

CARIBBEAN DEVELOPMENT BANK

TWO HUNDRED AND SEVENTY-SIXTH MEETING OF THE BOARD OF DIRECTORS

TO BE HELD IN THE TURKS AND CAICOS ISLANDS

MAY 22, 2017

PAPER BD 34/17

**BUILDING CAPACITY FOR DISASTER RISK MANAGEMENT AND CLIMATE
RESILIENCE PROJECT, ILE À VACHE – HAITI**
(President's Recommendation No. 938)

The attached Report appraises a request from the Government of the Republic of Haiti (GOH) for a grant to finance a project to improve the capacity of communities on Ile-à-Vache (IAV) to respond to climate variability and climate change threats (the Project). The Project is in keeping with the Strategic Plan for the Development of Haiti (Plan Stratégique de Développement d'Haiti - PSDH); Haiti's National Adaptation Programme of Action (NAPA) and the agreement for support to Haiti under the ninth Special Development Fund (SDF 9).

2. On the basis of the Report, I recommend a grant from the Special Funds Resources (SFR) of the Caribbean Development Bank (CDB) to GOH of an amount not exceeding the equivalent of five million, five hundred thousand United States dollars (USD5,500,000 mn) (the Grant) comprising:

- (a) an amount not exceeding the equivalent of four million, six hundred and four thousand and one hundred United States dollars (USD4,604,100), from SDF Resources; and
- (b) an amount not exceeding the equivalent of eight hundred and sixty-two thousand, and twenty Euros (EUR862,020) allocated from resources provided to CDB under the African Caribbean Pacific-European Union-CDB-Natural Disaster Risk Management in CARIFORUM Countries Contribution Agreement on the terms and conditions set out and referred to in Chapter 7 of this Report.

3. In addition, I recommend a waiver of CDB's Guidelines for Procurement (2006) to permit:

- (a) the procurement of one vehicle with no restriction as to country eligibility with respect to the source and origin of the vehicle; [REDACTED]
- (b) the procurement of a mini grid with no restrictions as to country eligibility for the contractor and the origin and source of the batteries. [REDACTED]

4. Funds are available within CDB's existing resources for the relevant disbursement period.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

CARIBBEAN DEVELOPMENT BANK

APPRAISAL REPORT

ON

**BUILDING CAPACITY FOR DISASTER RISK MANAGEMENT AND
CLIMATE RESILIENCE PROJECT, ILE À VACHE – HAITI**

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Considered at the Two Hundred and Seventy-Sixth Meeting of the Board of Directors on May 22, 2017.

**BD 34/17
AR 17/3 HAI**

Director, Projects Department

Mr. Daniel M. Best

*Coordinator
Environmental Sustainability Unit (ESU)
Projects Department*

Ms. Cheryl Dixon

MAY 2017

This Report was prepared by an Appraisal Team comprising:

Ms. Valerie Isaac, Operations Officer, (OO) – (Environment) and Coordinator; Mr. Stephen Lawrence, OO – Engineer; Mr. Takem Enaw, Legal Counsel; Dr. Yves Robert Personna, African Caribbean Pacific-European Union Project Coordinator; Dr. Anthony George, OO (Social Analyst); Mr. Elbert Ellis, OO (Social Analyst); Mr. Peter Werner, Renewable Energy/Energy Efficiency Specialist; Mr. Amos Peters, Economist; and Mrs. Vashti Rock, Coordinating Secretary.

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CURRENCY EQUIVALENT

[Dollars (\$) throughout refer to United States dollars (USD) unless otherwise stated.]

\$1.00	=	69.70 Gourdes
Gourdes 1.00	=	\$0.18

ABBREVIATIONS

ACP	-	African Caribbean and Pacific
ANAP	-	Agency for Management of Protected Areas (Agence Nationale des Aires Protégées)
AWPB	-	Annual Work Plans and Budget
bn	-	Billion
°C	-	Degree Celsius
CC	-	Climate Change
CCA	-	Climate Change Adaptation
CDB	-	Caribbean Development Bank
CDD	-	Community Driven Project
CRSP	-	Climate Resilient Spatial Plan
CVC	-	Climate Variability and Change
DCC	-	Directorate of Climate Change
DFA	-	Directorate of Fisheries and Aquaculture
DINEPA	-	Directorate for Potable Water and Sanitation (Directorate Nationale de l'Eau Potable et de l'Assainissement)
DMF	-	Design and Monitoring Framework
DRM	-	Disaster Risk Management
DRR	-	Disaster Risk Reduction
EU	-	European Union
EWS	-	Early Warning System
FADs	-	Fishing Aggregate Devices
FAPDI	-	Federation of Fisher-folk Association
FD	-	Fisheries Directorate
GIS	-	Geographic Information System
GM	-	Gender Marker
GOH	-	Government of the Republic of Haiti
GRM	-	Grievance Redress Mechanism
ha	-	hectares
HTG	-	Haitian Gourdes
IAV	-	Ile à Vache
IMF	-	International Monetary Fund
ISP	-	Implementation Support Plan
KAP	-	Knowledge, Attitude and Practice
km ²	-	Square kilometres
kWh	-	Kilowatt hours
LDRMC	-	Local Disaster Risk Management Committee
LPC	-	Local Project Coordinator
LPCC	-	Local Project Coordinating Committee
LWC	-	Local Water Committee
M&E	-	Monitoring and Evaluation

MARNDR	-	Ministry of Agriculture and Natural Resources
m	-	Metres
MDG	-	Millennium Development Goals
MEF	-	Ministry of the Economy and Finance
MITC	-	Ministry of Interior and Territorial Collectivities (Ministère de l'Intérieur et des Collectivités Territoriales)
mn	-	Million
MOE	-	Ministry of the Environment
MOU	-	Memorandum of Understanding
NAPA	-	National Adaptation Programme of Action
n/a	-	Not Applicable
NDRM	-	Natural Disaster Risk Management
NGOs	-	Non-Governmental Organisations
%	-	Percent
O&M	-	Operations and Maintenance
ONEV	-	National Observatory of the Environment and Vulnerability (Observatoire National de l'Environnement et de la Vulnérabilité)
PA	-	Project Advisor
PAP	-	Port-au-Prince
PC	-	Project Coordinator
PCR	-	Project Completion Report
PEAP	-	Public Education Awareness Programme
PLW	-	Project Launch Workshop
POM	-	Project Operations Manual
PPES	-	Project Performance Evaluation System
PSC	-	Project Steering Committee
PSDH	-	Strategic Plan for the Development of Haiti (Plan Stratégique de Développement d'Haïti)
PV	-	Photovoltaic
RDMC	-	Risk and Disaster Management Committee
RE	-	Renewable Energy
RFP	-	Request for Proposal
RMF	-	Results Monitoring Framework
RO	-	Reverse Osmosis
SA	-	Special Account
SFR	-	Special Fund Resources
SLR	-	Sea Level Rise
SOE	-	Statement of Expenditure
SNGRD	-	National System for Risk and Disaster Management
TA	-	Technical Assistance
TAG	-	Technical Advisory Group
TOR	-	Terms of Reference
UNDP	-	United Nations Development Program
UNEP	-	United Nations Environment Program
UNFCCC	-	United Nations Framework Convention on Climate Change
USD	-	United States Dollars

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COUNTRY DATA: HAITI

	2010	2011	2012	2013	2014	2015
Per Capita Gross Domestic Product (GDP) (current market prices; \$ mn)	662.3	740.9	766.9	810.3	831.6	818.3
Gross Domestic Product						
GDP at Current Market Prices (\$ mn)	6622.5	7516.8	7890.2	8452.5	8791.6	8765.3
Demand Components (% of GDP):						
Consumption Expenditure	116.4	106.4	98.3	95.4	95.0	88.3
Government Consumption	7.6	7.3	8.5	8.6	9.1	10.0
Gross Domestic Investment	25.4	27.9	29.5	30.0	31.0	32.3
Exports of goods and non-factor services	15.3	17.4	16.9	18.3	18.9	20.0
Imports of goods and non-factors services	64.7	59.0	53.2	52.3	54.0	50.6
Gross domestic savings ratio (%)	-24.0	-13.7	-6.7	-4.0	-4.1	1.7
Sectoral Distribution of Constant GDP (%)						
Primary sector	23.4	22.5	22.5	21.6	20.2	20.5
Secondary sector	17.4	17.8	18.1	18.5	18.9	18.8
Tertiary sector	51.5	51.7	51.4	51.8	52.6	52.5
Indirect and import taxes	7.7	8.1	8.0	8.1	8.3	8.2
GDP at constant 1986-87 Prices (\$ mn)	6622.5	6988.4	7190.0	7494.4	7704.0	7795.3
Annual rate of growth in GDP (%)	-5.5	5.5	2.9	4.2	2.8	1.2
Money and Prices						
Consumer prices (avg. annual % change)	5.7	8.4	6.3	5.9	4.6	9.0
Broad Money supply annual % change)	26.1	6.8	7.2	7.6	7.7	23.8
Total domestic credit (net, htg bn)	56.8	54.9	69.0	95.6	113.4	136.3
Estimated Tourism Expenditure (\$ mn)	431.0	458.0	473.0	418.0	465.0	...
International tourism, number of arrivals	255000.0	349000.0	349000.0	420000.0	465000.0	...
General Government Finances						
Revenue (htg bn)	53.3	66.6	78.2	76.2	74.1	82.0
Total expenditure (htg bn)	60.6	74.2	93.8	102.2	99.0	92.2
Net lending/borrowing (htg bn)	-7.3	-7.6	-15.6	-26.1	-24.9	-10.2
Primary net lending/borrowing (htg bn)	-5.8	-6.4	-14.3	-24.2	-23.1	-9.1
Primary net lending/borrowing (in % of GDP)	-2.2	-2.1	-4.4	-6.7	-5.9	-2.1
Government gross debt (htg bn)	46.3	35.8	53.6	78.2	103.0	128.1
Government gross debt (in % of GDP)	17.3	11.8	16.3	21.5	26.3	30.1
Balance of Payments (\$ mn)						
Exports of Goods and Services	1016.4	1311.7	1327.8	1566.9	1662.1	1752.5
Imports of Goods and Services	4287.3	4433.4	4195.3	4419.4	4762.5	4431.7
Current account balance (% of GDP)	-1.5	-4.3	-5.5	-6.4	-9.1	-2.7
Current Account Balance (\$ mn)	-101.8	-323.6	-431.1	-537.2	-801.8	-234.1
Debt (\$ mn)						
External debt outstanding	956.8	770.8	1155.6	1558.9	1940.1	2084.3
Debt service on external debt, total (TDS, current \$)	131.3	5.2	3.7	10.6	22.7	34.7
External debt stocks	91.2	56.8	82.5	96.7	115.2	117.3
(% of exports of goods, services and primary income)						
Average Exchange Rate						
Haitian Gourde(s) per US dollar	40.5	41.0	42.0	43.5	45.2	50.7

Sources: World Development Indicators, World Economic Outlook, Bank of the Republic of Haiti,

\$=USD

	2010	2011	2012	2013	2014
Population					
Mid-Year Population ('000)	9999.6	10144.9	10288.8	10431.2	10572.0
Population Growth Rate (%)	1.5	1.4	1.4	1.4	1.3
Crude Birth Rate	26.7	26.2	25.8	25.3	25.0
Crude Death Rate	9.2	9.1	8.9	8.8	8.7
Infant Mortality Rate					
Education					
School Enrolment (%)					
Primary	...	88	...	...	...
Secondary	...	...	...	...	...
Pupil-Teacher Ratio	...	...	...	...	...
Primary	...	...	...	...	...
Secondary	...	...	...	...	...
Labour Force					
Unemployment Rate (%)					
Male	...	...	...	...	...
Female	...	...	...	...	...
Participation Rate (%)	66.5	66.8	67.0	67.2	67.5
Male	71.3	71.5	71.6	71.8	72.0
Female	62.0	62.3	62.6	62.9	63.2

Sources: World Development Indicators

Indicators of Human Development	1970	1980	1990	2000	2010	2014
Health and Education						
Life Expectancy at Birth (years)	48.5	47.2	50.8	54.6	57.7	61.2
Male	...	45.5	49.4	53.1	55.9	59.2
Female	...	48.5	52.3	56.1	59.5	63.4
Dependency Ratio	...	83.6	82.3	89.2	79.9	67.6
Male
Female
Adult Literacy Rate (%)	54.1**	53.0	...
Male	37.1*	60.1**	...	64.4***
Female	32.5*	48.6**	...	57.2***
Human Development Index	...	0.4	0.5	...	0.5	...
Housing and Environment						
Households with piped water (%)	...		61.9	60.8	59.3	57.7
Households with access to flush toilets (%)	17.6	21.0	25.9	27.6
Households with electricity (%)	31.3	31.4	33.9	...

