisle ○ Ensworth Tzul ○ Shermack Murillo ○ Vivian Johnson ○ Jorge Avellas ○ Alfred Usher ○ Royden Cain ○ Jacob Cabral ○ Esther Eljio ○ Miriam Magoon ○ Idalmi Perez
Caye Caulker, Census conducted Palapa Gardens area (August 24, 2017)	<ul style="list-style-type: none"> • To conduct a census of project affected people. 	<ul style="list-style-type: none"> • Nextera team – Christa Hulse & Ruben Tulcey • CCVC – Enelda Rosado 	
Meeting with CCVC Councilor – Elizabeth Usher (August 24, 2017)	<ul style="list-style-type: none"> • To develop a sketch of the vision for the Artisan Center. • To determine how the CVRP – CPW can blend with the Center. • To locate survey pegs around the Palapa Gardens area. • To map the available project area. 	<ul style="list-style-type: none"> • Elizabeth Usher • Christa Hulse 	
Meeting with Belize City Council (August 25, 2017)	<ul style="list-style-type: none"> • To understand the City Council's role in the operation phase of the project. 	<ul style="list-style-type: none"> • Nextera team – Allan Herrera & Christa Hulse • Belize City Council – Marilyn Ordonez & Carla Patnett 	
Telephone Conversation with Cisco Construction Ltd., Executive V.P. Arsenio Burgos (August 28, 2017)	<ul style="list-style-type: none"> • To verify the type of design used for existing septic tanks in the North Creek Alley area. 	<ul style="list-style-type: none"> • Arsenio Burgos • Christa Hulse 	<ul style="list-style-type: none"> • Mr. Burgos indicated that the tanks were constructed using the three-chamber design.

Telephone Conversation with Ministry of Natural Resources, Dir. Policy & Strategic Planning, Dr. Paul Flowers (August 29, 2017)	<ul style="list-style-type: none"> • To appraise the Ministry of the land situation in the Palapa Gardens area. • To determine the authority of the CCVC over the area. • To get feedback on the next steps for the CCVC and CVRP. 	<ul style="list-style-type: none"> • Dr. Paul Flowers • Christa Hulse 	
Telephone Conversation with Belize Water Services, Ltd., CEO Mr. Alvan Haynes (August 29, 2017)	<ul style="list-style-type: none"> • To gain an overview of the sewer situation in south side Belize City. • To elicit the BWS' support/advice in managing the sewer situation of the two communities with PAPs. 	<ul style="list-style-type: none"> • Alvan Haynes • Christa Hulse 	
Cadastral mapping of Conch Shell Bay community (affected population only) (August 30, 2017)	<ul style="list-style-type: none"> • To develop a map, using GPS coordinates, of the major structures in the enclosure of each PAP. 	<ul style="list-style-type: none"> • Nextera team – Christa Hulse & Ruben Tulcey 	
Informal interview/conversation with Fisherfolk at the Conch Shell Bay Fish Market (August 30, 2017)	<ul style="list-style-type: none"> • To inform the fisherfolk of the impending dredge works. • To identify a suitable time for the dredging to be conducted – so as not to adversely displace the fisherfolk. • To determine their sentiments towards the 	<ul style="list-style-type: none"> • Christa Hulse • Enfield Jones (fisherman) • Ernesto Vasquez (fisherman) • Mervin Vacaro (vendor) 	<ul style="list-style-type: none"> • Fisherfolk informed that Sunday was the least busy day in the area. • They were supportive of the dredging as it would benefit them in protecting their boat engines, as well as leave the area more aesthetically

	dredging.		pleasing. • Indicated that there was a sunken boat (with engine and copper bottom) in the area that needed to be removed.
Meeting with BWS (August 30, 2017)	<ul style="list-style-type: none"> • To appraise the BWS technical team of the CVRP. • To determine how each PAP community's sewer could be managed. • To establish BWS' responsibility in the management of the sewer in the community. • To understand coordination efforts required with BWS in the resurfacing of the parallel drainage streets. 	<ul style="list-style-type: none"> • BWS – Sanjay Keshwani, Argent Tillet, Anthony Geban & Gerardo Castaneda • Belize City Council – Carla Patnett • Nextera team – Christa Hulse 	
Telephone Conversation with Ministry of Tourism & Civil Aviation, CEO Yashin Dujon (August 30, 2017)	<ul style="list-style-type: none"> • To establish whether the Ministry of Tourism had made any formal arrangements for the management of the Palapa Gardens area with the Ministry of Natural Resources. 	<ul style="list-style-type: none"> • Yashin Dujon • Christa Hulse 	
Site Visit – Conch Shell Bay & North Creek Alley areas (September 1, 2017)	<ul style="list-style-type: none"> • Visit with BWS' technical team to verify sewer management 	<ul style="list-style-type: none"> • BWS – Argent Tillet & Anthony Geban • Belize City 	

	needs.	Council – Carla Patnett • Nextera team – Christa Hulse & Ruben Tulcey	
Cadastral mapping of North Creek Alley community (affected population only) (September 1, 2017)	• To develop a map, using GPS coordinates, of the major structures in the enclosure of each PAP.	• Nextera team – Christa Hulse & Ruben Tulcey	
Meeting with Jim Novelo (Caye Caulker stakeholder) (September 5, 2017)	• Initiated by Mr. Novelo to appraise the CVRP of his interests in the Palapa Gardens area	• Jim Novelo • Christa Hulse	
Belize City, Census conducted in Yarborough area (September 16, 2017)	• To conduct a census of project affected people.	• Christa Hulse	

Example of Census Notification Letter


1517 Spain Avenue
Belize City, Belize
Tel: 223-1188
Email: allanherrera@nextera.com.bz
Website: www.nextera.com.bz

August 21, 2017

Dear Sir/Madam,

The Government of Belize (GoB) along with the Inter-American Development Bank (IDB) is undertaking a coastal protection project in Caye Caulker as part of a larger climate vulnerability reduction program. Specifically, the proposed initiative in Caye Caulker will comprise small scale, nature-based coastal protection works within the Palapas Gardens area.

The GoB and IDB are requiring an Environmental and Social Analysis to be conducted which, among other things, will determine the impacts of the planned interventions. Therefore, a census of potentially affected stakeholders, that is, those persons currently using the Palapas Gardens, has been planned.

The census will be conducted by a Nextera representative, accompanied by a representative from the Caye Caulker Village Council, on Thursday, August 24th, 2017. Your kind cooperation in the census will be greatly appreciated.

Sincerely,

Christa Hulse
Social Consultant

For official use only

Name of Artist/Business Owner/Representative: Harrison Cadle

Signature of Artist/Business Owner/Representative: HC

Date (of notification): 23/08/2017

Coveman Tours