Sources: Haitian Institute of Statistics; Bank of the Republic of Haiti, World Development Indicators

... not available

* 1982, **2001, ***2015

Mobile penetration rate (2016) - 61% - Source: National Council for Telecommunications (CONATEL) 2016

GRANT AND PROJECT SUMMARY

Financial Terms and Conditions			
Grantee:	Government of the Republic of Haiti (GOH)	Amortisation Period:	Not applicable (n/a)
		Grace Period:	n/a
Implementing Agency:	Ministry of Environment (MOE)	Disbursement Period:	September 30, 2017 to June 30, 2021
Source:	Amount (\$'million [mn]):		
Caribbean Development Bank (CDB) Special Funds Resources (SFR):	4.604	Supervision and Inspection Fee:	n/a
African Caribbean Pacific-European Union (ACP-EU)(EUR862,020)	0.896	Interest Rate: n/a	
GOH:	0.825		
Total:	6.325		
Project at a Glance			
Project Outcome/Description:			
<p>The expected outcomes of the Project are: (a) increased capacity of the central government, local authorities and communities to plan for climate resilience and disaster risk management (DRM) for Ile-à-Vache (IAV); (b) enhanced capacity to implement viable and sustainable fisheries and other livelihoods opportunities; (c) improved access to potable water and information for effective water resources management; (d) increased access to efficient, affordable electricity for households, businesses and public administrative services.</p> <p>The Project consists of the following:</p> <p>(1) Technical Assistance (TA) comprising:</p> <p>(a) DRM-climate change adaptation (DRM-CCA) plan, climate resilient spatial plan (CRSP) early warning system (EWS) and public education, awareness programme (PEAP);</p> <p>(b) sustainable fisheries and coastal ecosystem management pilot programme;</p> <p>(c) sustainable livelihoods options and opportunities assessment;</p> <p>(d) hydrometric network design and training of technicians from the Directorate for Potable Water and Sanitation (DINEPA) and the IAV local water committee (LWC) and design support for a reverse osmosis (RO) water purification system;</p> <p>(e) design and construction supervision support for a pilot mini-grid system;</p> <p>(f) maintenance training of solar photovoltaic (PV) and lighting systems; and</p> <p>(g) Monitoring and Evaluation (M&E).</p>			

(2) Equipment:

- (a) hydro-meteorological and seismic monitoring equipment;
- (b) four fish aggregating devices (FADS);
- (c) one 25 foot (ft.) boat;
- (d) one solar ice plant;
- (e) fisheries supply and education building;
- (f) water purification equipment;
- (g) one mini grid; and
- (h) one vehicle.

(3) Project Management

CDB's Results Monitoring Framework:

No.	Indicators	2020	2021	2022
1.	National sector policies/strategies/plans developed or implemented to improve capacity for climate resilience, conservation, rehabilitation or environmental management.		1	1
2.	Communities with improved capacity to address climate change (CC) and DRM.			1

Gender Marker Summary:

Gender Marker (GM)	Analysis	Design	Implementation	M&E	Score	Code
	1.0	1.0	0.5	0.5	3	GM ^[1]

Exceptions to CDB Policies:

- (a) With respect to the vehicle, a waiver of CDB's Guidelines for Procurement (2006) to extend eligibility for the source and origin of the vehicle to all countries. [REDACTED]
- (b) With respect to the mini grid, a waiver of CDB's Guidelines for Procurement (2006) to extend eligibility to all countries for the contractor and the origin and source of the batteries. [REDACTED]

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[1] GM – Gender Mainstreamed: the Project has the potential to contribute significantly to gender equality. See Appendix 4.1 for Gender Marker Analysis.

1. STRATEGIC CONTEXT AND RATIONALE

GRANT REQUEST

1.01 By letter dated September 27, 2016, GOH through MOE submitted a request to CDB to assist with the preparation of a project to address climate resilience of the communities on IAV, a 46 square kilometres (km²) islet and commune of the South Department, located approximately 10.5 km off Haiti's southern peninsula. GOH intends to seek financing for a larger follow-on intervention from a global climate fund.

MACROECONOMIC AND SOCIAL CONTEXT

Economic Context

1.02 Haiti is exposed to several natural hazards including hurricanes, storm surges, floods, landslides and earthquakes due to its topography and geographic location on the Atlantic Hurricane Belt. In addition, it is located in a seismically active zone, intersected by several major tectonic faults. The vulnerability of the country to natural hazards is exacerbated by many factors including: high levels of poverty, high population density, extreme environmental degradation, weak infrastructure, and weak governance systems. Natural hazards impose large economic and social costs, disrupting the economic growth process, decreasing living standards, and creating social upheaval. After five consecutive years of positive economic growth spanning 2005-2009, gross domestic product (GDP) contracted by 5.5 percent (%) in 2010, following the catastrophic earthquake. Economic growth in Haiti after the earthquake declined continually until a respectable growth rate of 4.2% was recorded in the 2013 fiscal year.

1.03 Slower economic growth and significant declines in international aid since 2010 (16.5% of GDP in 2011 to 5.3% of GDP in 2015) have weakened revenue mobilisation. This is further exacerbated by a continued decline in concessional financing from the PetroCaribe Development Fund due to low oil prices. Notwithstanding relative weakness on the revenue side, central government deficit inclusive of grant resources, declined to 2.4% of GDP in the 2015 fiscal year, (down from 6.4% in the previous year). In 2015, Haiti's gross debt to GDP ratio stood at 30%, compared to 26.3% in the previous year.

1.04 Most recently in October 2016, Hurricane Matthew caused significant devastation estimated at 1.9 billion United States dollars [USD1.90 bn] in damage to the country's infrastructure, affecting 1.4 mn people. Growth in 2017 is expected to accelerate to 2.8% as hurricane reconstruction provides a boost, the agriculture sector recovers, and remittance growth projected at 6% supports private consumption growth. A detailed country economic review is presented at Appendix 1.1.

Social Context

Human Development, Inequality and Multidimensional Poverty

1.05 Haiti's total population in 2015 was estimated at 10.5 mn with an average annual growth rate of 1.5%¹. Life expectancy at birth was projected at 62.8 years and the total fertility rate stands at 3.2 children per woman. Haiti's rapidly increasing unplanned urban settlements constitute approximately 57.4% of its total population. The population of Haiti can be characterised as youthful with a median age of 22.7 years. Approximately 12.4% of the total population is under the age of five and 40% below the age of 18. Significant human development investments in this youthful population cohort is likely to alter the status of inter-generational poverty experienced in Haiti.

1.06 The measures of human development in Haiti showed signs of slender improvement from a value of 0.471 (2015) to 0.483 (2016). Haiti continued to be among the lowest ranked countries in the world,

despite its upward movement to the rank of 163 from 168 in 2014, among 188 countries². The 2013 Millennium Development Goals (MDG) Report shows that 58.6% or 6.3 mn of the population live in poverty. In addition, 24.7% was living in extreme poverty, while about 1.0 mn Haitians would fall into poverty in the wake of a natural disaster or economic shock. Moreover, 5.104 mn or 48% of the total population is living in multidimensional poverty with deprivation in education, health and living conditions.³ Among the multi-dimensionally poor, approximately 20% live in severe poverty and an additional 22% was identified as being vulnerable to poverty. However, over the period 2000-2013, the country recorded some measurable progress on most of the MDG indicators and development targets. The 2013 MDG Report showed that Haiti made significant improvements in the fields of education with a net enrolment rate in primary education from 47% in 1993 to 88% in 2011, with equal participation of boys and girls.

1.07 Gender-based inequalities are a serious development constraint in Haiti and exist in the provision of health and reproductive services, employment, political representation and violence against women and girls. Traditional gender roles in livelihood strategies and community management are also significant human development challenges which constrain the economic, political, social and environmental sustainability of Haiti. The 2013 Haiti MDG Report revealed that the majority of women are employed in the informal sector or self-employed, identifying the problem of access to secure jobs for women. The macro social context is presented at Appendix 1.2.

Environmental Sustainability

1.08 The Global Climate Risk Index (2017) identifies Haiti as the third most affected country (fatalities and economic losses) from extreme weather events over the period 1996-2015. CC is expected to further exacerbate the risk of hydro-meteorological hazards by increasing the frequency and/or intensity of extreme events. CC projections for Haiti indicate that average annual temperatures could increase by 2.3 degrees Celsius (°C) by mid-century. Rainfall variability is also expected to result in more extreme droughts in the dry season and more intense rainfall in the wet season. Sea level rise (SLR) is projected to reach 0.56 metres (m) by 2090. This anticipated SLR, intensification and increasing frequency of hurricanes and extreme rainfall events, threatens the health and productivity of ecosystems and the safety and well-being of the population.

1.09 While approximately 65% of Haitian households have access to improved drinking water sources, access to sanitation services is approximately 25%. Pollution of surface and ground water resources is prevalent throughout the country and a serious concern for development and delivery of potable water. Haiti's progress on the management of environmental issues remained uneven with continuing decline in forest cover and high levels of land degradation. Despite significant land degradation issues, Haiti remains rich in biodiversity with high levels of flora and fauna endemism, many of which are considered endangered. Poverty and population growth, the introduction of alien species, habitat fragmentation and weak institutional governance are serious constraints to improving environmental sustainability.

Environmental Governance

1.10 Environmental governance challenges in Haiti are similar to those of many Borrowing Member Countries (BMCs) but are seemingly more intractable, as institutions have fewer financial and technical resources and are further affected by issues of political instability. Key environmental governance concerns include: inadequate dissemination of information; limited synergies and coordination among institutions; absence of legal enforcement; insufficient knowledge and expertise both at national and local levels; patchy or no environmental monitoring networks; and difficulty in accessing new environmentally sound technology. Primary responsibility for environmental sustainability rests with MOE which was established in 1995. Its mandate is to coordinate the development and implementation of state environmental policy with clear priorities to prevent degradation and to do so in all sectoral policies. MOE is also responsible for

supervising the multilateral environmental agreements ratified by Haiti, including the United Nations Framework Convention on Climate Change and the United Nations Convention on Biological Diversity.

1.11 The National System for Risk and Disaster Management (Système National de Gestion des Risques et Désastres [SNGRD]), is structured to manage risks and disasters at the central, departmental, communal and local levels. At the central level, the Civil Protection Directorate (Direction de Protection Civile [DPC]) in the Ministry of Interior and Territorial Collectivities (Ministère de l'Intérieur et des Collectivités Territoriales [MICT]) is the Executive Secretariat for the National Risk and Disaster Management Committee (Secretariat Permanent de Gestion des Risques et Désastres [SPGRD]) and the Permanent Secretariat for Risk and Disaster Management. SPGRD has representation from the key technical ministries and coordinates activities with the support of DRM committees at the departmental, communal and local government levels. These committees work closely with local non-governmental organisations (NGOs) and partners from the international development community. Despite Haiti's high exposure to multiple natural hazards, these institutional arrangements are not underpinned by a sufficiently robust legislative and regulatory framework, and work is needed to strengthen the capacity of the committees to plan and implement programmes to begin to effectively address disaster risk reduction (DRR) and management.

1.12 The profile of MOE and other environmental management agencies remains low and MOE is largely uninfluential in shaping sectoral policies which can negatively impact on the country's ability to attain its sustainable development objectives. Haiti continues to benefit from the support of the development community and currently there are ongoing externally financed projects in the area of environmental management. However, limited core financing, and low numbers of technical personnel in the national level institutions and at the local levels, mean that capacities developed during project implementation are generally lost on project closure. This perpetuates the cycle of weak governance and in turn presents further barriers to improved environmental management. Details of the Institutional arrangements for environmental governance are presented at Appendix 1.3.

Ile-à-Vache – Issues, Constraints and Opportunities

1.13 The “Mairie de l'IAV” (Municipality of IAV) falls under MITC. IAV lies offshore of Les Cayes, the largest town on the southern peninsula. Approximately 25% of the land area is coastal wetland, predominantly mangrove forests. The eastern side of the island contains a lagoon with the third largest mangrove forest, (2,309 hectares [ha]), in Haiti. This coastal ecosystem supports rich biodiversity, serves as a buffer against flooding and coastal erosion and is the foundation of the island's economic activity, which is largely dependent on fishing. In 2013, GOH declared the IAV National Natural park (11,235 ha), a marine protected area, to protect the mangrove forests, reefs and other coastal ecosystems. Although tourism is identified as the economic sector with great potential, fisheries remain the major economic and income generating activity.

1.14 There are five main villages: Madame Bernard, Kakok, La Hatte, Baleraze and Point de l'Est which serve as social and economic hubs for the island. The population of IAV was estimated at 15,399 persons⁴ of which 46% are women. The population is ‘predominantly rural and youthful’ with 44% below the age of 18 years. IAV has approximately 2,811 households.

1.15 An elected Mayor is the ‘head of administration’ in IAV and serves for four years. The Mayor's office maintains management responsibilities over local development activities. Madame Bernard is considered the administrative centre, with the Mayor's office, police station, a small dock and a few small businesses. Public infrastructure and services are rudimentary. The island is accessible via helicopter or boat. There are no paved roads. From Madame Bernard (west), a deeply rutted dirt track over rough terrain provides access to Point Est (Eastern Coastline), accommodating motorcycles and mules, the principal forms of land transportation.

1.16 Various rudimentary livelihoods are present in IAV. They are supported by informal arrangements and wide social networks in the provision of agricultural, fishing, small scale agro-processing and tourism products. High unemployment and underemployment are determining factors of poverty which contribute to migration of the youthful population from IAV to neighbouring Les Cayes and Port Au Prince. The most vulnerable groups are unemployed women and young persons, persons with disabilities and the elderly. Communities lack the capacity to explore alternative livelihood choices such as off-shore fishing or tourism related services. Currently, a range of NGOs provide support to the communities for basic social services. However, the scale of this support has not been sufficient to make significant impact or positively change the negative trajectory of the population's development capacity as there has been insufficient emphasis on developing options for livelihoods diversification. A socio-economic profile of the project area is presented at Appendix 1.4.

Climate Change Disaster Risk Management and Building Climate Resilience

1.17 IAV is particularly vulnerable to the impacts of tropical storms and hurricanes. The fragile land and marine resource base show signs of increasing environmental degradation as recurring floods and storms exacerbate the already dire socio-economic conditions of IAV communities. The capacity of the coastal ecosystem to maintain and provide its normal protection to coastal communities is under threat and CC related impacts are expected to further exacerbate the degradation of IAV's coastal ecosystems, freshwater resources, and to generally decrease the resilience of the island's communities to adapt. Extreme poverty, isolation and reduced capacity of the natural resource base to sustain livelihoods have contributed to a precarious existence for the island's population. This will continue to push the population into even more unsustainable environmental practices and undermine the potential for the ecosystem to regenerate itself. GOH does not have sufficient resources or capacity to support these communities or to implement the required enforcement regime necessary to effectively manage the recently designated IAV marine park as a protected area.

Freshwater Resources

1.18 IAV's fresh water supply is derived predominantly from groundwater sources available from a few shallow aquifers. A small distribution system supplies well water to distribution points, in Madame Bernard, Baleraze and three other villages. These wells are equipped with hand pumps or solar pumps. Anecdotal evidence suggests that the supplies are unreliable and brackish during the dry season. Information on the quality of this supply is limited, however available data indicates generally widespread contamination with high incidences of coliform bacteria (E. Coli). Approximately 37% of households have access to an improved water source. Published national statistics for 2012, indicate that within Haiti, the IAV commune had the lowest percentage of the Haitian population (9%) using improved sanitation facilities. Statistics available from the local medical centre on the island indicate that since 2010, up to 1,000 cases of cholera have been diagnosed and up to 40 deaths occurred, with the last being recorded in April 2015. LWC or *Comité d'Eau* closely interacts with the community, and is responsible for managing and maintaining the water infrastructure, including the application of water treatment with chlorine or water purification tablets when resources are available. The purchase of bottled water appears to be widespread. There has been no hydro-geological assessment of the freshwater resources on the island and there is no routine collection of rainfall data.

Coastal Ecosystems and Fishing Effort

1.19 Fishing constitutes the primary income-generating activity on the island. Projected changes in ocean surface temperature and salinity, can reduce fish stocks and also modify migratory patterns. Studies of the coastal ecosystems around IAV indicate that most of the coral reefs are already degraded due to unsustainable fishing practices⁵. Fishing is entirely artisanal and much of the effort appears to be for already declining reef-associated species and some semi-pelagic species. Other challenges include: (a) limited capacity for offshore fishing; (b) widespread use of unsustainable fishing methods (purse and small net gauges, compressor fishing) and low levels of awareness about sustainable fishing practices; (c) limited capacity of fishers' associations; (d) absence of post-harvest processing facilities including lack of ice; and (e) absence of fishing supply services.

Access to Energy

1.20 Limited access to energy and the high cost for self-generation of electricity limits the viability of businesses, and restricts household and educational activities. Energy consumption on the island is largely limited to wood or charcoal for cooking purposes and fuel for transportation. The island's two hotels and the Mayor's office have diesel generators that supply electricity intermittently. It is estimated that 20% to 40% of households use photovoltaic (PV) battery kits allowing some lighting and charging of small appliances. Solar lanterns and other forms of battery powered electric lighting are widespread. In 2015, 350 solar high pressure sodium street lamps were installed primarily around Madame Bernard and 8 public facilities were equipped with solar PV systems. Currently only 200 street lamps are now functioning due to an absence of spare parts and limited maintenance.

Country Sector Strategy

1.21 The proposed project is consistent with PSDH that identifies IAV for low density eco-tourism development. It is also in line with Haiti's National Adaptation Programme of Action (NAPA) that provides the framework for the country's climate adaptation agenda. Priorities identified by NAPA include management of coastal zones; development and conservation of natural resources; preservation and strengthening of food security; protection and conservation of water; construction and rehabilitation of infrastructure; and waste management and environmental education and awareness-raising. NAPA specifically references the designation of marine protected areas particularly along the South Coast of Haiti. The Project supports the overall objective of the draft National Plan for Risk and Disaster Management (Plan National de Gestion des Risques et Désastres) 2016-2030, which has as its objective the substantial reduction of losses and risks associated with disasters, including human lives, damage to livelihoods and to economic, physical, social, cultural and environmental goods. The Project is also consistent with Haiti's sustainable energy roadmap that identifies renewable energy (RE) mini-grid systems as effective and economically viable options for rural electrification.

Linkage of the Project to CDB's Country and Sector Strategy and Poverty Goals

1.22 A Country Strategy for Haiti is currently being drafted and will reflect the priorities agreed for Haiti based on the negotiations outcome of the ninth Special Development Fund (SDF 9) negotiations. The Project is consistent with the expressed priority to strengthen support for environmental sustainability initiatives.

1.23 The proposed Project is consistent with CDB's:

- (a) Strategic Objective of Supporting Inclusive and Sustainable Growth and Development.

- (b) Corporate Priority of Promoting Environmental Sustainability (CC resilience Environmental Management and DRM).
- (c) Climate Resilience Strategy to strengthen adaptive capacities at the national and community levels to CC risks.
- (d) Energy Sector Policy and Strategy to promote RE for more sustainable, affordable and accessible energy.
- (e) TA Policy and Operational Strategy of commitment to strengthening the synergies between TA operations and investments.
- (f) Gender Equality Policy and Operational Strategy to strengthen governance processes to address gender inequalities and disparities.
- (g) ACP-EU-CDB Natural Disaster Risk Management (NDRM) in CARIFORUM Countries Programme to strengthen EWS, national risk profiling and community based DRR and CCA.

RATIONALE FOR PROJECT

1.24 IAV is already experiencing the effects of climate variability and change (CVC) through: increased frequency of storms, severe weather systems and other extreme events, SLR as well as more subtle changes in temperatures and rainfall patterns. Information on CVC and the effects on communities, and ecosystems is insufficient to inform decision-making. Inadequate equipment for data collection, limited resources for acquiring and maintaining equipment, limited technical staff capacity, and financial resources, hinder the ability of responsible agencies to design effective interventions that will improve the adaptive capacity of communities. Development plans that propose expansion of the tourism industry for IAV, could exacerbate the mounting environmental and social pressures on the island and hamper the ability of its communities to improve their quality of life, unless climate and natural hazard risks are integrated into these development decisions.

1.25 Reducing disaster and climate risks and enhancing resilience of the local population are crucial to ensuring that social, economic and environmental development gains are able to take root. The proposed project integrates multi-sectoral interventions on IAV that will directly benefit its communities by: (a) building adaptive capacities of communities for DRM and climate resilience by supporting opportunities for enhanced livelihood streams; (b) financing investments to improve access to electricity and potable water to establish proof of concept of successful demonstrations; and (c) catalysing innovative solutions for natural resources conservation and protection, through training, technical support, environmental data collection and monitoring and developing management plans. These integrated activities are underpinned by consultative and participatory implementation processes, to promote community ownership and engender a positive environment for longer term partnerships between the local communities, the municipality and national environmental institutions.

2. PROJECT DESCRIPTION

PROJECT OUTCOMES

2.01 The expected project outcomes are:

- (a) Increased capacity of the central government, local authorities and communities to plan for climate resilience and DRM for IAV.
- (b) Enhanced capacity to implement viable and sustainable fisheries and other livelihoods opportunities.
- (c) Improved access to potable water and information for effective water resources management.
- (d) Increased access to efficient, affordable electricity for households, businesses and public administrative services.

PROJECT COMPONENTS

2.02 A detailed description of each project component is presented at Appendix 2.1. Those components are:

- (a) Component 1 – Improving Planning for Climate Resilience and Disaster Risk Management
 - (i) Consulting services to develop and implement a DRM-CCA plan, CRSP, EWS and PEAP (See Appendix 2.2).
 - (ii) Equipment: hydro-meteorological and seismic monitoring equipment.
- (b) Component 2 – Supporting Sustainable Management of Coastal Ecosystems and Sustainable Livelihoods Options
 - (i) Consulting services to develop and implement a sustainable fisheries and coastal ecosystem management pilot programme (See Appendix 2.3).
 - (ii) Consulting services to conduct an assessment for identification and planning of viable and sustainable ventures for livelihoods options and employment opportunities (See Appendix 2.4).
 - (iii) Equipment: FADS; patrol boat; ice plant and fisheries supply and education building.
- (c) Component 3 – Improving Water Resources Management and Access to Potable Water Supply
 - (i) Consulting services to design and establish a hydrometric network and training of technicians from DINEPA and the IAV LWC and design support for a RO water purification system (See Appendix 2.5).
 - (ii) Equipment: water resources monitoring and water purification equipment.

(d) Component 4 – Improving Access to Sustainable Energy

- (i) Consulting Services for design and construction supervision support for a Pilot Mini-Grid System in Madame Bernard (See Appendix 2.6).
- (ii) Consulting Services for maintenance training of solar PV and lighting systems (See Appendix 2.7).
- (iii) Equipment: lighting fixtures, mini grid, solar PV for water purification equipment.

(e) Component 5 – Project Management, Monitoring and Evaluation

- (i) the services of a Project Coordinator (PC), Project Advisor (PA) and Local Project Coordinator (LPC). Project Steering Committee (PSC), Technical Advisory Committee and Local Project Coordinating Committee (LPCC); M&E and the technical and administrative facilities required to manage project implementation.
- (ii) Equipment: an all-terrain vehicle.

2.03 Land of approximately 1,500 m², owned by GOH, will be made available for the purposes of the Project.

2.04 The Project's Design and Monitoring Framework (DMF) is presented at Table 2.1. Further details on the monitoring indicators in the DMF are presented at Appendix 2.8.

LESSONS LEARNT AND INCORPORATED INTO DESIGN

2.05 The Project builds on lessons learnt in the design and implementation of community level projects in Haiti, other CDB BMCs, and the wider global community to improve natural resources management and increase resilience. The specific lessons learnt and incorporated in the design are:

Lesson Learnt	Application in Project Design
Projects adopting an integrated approach that result in an increase in individual/household income or food supply are critical in efforts to reduce poverty in Haiti.	Project utilises a multisector approach that concurrently tackles issues such as governance, economic and social development, disaster and climate risk reduction, fisheries productivity and food security, energy, water access and management. Provision is also made for a diagnostic of sustainable livelihoods options to inform improved and diversified sustainable livelihood strategies for all interested individuals and groups.
Participatory and gender mainstreaming approaches involving communities, central government and local agencies and project beneficiaries at all stages of the project cycle are essential for strengthening buy-in and enhancing the sustainability of interventions.	During project design, consultations with stakeholders included beneficiary gender analysis, identifying needs and challenges, recommending solutions and prioritising proposed project interventions. The Project implementation structure provides for continued community involvement in decision-making, gender responsive indicators and

Lesson Learnt	Application in Project Design
<p>Donor coordination and improving information-sharing mechanisms are crucial for ensuring efficient use of funds and for preventing duplication and overlap of efforts.</p> <p>National institutions should be utilised as far as possible rather than international NGOs.</p> <p>The financing of operation and maintenance of community/public services and infrastructure such as electricity from solar lights, and supply of potable water through the collection of fees is important to ensure that these systems are financially sustainable.</p>	<p>targets, fostering engagement between beneficiaries and public officials. Technical support will be provided to the community to enable adoption of good practices concerning management of fisheries, water resources, DRR and energy.</p> <p>The Project design was influenced by dialogue with development partners working in Haiti's South Department, having regard to their ongoing activities. The Project will share outputs including lessons learned, to provide opportunities for development partners and others to address resource gaps towards the sustainability of project benefits post project completion.</p> <p>GOH public sector institutions will be responsible for the implementation of project activities.</p> <p>Project design promotes mechanisms to allow gradual cost recovery and movement towards financial sustainability of the services supplied through application of user fees.</p>

TABLE 2.1: DESIGN AND MONITORING FRAMEWORK

Narrative Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions
<u>Project Impact:</u> Reduced vulnerability of IAV residents to climate and disaster risks.			
<u>Project Outcomes:</u>			
1. Increased capacity of central government, local authorities and communities to engage in planning for climate resilience and DRM for IAV.	<u>By June 30, 2021</u> <ul style="list-style-type: none"> (a) Number of national agencies with annual work plans and budgets (AWPBs) that integrate DRM-CCA Plan and Spatial Plan recommendations. (b) Local disaster risk management committee (LDRMC) effectively performs its devolved DRM functions. (c) 95% of households better prepared through DRM PEAP. 	National agencies AWPBs. SPGRD reports. Reports from the IAV Office of the Mayor. Final project evaluation report.	Government is committed to integrating DRM in local development planning. Strong cooperation and coordination continues among partner agencies and CC information is made available to multiple users. Decentralised planning processes are functional.
2. Enhanced capacity to implement ecosystem-based viable and sustainable fisheries and other livelihoods opportunities.	<u>By June 30, 2021</u> <ul style="list-style-type: none"> (a) 50% of the total fish catch (by weight) are from offshore FADs. (b) Biomass of fish within replenishment zones (g/60 m²). (c) 80 % of fishers accessing goods and services from the Federation of Fisher-folk Association (FAPDI). (d) 95% of fishers adhering to recommended safety practices. (e) Replenishment zones are effectively managed and individual parties comply with the Memorandum of Understanding (MOU). (f) 40% of trained beneficiaries (men and women) apply business and occupational skills towards sustainable livelihoods ventures. 	FAPDI Spot measurements of catches. Surveys undertaken by trained community-based assessors. FADPI records. Post Knowledge Attitude and Practice (KAP) questionnaire survey. Sub-project business plans prepared through TA. Management effectiveness score based on criteria and process in MOU. Final project evaluation report.	Strong cooperation and coordination continues between partner agencies and CC information is made available to multiple users.
3. Improved access to potable water and information for effective water resources management.	<u>By June 30, 2021</u> <ul style="list-style-type: none"> (a) 60% of households using the potable water sources provided under the Project (b) LWC perform its devolved management and technical Operation and Maintenance (O&M) functions. 	Progress reports from DINEPA. Beneficiary/household surveys. Final project evaluation report.	Potable water continues to be affordable to the majority of IAV residents.
4. Increased access to efficient, affordable electricity for households, businesses and public administrative services.	<u>By June 30, 2021</u> <ul style="list-style-type: none"> (a) 50 customers in Madame Bernard purchasing electricity supplied by the mini-grid. (b) Streetlight outages addressed within five days. 	Accounting data of mini-grid operator company. Complaints record at Mayor's office. Final project evaluation report.	Demand for electricity remains high.

TABLE 2.1: DESIGN AND MONITORING FRAMEWORK

Narrative Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions
	(c) 50% of persons (men and women) trained in operations and maintenance of solar powered infrastructure are applying skills.		Electricity tariffs continues to be affordable for customers.
<p><u>Project Outputs:</u></p> <p>Component 1 - Improving DRM.</p> <p>Communities informed of the need to strengthen preparedness and make assets less vulnerable to natural hazards. Institutional and technical capacity of LDRMC.</p> <p>Hydro-meteorological and seismic monitoring equipment installed.</p>	<p><u>By June 30, 2019</u></p> <p>(a) EWS developed by September 30, 2018.</p> <p>(b) DRM-CCA plan completed by May 31, 2018.</p> <p>(c) CRSP completed by December 31, 2019.</p> <p>(d) Community DRM education and awareness programme developed and implemented by June 31, 2020.</p> <p>(e) LDRMC trained in DRM activities aligned with its devolved DRM functions by September 31, 2019.</p> <p>(f) Monitoring data reports prepared by November 31, 2018.</p>	<p>Consultant's reports.</p> <p>Baseline and KAP surveys.</p> <p>Project progress report/training report.</p> <p>Reports from training sessions.</p>	<p>DRM agencies and sector agencies endorse the recommendations of DRM-CCA and CRSP and are willing to cooperate and coordinate.</p> <p>CDRMC members are committed to participate in community-based DRR and</p> <p>CCA actions.</p> <p>Monitoring data/information is made available to multiple users.</p>
<p>Component 2 - Sustainable fisheries and Coastal Ecosystems based management</p> <p>Fisheries infrastructure works installed</p> <p>Awareness raising and local capacity building programme delivered.</p> <p>Viable sustainable livelihoods promoted.</p>	<p>(a) Ice facility constructed and operational by October 31, 2019.</p> <p>(b) Fisheries office and education facility constructed by October 31, 2018.</p> <p>(c) Four FADs built and deployed by May 30, 2018.</p> <p>(d) 60 fishers complete safety at sea training by May 30, 2018.</p> <p>(e) Sustainable fisheries management and zonation plan developed and implemented by December 31, 2018.</p> <p>(f) MOU for co-management of the replenishment zones in place by June 30, 2020.</p> <p>(g) Education and awareness programme designed and implemented by October 31, 2020.</p> <p>(h) Sustainable livelihoods assessment report by August 31, 2018.</p> <p>(i) 80% of beneficiaries complete business and occupational skills training by June 30, 2019.</p>	<p>Consultants Reports.</p> <p>Project progress report.</p> <p>Baseline and KAP surveys.</p>	<p>Fisher-folk are committed to participate and collaborate with public sector agencies.</p>


TABLE 2.1: DESIGN AND MONITORING FRAMEWORK

Narrative Summary	Performance Targets/Indicators			Data Sources/Reporting Mechanisms		Assumptions
Component 4 – Improving Water Resources Management and access to Potable water supply. Water supply infrastructure installed. Water quality and water resources availability monitored. O&M knowledge transferred through training. Awareness raising and local capacity building programme delivered.	(a)	Two community potable water supply systems installed by July 31, 2019.		Project progress reports.		Technicians demonstrate strong interest in the O&M training programme. Trainees remain on IAV.
	(b)	Water resources assessment reports by June 30, 2020.		Training attendance records.		
	(c)	LWC trained in O&M aligned with its management and technical functions by October 2018.		Consultant’s report		
	(d)	Education and awareness programme designed and implemented by October 31, 2020.		Annual asset maintenance plan.		
				Baseline and KAP surveys.		
				Consultants Reports.		
Component 5 – Improving access to sustainable energy Energy infrastructure installed and rehabilitated. O&M knowledge transferred through training. Awareness raising and local capacity building programme delivered.	(a)	16kW Solar PV for Baleraze water purification system installed by June 30, 2018		Project progress reports.		
	(b)	Ice plant installed by October 31, 2018		Training attendance records.		
	(c)	140kW mini grid installed and operational by March 30, 2019.		Annual asset maintenance plan.		
	(d)	Five public buildings connected to mini-grid by May 31, 2019		Baseline and KAP surveys.		
	(e)	20 persons trained in maintenance of solar powered infrastructure (of which 40% are women) by April 2018		Consultants’ reports.		
	(f)	Maintenance manual for solar PV systems by February 2018				
	(g)	Education and awareness programme designed and implemented by March 2018				
Activities/Inputs	CDB	ACP-EU		GOH	Total	
1. DRM 2. Ecosystems-based fisheries management and sustainable livelihoods 3. Improved Water Resources Management 4. Increased Access to Sustainable Energy 5. GOH contribution (land, counterpart personnel., office admin costs) 6. Project Management, M&E 7. Physical Contingencies	USD	USD	EURO	USD	USD	
	3,348,500	814,400	783,655	-	4,162,900	
	-	-	-	687,600	687,600	
	488,000	-	-	-	488,000	
	767,600	81,500	78,365	137,400	986,500	
	4,604,100	895,900	862,020	825,000	6,325,000	

3. FINANCING STRUCTURE AND COSTS

3.01 The Project is estimated to cost USD5.72 mn, of which USD4.6 mn will be financed by resources from CDB, Euro 0.86 mn from ACP-EU and a 0.83 mn counterpart contribution by GOH. ACP-EU will finance Component 1 - Improving Planning for Climate Resilience and DRM. The beneficiary's contribution will be in-kind. A summary of the Project's cost and financing plan is presented at Table 3.1. Further details are given in the Project Cost, Phasing and Financing Plan, which is presented at Appendix 6.11.

TABLE 3.1: SUMMARY OF PROJECT COST AND FINANCING

ITEM	CDB SFR	ACP/EU		GOH	TOTAL
	USD	USD	EURO	USD	USD
Disaster Risk Management for Improved Resilience Planning Coastal Ecosystems-based Fisheries Management to promote sustainable diversified livelihoods Improving Water Resources Management and Potable Water Improving Access to Sustainable Energy	3,348,500	814,400	783,655		4,162,900
Project Management, Monitoring and Evaluation	488,000	-	-	-	488,000
GOH Contribution (Land, counterpart personnel, office admin costs)	-	-	-	687,600	687,600
Base Cost	3,836,500	814,400	783,655	687,600	5,338,500
Physical Contingencies 	767,600	81,500	78,365	137,400	986,500
Total	4,604,100	895,900	862,020	825,000	6,325,000

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

4. PROJECT VIABILITY

TECHNICAL ANALYSIS

Sustainable Energy

Pilot Mini-Grid System in Madame Bernard

4.01 Stand-alone PV systems for the project infrastructure (water purification equipment and ice plant) in Madame Bernard were considered but not further explored as unused excess energy would be generated. For household electrification, small solar PV systems are a good option but high upfront investment remains a significant barrier, especially for low income households. A mini-grid system is therefore a more cost effective way to power the project infrastructure and offer access to energy for households and businesses. Alternative options considered were wind power and diesel generators. However, the wind option was not further explored due to the lack of available wind data and more complex design and construction requirements, while diesel generators have high costs for fuel.

4.02 In addition to the water purification equipment and ice making equipment, an initial examination identified 185 homes, 35 small businesses, 18 medium to large facilities as potential energy users. The peak demand of the end users is estimated with 37.5 kilowatts (kW) with an annual energy consumption of 104,800 kilowatt hours (kWh). Based on this initial estimate a preliminary assessment showed that a hybrid system, providing 24/7 electricity with a 140kW solar PV system, a 1,200kWh battery system and a 40kW diesel generator is considered more feasible than a battery only PV system. It is expected that the diesel generator will provide only a small share of the electricity but will improve backup capabilities and ensures reliable supplies during evenings and at nights.

4.03 Operational costs of the proposed system will be recovered through a prepaid metering system. Tariffs could range between 10HGT/kWh and 20HGT/kWh, equivalent to 0.15USD/kWh and 0.3 USD/kWh respectively, based on comparable data. In the absence of reliable baseline data, the mini-grid system will be developed as a design, build and operate (DBO) contract. A detailed demand and design study is required to develop a request for proposal (RFP) specifying obligations of the contractor, including the establishment of a local mini-grid operator and associated business plan. A Consultant will be engaged to undertake the demand study and prepare the RFP. Terms of Reference (TOR) for the consultancy is provided at Appendix 2.6.

Water Resources Assessment and Access to Potable Water Supply

4.04 The Project proposes to install water purification equipment, at community water supply points in Madame Bernard and Baleraze, to enable access to potable water. The RO systems proposed will be powered by solar energy. Water will be distributed in five gallon containers and sold by LWC at a rate which will recover operational expenses. Similar systems have proven to be effective and are common in Haiti. CDB has previously funded these water purification RO systems in Port-au-Prince and other areas under its Community Driven Development (CDD) Project. The typical cost of a five gallon bottle is about USD1.00.

4.05 The water purification system for Madame Bernard will be connected to the pilot mini-grid system and will pay an agreed tariff for the electricity it consumes. Connecting the water purification system for Baleraze village to the mini-grid would require a larger distribution network, making this solution less viable than a stand-alone solar PV battery system. Therefore, a 16kW ground mounted solar PV system, including 215kWh battery storage will be installed. The sizes of the PV and battery systems are optimised to provide electricity supply for two days. Expenses for operations and maintenance of the PV system will be recovered through sales of purified water. Alternative options considered were wind power and diesel

generators. However, wind power is more complex in design and construction while diesel has higher operational costs, especially for fuel.

4.06 The establishment of a hydrometric network for monitoring the water resources (rainfall and water availability) will require installation of rain gauges, flow meters, and water quality sampling apparatus. Observation and test production wells will have to be drilled/equipped to enable groundwater level and yield measurements. Specifications for monitoring equipment are those already in use by DINEPA.

Solar Street Lighting

4.07 In the absence of an electricity grid, solar street lights are the most suitable option for lighting public spaces. Extended outages of lamps increases the risk of vandalism and theft of the street lighting infrastructure. To ensure adequate lighting in public areas and improved longevity of the lights, the Project will provide suitable spare parts and training to local technicians and potential service providers in the maintenance and repair of street lights and other PV systems. The selection of spares will consider local environmental conditions and quality requirements to improve durability of the street lighting infrastructure. A PEAP will be implemented to underscore public responsibility for the protection of street lighting infrastructure. Given the already expanding use of solar PV technology on IAV, the capacity building training activities in the repair and maintenance of solar PV equipment could provide an alternate source of income.

Fish Harvesting Technology

4.08 The use of FADs is considered appropriate technology for the peculiar physical location of IAV. It is one of a very small number of locations in Haiti where the seabed falls rapidly to over 2,000m within 5km of the coastline, allowing FADs to be deployed in areas accessible to traditional Haitian sailing boats. This reduces the risks and higher costs associated with offshore fishing and will permit a greater number of fishers from IAV to benefit from FADs.

Environmental Monitoring and Early Warning Systems

4.09 The specifications for monitoring equipment to be installed for weather, climate and seismic data collection are compatible with systems already in use by the National Meteorological Centre (CNM) and the National Observatory of the Environment and Vulnerability (Observatoire National de l'Environnement et de la Vulnérabilité [ONEV]). The data will be fed into the national Geographic Information System (GIS) being used at the central government levels.

SOCIAL, GENDER AND ENVIRONMENTAL ASSESSMENT

Environmental and Social Assessment

4.10 The Project is categorised as “B” based on CDB’s Environment and Social Review Procedures. Potential adverse environmental and social impacts are readily identifiable, short term, and can be mitigated by employing appropriate known “best practices”. The impacts are largely associated with the construction phase of the ice plant, fisheries supply and education centre, water purification systems and the stand-alone PV system and the mini-grid. These include soil erosion and dust nuisance for site preparation/vegetation removal, noise nuisance, management and disposal of construction material and waste, occupational health and safety risks to construction workers and community health and safety hazards. Mitigation measures to address these potential negative environmental and social impacts will be included in the technical specifications of the contract documents for the construction of these works.

4.11 There will be some negative environmental impacts associated with the mini-grid system during the operational stage. These relate to the management of waste generated from repairs and replacement of PV cells and increased volume of water needed for cleaning the solar panels to remove dust and saline residue. These impacts are easily managed through appropriate drainage design and implementation of satisfactory arrangements for waste disposal.

4.12 In order to receive and facilitate the resolution of project related concerns, complaints and grievances by affected persons, including its environmental and social performance, a Grievance Redress Mechanism (GRM) will be drafted by the PC for approval of the LPC. The GRM will address the affected persons' concerns and complaints proactively and promptly, using a transparent process that is gender responsive, culturally appropriate, and easily accessible to affected persons at no costs and without retribution. CDB operates a Projects Complaint Mechanism which provides an additional, accessible way for individuals and communities to complain directly to CDB if they believe that a CDB-financed project had or is likely to have adverse environment and social effects on them or their community.

Economic, Social and Gender Impacts

4.13 The incorporation of natural resources management, natural hazard and climate resilience within a broader community based development initiative, underpinned by gender focussed, participatory engagement and management processes has been used successfully by other development institutions, to identify innovative approaches to address complex issues which often cross administrative boundaries and sectors. These processes help to establish and strengthen partnerships, implementation mechanisms and improve accountability and community social cohesion.

4.14 The use of this approach under the Project lays the basis for producing long-term economic, environmental, and social benefits by investing in measures that are designed to protect and improve the ecological health of the coastal ecosystems that provide the foundation for community livelihoods and a measure of food security on IAV. This will also include co-benefits of ecosystem services and protection from natural hazards, SLR and predicted CC impacts. The proposed replenishment areas will include fish spawning and resilient coral reef sites to help ensure the reef's capacity to recover from extreme climate events by providing a sufficiently large and resilient seed stock of critical biodiversity to sustain long-term productivity. The inclusion of resources to promote alternative livelihood options, using targeted skills training, off-shore fishing, improved access to potable water and sustainable energy will help to reduce fishing pressure on the reef as well as inject resources and technical support to complement the on-going efforts of NGOs and community-based organisations (CBOs), to strengthen the enabling environment for more diversified livelihood options.

4.15 The co-management of the marine protected area with FADPI, IAV Women's Organisation, and central and local authorities is intended to contribute to community-driven development, greater social cohesion and regulation of attendant social risks related to restrictions of the protected fishing area. The access to sustainable energy increases the potential for expansion of economic and social activities. In addition, improvements in street lighting will provide a safer environment and reduce the safety risks to women and children who rise early and travel long distances to fetch water for domestic use. Building local residents' knowledge and capabilities including women and young persons in RE and solar PV equipment repair will contribute to community ownership and provide alternative income-generating opportunities. Upgrade of water systems at Madame Bernard and Baleraze and improvements in water quality will likely result in a reduction in the number of reported cases of water-borne diseases that disproportionately impact children's school attendance and diminish learning outcomes. Gender-responsive capacity building workshops, public education, information and communication programmes on water, health, sanitation and environmental issues are expected to generally improve health outcomes.

4.16 The Project is rated as gender mainstreamed, with a score of 3.00 on the Gender Marker at Appendix 4.1 and a Gender Action Plan at Appendix 4.2).

5. RISK ASSESSMENT AND MITIGATION

RISK ASSESSMENT

5.01 The Project is subject to a number of risks which can be summarised under the headings of Implementation. The Project design includes various measures, as detailed in Table 5.1, to mitigate those risks.

TABLE 5.1: SUMMARY OF RISKS AND MITIGATION MEASURES

Risk Type	Description of Risk	Mitigation Measures
Implementation	Limited capacity of MOE to implement a multi-component project in a timely manner.	A PA financed by the Project will support MOE staff throughout implementation. Capacity of MOE staff will be enhanced through mentoring and participation in CDB's online procurement and project management courses. The MOE/PC will be supported by a Technical Advisory Group (TAG), as well as a PSC which will provide overall policy guidance.
	Some stakeholders (local communities, and/or NGOs) may not support the proposed activities (e.g., the proposed restrictions concerning replenishment zones).	The Project includes continuation of participatory and inclusive processes from the design stage into the implementation phase to ensure continued commitment, "buy in" and uptake of the implementation strategies. It also includes activities aimed at strengthening community level governance structures. The Project Operations Manual (POM) will mandate support for only activities that comply with sound environmental and social safeguard policies.
	Inadequate O&M could negatively impact the sustainability of investments.	A service provider with the requisite capacity will be engaged for O&M of the mini-grid system. Cost recovery mechanisms such as sale of ice to fishers and other residents; payment for potable water and electricity will be instituted. Municipal budget will include vehicle maintenance costs.
	Haiti's vulnerability to natural hazards, capacity and resource limitations could constrain sustainability of the Project achievements.	The Project is mitigating this risk through strengthening technical capacity at the community levels and promoting diversification of sustainable livelihoods options. In addition, the Project includes a participatory and consultative process with different stakeholders (including communities and NGOs) to ensure close coordination. Moreover, CDB will continue to assess the resource constraints and mitigate it with efforts to support GOH's sourcing of additional resources for continuation of activities.

6. IMPLEMENTATION AND PROJECT MANAGEMENT

THE GRANTEE

6.01 The Grantee is GOH. GOH has the legal capacity to accept the Grant and carry out the Project on the terms and conditions referred to and set out in Chapter 7.

IMPLEMENTATION ARRANGEMENTS

6.02 The structure for project implementation arrangements reflects the diverse skill sets, collaboration and information sharing required to effectively deliver project outputs in a participatory manner within a short timeframe while ensuring transparency, good governance and application of the policies and procedures of CDB.

6.03 MOE through its Directorate of CC (DCC), will have overall responsibility for project implementation. MOE will be responsible for project coordination and management in conformity with the standards and requirements agreed upon with CDB. Key activities will include, but not be limited to: preparation of the POM, annual work and budget planning; Stakeholder Engagement Plan and semi-annual meetings with the wider IAV community, to update and obtain feedback on the status of project implementation; and the achievement of outcomes and M&E indicators. CDB will provide institutional support during project implementation.

6.04 It will be a condition precedent to first disbursement of the Grant that MOE assigns from its staff, a person whose qualifications and experience are acceptable to CDB, as a dedicated PC. The PC shall be responsible for the day-to-day management of the Project and shall report to DCC of MOE. The duties and responsibilities of PC are set out in Appendix 6.1. MOE does not have experience implementing CDB financed projects. The services of a PA has been included. The PA will provide general technical support to the PC and other partner public sector agencies for the delivery of critical project implementation activities such as: development of the POM, work programme schedule and budgeting, procurement, project monitoring and reporting and generally facilitating collaboration and engagement of key project stakeholders within and outside of the Haitian public administration system. It shall be a condition precedent to first disbursement of the Grant that a PA be engaged. The TOR for PA are attached at Appendix 6.2.

6.05 To provide effective inter-agency coordination, promote participation of, communication and information sharing among project stakeholders throughout implementation, it will be a condition precedent to first disbursement of the Grant that GOH establishes a PSC. The membership of PSC shall comprise officials of MOE and representatives of GOH agencies that interface with MOE, with regard to the various project components, as well as representation from the IAV municipal administration office. PSC will be required to meet not less than once every quarter and extraordinary meetings shall be called by the Chair, if needed. It shall be chaired by DCC, MOE or his/her assignee. The Minutes of these Meetings will be shared with CDB. The duties and composition of PSC are attached at Appendix 6.3.

6.06 A TAG shall comprise senior technical officers from MOE and other agencies identified by MOE. The establishment of TAG shall be a condition precedent to first disbursement.

6.07 The responsibilities of TAG will include, but not be limited to, the following:

- (a) defining the scope and timing of activities required to ensure that project activities are executed in a timely and efficient manner;
- (b) reviewing and approving AWPB and semi-annual and annual project reports;

- (c) reviewing and supporting PC on the development of AWPBs;
- (d) supporting PC in finalising of TORs for consultants, contractors and suppliers; and
- (e) reviewing consultants' reports and sourcing of the relevant technical data for consultants.

6.08 The PC and PA will be based in Port-au-Prince (PAP) and travel frequently to IAV on project business. Project implementation requires simultaneous activities, and the effective engagement, consultation and participation of IAV stakeholders. Project implementation arrangements on IAV therefore provide for a LPC resident on IAV who will serve as the liaison officer for the Project, providing logistical support specifically for Component 2, as well as to consultants, contractors, working to implement specific project activities. As a condition precedent to first disbursement of the Grant, GOH is required to engage LPC by July 31, 2017. The duties and responsibilities of the LPC are provided at Appendix 6.4.

6.09 Given the unique situation in Haiti, the need to retain staff and to build capacity in Haiti's civil service where remuneration is exceptionally low, other multilateral development banks provide allowances including travel, to civil servants managing externally financed projects, to acknowledge the increased responsibility and work load. GOH has identified a staff member who has supported the preparation of the Project as PC. While CDB does not typically provide financing for recurrent expenditure outside of its Framework for Policy-based Operations, it is proposed in the circumstances outlined that a responsibility allowance be paid by the Project to the assigned PC, for the duration of the project implementation period, in-keeping with similar practice which obtains on other externally finance projects under implementation by the same Ministry. The value of the responsibility allowance over the implementation period of 46 months is estimated at USD60,000. Remuneration for the responsibility allowance of the PC, professional fees of the PA and LPC will be financed by the Project.

6.10 To facilitate community engagement and convey beneficiary feedback, a LPCC will be established and chaired by the Mayor, IAV municipality - Mayor's Office. As a condition precedent to first disbursement of the Grant, GOH is required to submit evidence satisfactory to CDB, of the establishment of the LPCC and its composition, which should include, but not be limited to representation from the LWC, LDRMC and FAPDI. LPC will serve as secretary of the LPCC.

6.11 The proposed Project Management Organisational Structure is presented in Figure 1.

PARTICIPATION OF BENEFICIARIES, STAKEHOLDERS

6.12 The preparation and appraisal of the Project involved consultation with a wide range of stakeholders, including residents and various NGOs and CBOs on IAV. Meetings were also held with senior government representatives - Ministries including, *inter alia*, MOE, the Ministry of Agriculture and Natural Resources (MARNDP) and the Ministry of Economy and Finance (MEF); primary stakeholders including representatives of development partners working in the South Department. The discussions provided the opportunity for stakeholders to share their experiences and knowledge as they relate to practices and challenges with the fisheries sector, water resources availability and quality, energy use and availability, weather-related changes and the impact on their livelihoods, organisational capacity of various groups, particularly women's organisations, fishers associations, microcredit agencies, the roles and challenges faced by women, men and youth, and perceptions of the intended project.

6.13 This principle of stakeholder participation will be maintained during the life of the Project. A formal mechanism for stakeholder engagement will be embedded in a stakeholder engagement plan to be prepared by PC for approval by PSC. In addition, PC and PA will convene semi-annual meetings with the wider community, to update and obtain feedback from stakeholders on the status of project implementation. In-keeping with CDB and GOH's commitment to transparency, key project-related data including details

of the Project's scope, approved budget, results and implementation status will be available to the public in a culturally appropriate manner.

6.14 A MOU will be established between key fisheries stakeholders and government entities responsible for marine protected areas, to formalise co-management arrangements for the governance of the IAV marine park. Given the participatory and consultative approaches required, the MOU will need to take effect after the mid-term evaluation, to take into consideration its recommendations. As a condition of the Grant, the MOU will be signed by June 30, 2019 or a later date as agreed between CDB and GOH.

ARRANGEMENTS FOR MONITORING AND EVALUATION OF RESULTS

6.15 The Project, will engage a M&E specialist, to provide M&E support to MOE and other ministries/agencies with responsibility for operations and related service delivery post project implementation - e.g. DINEPA, Fisheries Directorate, the Agency for Management of Protected Areas (ANAP), MITC, and MPCE. The M&E Specialist will, *inter alia*: (a) update and refine the Project Results Framework including integration of gender sensitive targets ; (b) monitor project implementation progress; and (c) monitor capacity-building project components – in particular participation of stakeholders and their assessment of the relevance/efficacy of project outcomes. Where relevant, M&E indicators will be disaggregated by sex, age group, disability, and poverty status. M&E will carry out baseline studies to capture socioeconomic data, household characteristics, and living conditions. The Draft TOR for the M&E Consultant are attached at Appendix 6.5.

6.16 The Project will undergo an independent mid-term evaluation (MTE) at the mid-point of project implementation. The MTE will determine progress being made toward the achievement of outcomes and will identify course correction if needed. The M&E Consultant will assist with development of the TOR for MTE and Final evaluation.

6.17 An independent final evaluation will take place three months prior to the preparation of the Project Completion Report. The final evaluation will assess the extent to which project outcomes have been achieved, or are likely to be achieved, and evaluate the Project along relevant criteria (e.g. relevance, efficiency, effectiveness, sustainability), which will be selected after the MTE. The final evaluation will identify lessons learned, and provide recommendations for the implementation of similar projects in the future.

IMPLEMENTATION SCHEDULE

6.18 The Project will be implemented over a period of 48 months. A provisional Implementation Schedule is presented at Appendix 6.6. CDB, in collaboration with GOH, will organise a project launch workshop (PLW) after signing of the Grant Agreement and assignment of PC and LPC, establishment of the PSC, TAG and LPCC. The PLW will focus on project implementation arrangements, including the application of CDB's policies and procedures. CDB staff, assisted by contracted service providers (PA and other consultants), will provide implementation support to GOH over the life of the Project. Details of CDB support are provided in the Implementation Support Plan (ISP) at Appendix 6.7. The ISP will be reviewed annually to ensure that it continues to be relevant to the needs of the Project. GOH shall be required to report on the status of project implementation in-keeping with the Reporting Requirements at Appendix 6.8.

PROCUREMENT

6.19 Consultancy services shall be procured in accordance with CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011) and goods, works and non-consultancy services will be procured in accordance with CDB's Guidelines for Procurement (January

2006). A Procurement Plan is presented at Appendix 6.9 and any revisions to the plan shall require CDBs prior approval in writing.

6.20 Financing for Planning for Resilience and Improved DRM shall be provided under the ACP-EU-CDB NDRM in CARIFORUM Countries Agreement and thus, in accordance with that Agreement eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries, in accordance with the EU Eligibility Rules set out in Appendix 6.10.

6.21 Given the need for dedicated transportation on IAV, to ensure effective project management and supervision during implementation, a suitable project vehicle shall be procured. The road conditions necessitate the use of a 4x4 vehicle and given the lack of availability and high cost of fuel on the island, the option of procuring a suitable electric or hybrid vehicle, which will also reduce the “carbon footprint” of the vehicle, shall be explored. Given the limited availability of such vehicles in Member Countries a waiver of CDB's Guidelines for Procurement (2006) is requested to permit the procurement of a vehicle, with no restriction as to country eligibility with respect to the source and origin of the vehicle. [REDACTED]

6.22 To ensure sufficient interest from suitably qualified and experienced contractors for the provision and operation of the mini grid system and the supply of appropriate batteries for the system, a waiver of CDB's Guidelines for Procurement (2006) is sought to extend country eligibility for the mini grid contractor and for the origin and source of the required batteries to all countries. The remainder of the equipment shall have its source and origin in CDB Member Countries. . [REDACTED]

DISBURSEMENTS

6.23 Disbursement of the Grant will be made in accordance with CDB's procedures for the withdrawal of funds. It is expected that the first disbursement from the Grant will be made by September 30, 2017 and that the Grant shall be fully disbursed by June 30, 2021. The Project Cost, Phasing and Financing Plan is presented at Appendix 6.11.

6.24 MOE will develop AWPBs for implementation of activities. Amounts for the purchase of goods and equipment will be disbursed by CDB to the successful supplier/consultant once CDB has received the appropriate request from MOE. GOH will establish a foreign currency Special Account (SA) in a commercial bank acceptable to CDB, to be used exclusively for CDB's share of eligible expenses on terms and conditions acceptable to CDB. This disbursement mechanism will be used for small and numerous expenditures such as, training, small works and goods, to allow MOE to finance these transactions for project activities quickly and with minimum administrative delays. It shall be a condition precedent to first disbursement of the Grant that the SA shall have been established. The SA, which will be subject to external audit, will be a revolving account funded with an advance from CDB grant resources, which will be used exclusively to meet CDB's share of eligible expenditure in both local and foreign currencies as the expenditure is incurred. The advance should be sufficient to cover at least three months' eligible expenditure.

6.25 MOE will use statements of expenditure (SOE) for documentation of eligible CDB expenditures. Under this procedure, CDB will make reimbursements to SA against a withdrawal application supported by SOE that are prepared and certified by MOE and acceptable to CDB in form and content. MOE will retain the supporting documentation which will be inspected and verified by independent auditors and CDB during supervision missions. Further details on payment arrangements and the operation of SA are presented at Appendix 6.12.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

SUSTAINABILITY ISSUES

6.26 The Project aims to develop institutional capacities at the national and local levels to support and sustain long term project achievements. The Project will train a range of IAV stakeholder community interest groups in leadership and life skills and at the national level, will help to build the capacity of the implementing agency, using a “learning by doing” approach with the added support of the PA. Financial sustainability of the proposed project activities is built into the project interventions. The Project invests in developing and pilot testing a model for community-based marine park protection and management and promotes alternative livelihoods initiatives that have been successful in other BMCs. The use of user fees for potable water, ice and electricity use, will strengthen cost recovery. While these interventions will not meet all costs to sustain the activities, they are important to sustain community engagement and provide lessons of experience that will contribute to the sustainability of envisaged broader and longer - term development interventions. In addition, the inclusion of a M&E element allows for adjustments during project implementation.

MAINTENANCE

6.27 Maintenance plans will be developed in collaboration with existing stakeholder groups. It is expected that beneficiary participation and other capacity building support provided throughout the project cycle will promote a sense of collective ownership. Monies from the sale of water by the LWC will be managed by the local Municipal authorities. It will be the responsibility of the operations and management contractor to maintain the mini-grid from the proceeds of the sale of electricity. The prospects are therefore encouraging that the outputs of the project components will be maintained.

EXPECTED PERFORMANCE RATING

6.28 In accordance with CDB’s Project Performance Evaluation System (PPES), the Project is accorded a composite rating of 6.1. This satisfactory rating indicates that the Project is very likely to achieve its development objectives, and that its performance is expected to be of a high standard. A summary of the PPES Matrix is shown at Table 6.1.

TABLE 6.1: PROJECT PERFORMANCE EVALUATION MATRIX

Criteria	Expected Performance Scores	Justification
1. Strategic Relevance	8.0	The Project is consistent with CDB’s Strategic Objectives of fostering the sustainable growth of its BMCs, reducing poverty and fostering inclusive social development and Corporate priority of promoting environmental sustainability. It conforms to the SDF 9 agreement concerning interventions in Haiti. It is also consistent with GOH’s development priorities outlined in the Strategic Development Plan – supporting economic growth, environmental management; climate resilience, poverty reduction and gender equality.

Criteria	Expected Performance Scores	Justification
2. Poverty Relevance	8.0	The use of a climate sensitive ecosystem-based approach and provision of investments in equipment to improve access to water and energy services, will help to boost incomes in an equitable and sustainable manner. New opportunities for men and women to earn additional income will be explored. EWS will contribute to reduced vulnerability to natural hazard risks and loss of assets. Improved access to potable water and affordable electricity can increase productive times and a sense of security by women and children. Spatial planning, environment and DRR education and awareness activities are intended to motivate residents to protect the natural resources on which their livelihoods depend.
3. Efficacy	5.8	The Project is expected to achieve its stated outcomes and has been designed, and will be implemented in a highly participatory and inclusive manner. Evidence in Haiti and the wider global community suggests that the active participation of beneficiaries and stakeholders is an effective mechanism for the development of high quality and relevant investments in a gender-equitable manner, and is key to achieving project outcomes. Evidence has also shown that capacity building and adequate time for implementation are critical to achieving outcomes in fragile States like Haiti.
4. Cost Efficiency	5.0	Careful consideration was given to the design of the Project to ensure that cost-effective options were selected. During implementation, the Project will continue to utilise least cost options in the design and implementation of the components whilst giving due consideration to operational and maintenance efficiencies.
5. Institutional Development Impact	5.0	The Project will provide opportunities for significant improvement in the competences and skills of beneficiaries and other stakeholders, particularly in areas related to sustainable fishing practices, ecological monitoring, O&M for water and solar infrastructure. There are specific interventions (e.g. transferring capacity from PA to PC, MOE and other sector agencies; co-management and linkages between NGOs, FADPI and ANAP for monitoring), to improve inter-agency collaboration and enhance the capacity of key sector agencies – MOE, ANAP, Fisheries Directorate (FD) - provide ongoing support to the fisheries sector and for effective project management. Strengthening governance arrangements for LWC, LDRMC will contribute to systematic procedures and practices adopted for water resources management use and DRR.

Criteria	Expected Performance Scores	Justification
6. Sustainability	5.0	Beneficiaries will develop skills required to maintain assets provided by the Project. Data collection for water resources assessment will provide a scientific basis for decision-making; planning, allocation and management of water resources and monitoring water quality. Co-management for the marine park will support compliance by fishers; education and awareness and sharing of information derived from monitoring and assessment reports with stakeholders, give residents voice and capacity to continue to participate in decisions affecting their lives; linking the community with business development support services will enhance sustainability of livelihoods investments. Sharing project achievements, outputs and active engagement with donors and other stakeholders during project implementation will provide exposure to IAV and possibly increase the chances for resource mobilisation to address development deficits. The inclusion of a M&E component allows for adjustments during project implementation as well as to use lessons learned to improve sustainability of follow-on interventions.
7. Overall Performance	6.1	Satisfactory.

7. RECOMMENDATIONS

7.01 It is recommended that the Board of Directors approve a grant from CDB's SFR to GOH of an amount not exceeding the equivalent of five million, five hundred thousand United States dollars (USD5,500,000) (the Grant) consisting of :

- (a) an amount not exceeding the equivalent of four million, six hundred and four thousand one hundred United States dollars (USD4,604,100) from CDB's SDF; and
- (b) an amount not exceeding the equivalent of eight hundred and sixty-two thousand, and twenty euros (EUR862,020) allocated from resources provided to CDB under the ACP-EU-CDB NDRM in CARIFORUM Countries contribution agreement (the Contribution Agreement),

to assist GOH in financing capacity building for DRM and climate resilience on IAV, including the improvement of water resources management and the installation of a mini-grid system in Madame Bernard (the Project) on CDB's standard terms and conditions, and on the following terms and conditions:

(1) Disbursement:

- (a) The first disbursement of the Grant shall be made by September 30, 2017, and the Grant shall be fully disbursed by June 30, 2021, or such later dates as CDB may specify in writing.
- (b) Except as CDB may otherwise agree, total disbursements shall not exceed eighty-seven percent (87%) of the cost of the Project.

- (c) The Grant shall not be used to meet any part of the cost of the Project which consists of identifiable taxes and duties.

(2) **Procurement:**

- (a) Except as set out in paragraphs (b) below, procurement shall be in accordance with the procedures set out and/or referred to in the Grant Agreement or such other procedures as CDB may specify in writing. The Procurement Plan set out in Appendix 6.9 shall be approved by CDB for the purposes of the Project. Any revisions to this Plan shall require CDB's prior approval in writing.
- (b) A waiver of CDB's Guidelines for Procurement (January 2006) is requested to permit:
 - (i) procurement of one (1) vehicle with no restriction as to country eligibility with respect to the source and origin of the vehicle; and
 - (ii) an extension of country eligibility for the mini-grid contractor and for the origin and source of the required batteries to all countries.
- (c) In order to comply with the requirements of the Contribution Agreement, where Grant resources are used together with resources provided under the Contribution Agreement, country eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries, in accordance with the EU Eligibility Rules set out in Appendix 6.10.

(3) **Conditions Precedent to First Disbursement:**

CDB shall not be under any obligation to make the first disbursement of the Grant until GOH shall have furnished, or caused to be furnished to CDB, evidence acceptable to CDB of the following:

- (a) one (1) or more legal opinions, satisfactory to CDB, of a legal practitioner, acceptable to CDB, showing that:
 - (i) GOH has complied with all the necessary requirements under the constitution of Haiti and the laws and regulations in force in Haiti in order to enter into the Grant Agreement; and
 - (ii) the Grant Agreement has been duly authorised by and executed and delivered on behalf of GOH and constitutes a valid and binding obligation of GOH in accordance with its terms; and
- (b) proof that the person or persons who signed the Grant Agreement on behalf of GOH were legally empowered to do so;
- (c) PC referred to in sub-paragraph 4 (b)(i) below shall have been assigned;
- (d) PA referred to in sub-paragraph 4 (b)(iv) (aa) below shall have been engaged;
- (e) TAG referred to in sub-paragraph 4(b) (iii) below, shall have been established;

- (f) LPC referred to in sub-paragraph (4)(b)(iv)(bb) below, shall have been engaged;
- (g) LPCC referred to in sub-paragraph (4)(b)(vi) below, shall have been established;
- (h) SA referred to in sub-paragraph (4)(h)(iii) below, shall have been opened; and
- (i) PSC referred to in sub-paragraph (4)(b)(ii) below, shall have been established.

(4) **Other Conditions:**

- (a) Except as CDB may otherwise agree, GOH shall carry out the Project through DCC of MOE.
- (b) GOH shall:
 - (i) for the duration of the Project, procure or cause MOE to assign from within its staff, a person with qualifications and experience acceptable to CDB, as PC. PC shall be responsible for the day to day management of the Project and shall report to the DCC of MOE. The duties and responsibilities of PC are set out in Appendix 6.1 of this Report. The qualifications and experience of any person subsequently assigned or appointed as PC shall be acceptable to CDB;
 - (ii) establish, and for the duration of the Project maintain, a PSC with the duties, composition and procedures set out in paragraph 6.05 and Appendix 6.4 of this Report;
 - (iii) establish, and for the duration of the Project maintain, a TAG. TAG shall comprise senior technical officers from MOE and other agencies identified by MOE and shall carry out the responsibilities set out in paragraph 6.07 of this Report;
 - (iv) in accordance with the procurement procedures applicable to the Grant, select and engage:
 - (aa) a PA to carry out the services set out in the TOR at Appendix 6.2 of this Report;
 - (bb) by July 31, 2017, a LPC resident on IAV, who shall manage logistical support to PC and other consultants to be engaged to carry out specified tasks in the Project. The duties and responsibilities of LPC are set out in Appendix 6.3 of this Report;
 - (cc) an M&E consultant to carry out the services set out in paragraphs 6.15 and 6.16, and the TOR at Appendix 6.5 of this Report;
 - (dd) consultants to carry out the services set out in the respective TORs at Appendices 2.2 to 2.5 of this Report;
 - (ee) Design and Supervision Support for Mini Grid System consultant to carry out the services set out in the TOR at Appendix 2.6; and

- (ff) Maintenance Training, Solar Photovoltaic and Lighting System consultant to carry out the services set out in the TOR Appendix 2.7 of this Report;
 - (v) within a timeframe acceptable to CDB, implement the recommendations arising from the consultancies, as may be acceptable to CDB; and
 - (vi) establish, and for the duration of the Project maintain, a LPCC with the duties and composition set out in paragraph 6.10 of this Report
- (c) GOH shall:
 - (i) carry out the Project at all times with due diligence and efficiency, with management personnel whose qualifications and experience are acceptable to CDB, and in accordance with sound technical, environmental, financial and managerial standards and practices;
 - (ii) institute and maintain organisational, administrative, accounting and auditing arrangements for the Project acceptable to CDB;
 - (iii) maintain the facilities financed from the Grant, or cause the same to be kept, in good repair and condition, and shall provide the resources necessary to adequately carry out such maintenance works as may be required from time to time; and
 - (iv) execute, implement and operate the Project in compliance with all applicable laws and regulations.
- (h) GOH shall:
 - (i) ensure that all relevant workshops, publications, correspondence, advertisements, press releases and promotions associated with the Grant, openly acknowledge the financial support from the EU in the framework of the ACP-EU-CDB NDRM in CARIFORUM Countries and CDB's contribution to the Project, and display the EU, ACP and CDB's logos;
 - (ii) furnish or cause to be furnished to CDB the reports listed in Appendix 6.8 of this Report, in such form or forms, as CDB may require not later than the times/period specified therein for so doing;
 - (iii) for the purposes of the Project, open and maintain a foreign currency SA in a commercial bank acceptable to CDB on the terms and conditions set out in paragraphs 6.24 and Appendix 6.12 of this Report;
 - (iv) ensure that, upon reasonable notice, officials of MOE meet with CDB representatives at a mutually acceptable time and place in Haiti as determined by CDB to be necessary, but at least twice annually, and exchange views with regard to progress against the agreed outcomes and to identify issues to be addressed and recommend actions; and

- (v) by June 30, 2019 conclude a MOU, in form and substance acceptable to CDB, with key fisheries stakeholders formalising co-management arrangements for governance of the IAV Marine Park.
- (i) Except as CDB may otherwise agree, GOH shall:
 - (i) meet or cause to be met:
 - (aa) the cost of items designated for financing by GOH as shown in the Project Cost, Phasing and Financing Plan (the Budget) set out at Appendix 6.11 of this Report;
 - (bb) any amount by which the cost of the Project exceeds the estimated cost shown in the Budget; and
 - (cc) the cost of any other items needed for the purpose of, or in connection with, the Project; and
 - (ii) provide or cause to be provided all other inputs required for the punctual and efficient carrying out of the Project not being financed by CDB.
- (j) CDB shall be entitled to suspend, cancel or require a refund of the Grant or any part thereof if the resources provided under the Contribution Agreement or any part thereof is suspended, cancelled or required to be refunded, except that GOH shall not be required to refund any amount of the Grant already expended in connection with the Project and not recoverable by GOH unless that amount already expended was misappropriated due to a proven fraudulent or unethical conduct.

COUNTRY ECONOMIC REVIEW**Overview**

1.01 While global growth was projected by the International Monetary Fund (IMF) to slow to 3.1 in 2016 amid a spike in uncertainty due to the June United Kingdom vote to leave the EU (Brexit) and a lower than expected growth performance by the US, Haiti's growth prospects for a variety of reasons is likely to underperform relative to the global average in 2016 and in 2017. Over the course of the 2016 calendar year Haiti experienced high levels of political uncertainty prior to and in the aftermath of the November 20th presidential election due to several election postponements and post-election result contestation. Notwithstanding a low voter turnout of about 20, Jovenel Moise of the centre-right Tet Kale party won an outright victory and took office in March 2017. In addition to election instability on October 4, 2016, Hurricane Mathew hit the country with average wind speeds of about 145mph causing significant devastation (approximately USD1.89 bn in damages) to the country's infrastructure and affecting 1.125 mn people. With the results of the election confirmed, internationally certified and accepted by all parties and significant donor contributions to the hurricane relief efforts, as well as a continuation of policy enhancements, Haiti is poised to recover in 2017. This recovery, however, will be constrained by slow implementation of public projects and a weak investment environment.

Real Sector

1.02 Economic growth in Haiti has declined continually since it posted a respectable growth rate of 4.2 in the 2012/2013 fiscal year. Over the 2015/2016 fiscal year based on preliminary estimates, real output is expected to grow by approximately 1.1, roughly the same as the 1.2 growth rate recorded over the 2014/2015 fiscal year, but still low relative to 2.8 economic expansion in the fiscal year 2013/2014. Haiti's tourism sector, is likely to expand in 2016 to 4.474 million gourdes (HTG), a less than half % wage increase in Hotel and Restaurant value added. Due to lower investment, political uncertainty, modest recovery in the agricultural sector, and significant damage to the productive base induced by Hurricane Matthew, there is a downside risk of lower growth in 2016. Growth in 2017 is expected to accelerate to 2.8 as hurricane reconstruction provides a boost, the agriculture sector recovers, and remittance growth projected at 6% supports private consumption growth.

Prices and Unemployment

1.03 In 2016, Haiti continued to experience high levels of price growth reporting an annual inflation of 12.0 in the year, up from 11.3 in 2015. This occurred largely due to depreciation of the HTG against the U.S dollar and shortages induced by drought and the impact of Hurricane Mathew. Food, alcoholic beverages, and tobacco account for 50.4% of the total weight in the Haitian basket of consumer goods and services, and it is this component of the consumer price index that largely drives prices in Haiti and this category grew at 14.6. Inflation will moderate over 2017 and 2018 only slightly due to the likelihood that oil prices rise and the currency continues to depreciate. However, assuming limited weather interruptions, increases in food supply could put some downward pressure on prices.

Central Government Operations and Debt

1.04 Slower economic growth and significant declines in international aid since 2010 (16.5 of GDP in 2011 to 5.3% of GDP in 2015) have weakened revenue mobilisation. This is further exacerbated by a continued decline in concessional financing from Petrocaraiibe (which averaged 4% of GDP over the 2009-2014 period) due to low oil prices. In nominal terms central government revenue increased by 10.7 from HTG74.1 bn in 2014 to HTG82.0 bn in 2015. In real terms, however, this only reflected a marginal increase from 18.9% of GDP to 19.3% of GDP. Revenue was projected by the IMF to be approximately HTG82.3 bn representing a relative decline to 17 of GDP. Notwithstanding, relative weakness on the revenue side

Central Government deficit inclusive of grant resources declined to 2.4 of GDP in the 2015 fiscal year, down from 6.4 in the previous year. Moreover, the deficit is projected to decline to 1.55% of GDP in the 2015-2016 fiscal year. The decline in the deficit has been due to a substantial decline in public spending from HTG99 bn in 2014 to HTG92.2 bn in 2015 and HTG89.8 bn in 2016. This represented a decline from 25.2% of GDP in 2014 to 18.5% of GDP in 2016. Much of this decline in public spending can be attributed to public financial management reforms associated with the IMF Extended Credit Facility.

1.05 In 2015, Haiti recorded a gross debt to GDP ratio of 30 % of GDP compared to a debt to GDP ratio of 26.3 % in the previous year. Debt is projected by the IMF to rise to 33.6 % of GDP in 2016. Haiti's debt outlook critically depends on what happens to oil prices, borrowing terms, and the exchange rate. Given current low oil prices, stable albeit low growth, Haiti's debt outlook looks favourable. The IMF's debt sustainability analysis suggests that Haiti's risk of debt distress has improved over 2015-2016, conditional on Petrocaraiibe financing continuing, growth not dramatically declining and oil prices remaining low. Haiti's improved public financial management if unabated will strengthen this debt assessment.

Monetary

1.06 Broad money growth over the 2015-2016 was approximately 7.6% compared to 7.3% in the previous year. This reflected an increase in private domestic credit of 11.4% and an increase of 5.5% to the public sector. Credit to the private sector still remains relatively low at approximately 20.4% of GDP due to low levels of financial intermediation in Haiti.

Balance of Payments

1.07 According to the Economist Intelligence Unit the current account deficit is expected to narrow to 5 % of GDP in 2016 up from 8.6% of GDP in 2015, due to a decline in the trade deficit to about USD2.2 bn. With the expected rise in oil prices and import demand increasing reflecting hurricane reconstruction, the current account deficit is projected to widen to 7.3 % of GDP. The trade deficit, estimated at about 30.9% of GDP will likely remain high. Duty free access for textile products to the US market under the HOPE II act has been extended to 2025 and this is likely to help sustain export growth. Offsetting flows include inflows of large volumes of development aid, modest foreign direct investment and a large remittance inflows. On June 2016, international reserves were about 5.6 months of import cover (USD2.2 bn).

Outlook

1.08 GOH remains committed to public sector reform, enhancing public financial management, revenue collection and mobilisation and improving its planning capability as a critical step toward poverty reduction. Reconstruction forms a second pillar of their poverty reduction strategy and this has continued apace. These shorter term poverty reduction strategies complement longer term poverty reduction strategies of the government but are often interrupted by natural hazards induced emergencies. With hurricane aid relief, hurricane reconstruction, a projected rise in remittances, the end of a two-year long drought and the associated recovery of the agriculture sector, the near term and medium prospects for Haiti are favourable. However, substantive potential downside risks remain: political uncertainty, slow implementation of policy reform, increases in oil prices, and the occurrence of additional external shocks.

TABLE 1.0 SELECTED ECONOMIC INDICATORS

	2012/13	2013/14	2014/15	2015/16	Projections 2016/17
Output and Inflation (year on year change)					
-Real GDP	4.2	2.8	1.2	1.1	2.8
-CPI	7.6	3.4	6.4	11.3	12.0
General government (of GDP)					
-Revenue	12.8	12.5	14.7	14.7	15.0
-Grants	8.1	6.5	6.1	5.6	5.3
-Expenditure	28.1	25.4	23.4	22.2	22.5
-Overall balance	-7.2	-6.4	-2.7	-1.9	-2.2
Total public sector debt	19.5	24.1	25.5	26.4	27.2
External sector					
-Trade balance (of GDP)	..	..	-8.6	-5.0	-7.3

Sources: IMF, Economist Intelligence Unit.

**TABLE 1.1 ESTIMATED DAMAGE FROM NATURAL HAZARDS
RESULTING IN DISASTERS: 2000-2016**

Disaster ID	Type	Date	Total damage (‘000 US\$)
2010-0017	Earthquake	12-01-2010	8,000,000
2016-0355	Storm	28-09-2016	2,000,000
2012-0410	Storm	24-10-2012	254,000
2004-0473	Storm	17-09-2004	50,000
2005-0351	Storm	07-07-2005	50,000
2002-0321	Flood	23-05-2002	1,000
2004-0462	Storm	13-09-2004	1,000
2005-0585	Storm	19-10-2005	500
2001-0611	Storm	30-10-2001	20

Source: EM-DAT

**TABLE 1.2 ESTIMATED DEATH TOLL FROM NATURAL HAZARDS
RESULTING IN DISASTERS: 2000-2016**

Disaster ID	Type	Date	Totals deaths
2010-0017	Earthquake	12-01-2010	222,570
2010-0557	Epidemic	22-10-2010	6,908
2004-0473	Storm	17-09-2004	2,754
2004-0231	Flood	23-05-2004	2,665
2016-0355	Storm	28-09-2016	546
2008-0378	Storm	02-09-2008	529
2015-0366	Epidemic	2015	170
2007-0523	Storm	28-10-2007	90
2008-0352	Storm	26-08-2008	85
2012-0410	Storm	24-10-2012	75

Source: EM-DAT

DETAILED MACRO-SOCIAL CONTEXT

1.01 The Republic of Haiti, in the 21st century, has experienced extensive challenges, vulnerabilities and opportunities in the economic, political, social and physical landscapes. Haiti's indicators of economic growth and human development reflect significant constraints on advancements, however, its geographical location and natural environment coupled with its historical, human and socio-cultural resources afford tremendous potential for sustainable development. Notwithstanding all of the above, vested interests, political instability and natural hazards have restrained contemporary Haiti as one of the poorest countries in the world (World Bank 2017)⁶. In addition, the ravages of deforestation and soil erosion as a result of significant population pressures have further impaired the physical environment.

Population and Demographic Characteristics

1.02 Haiti's demographic features (population size, structure and composition) portray a significant demographic shift with a burgeoning youthful population and increasing urbanisation. Haiti's total population in 2015 was estimated at 10.5 mn with an average annual growth rate of 1.5% (UNDP 2016⁷). Life expectancy at birth in 2015 was projected at 62.8 years and the total fertility rate stands at 3.2 children per woman. Haiti's rapidly increasing urban settlements constitute approximately 57.4% of its total population. The population of Haiti can be characterised as youthful with a median age of 22.7 years. Approximately, 12.4% of the total population is under the age of five and 40% below the age of 18 years. In addition, 61% (6.4 mn) of the population is estimated among the economically-active population (15-64 years). The sex ratio is relatively even (105 males to 100 females) but a relatively high dependency ratio (63.3 persons per 100 persons aged 15-64 years) is expected to stymie development efforts. The population density continues to be very high with an average of 403 persons per km². The population and demographic pressures hold significant implications for human capital development, economic production and overcoming poverty and vulnerabilities. Some of the visible physical features in Haiti include accelerated deforestation, soil erosion and extensive agricultural cultivation of marginal lands. Significant human development investments in this youthful population cohort is likely to alter the stasis of inter-generational poverty experienced in Haiti.

Human Development and the Millennium Development Goals

1.03 The measures of human development in Haiti (UNDP 2016) show signs of slender improvement from a value of 0.471 (2015) to 0.483 (2016). The country recorded some measurable progress in three development indicators of life expectancy, education and living conditions among its population. These indicators are the drivers of increasing incomes for the two poorest quintiles of the population (see World Bank 2017). Over the period 2000-2013, the country recorded some measurable progress in achieving most of the MDG indicators and development targets. The 2013 MDG Report shows that Haiti made significant improvements in the fields of education and healthcare with a net enrolment rate in primary education from 47% in 1993 to 88% in 2011, with equal participation of boys and girls. Haiti also decreased the number of underweight children by 50% and infant mortality has dropped by 44% since 1990. In addition, the number of children vaccinated against measles increased by nearly 60% over the period from 1987 to 2013. However the maternal mortality rate in Haiti remains considerably high (350 deaths per 100, 000 live births).

1.04 Despite these improvements, Haiti is still severely challenged to maintain its trajectory towards sustainable development. Haiti is among the most unequal countries in the world. When Haiti's human development index (HDI) is adjusted for the level of income inequality in the Republic, it is further reduced to a value of 0.296. This shows that the level of income inequality in Haiti is disquieting with a Gini-Coefficient of 59.2. Haiti also continued to be among the lowest ranked countries in the world despite its slim upward movement to the rank of 163 among 188 countries.

Gender and Multidimensional Poverty

1.05 Gender based inequalities is a serious development constraint in Haiti. Gender inequalities exist in the provision of health and reproductive services; employment; political representation; and violence against women and girls (sexual, physical, verbal and emotional). The Gender Inequality Index for Haiti (UNDP 2016) was 0.603 and ranked 138 of 188 countries worldwide. Although there is reason for optimism with slightly improved HDI indices and ranking, small gains in economic growth and human development may be eroded by persistent inequalities that entrench poverty levels. The 2013 Haiti MDG Report reveals that the majority of women are still employed mainly in the informal sector or for themselves, identifying the problem of access to secure decent jobs for women. The maternal mortality rate in Haiti remains considerably high (350 deaths per 100, 000 live births) despite a significant reduction over the past two decades and an increase of at least one antenatal visit from 68% in 1990 to 90% in 2010. Moreover, political representation of women in Haiti is also among the lowest in the world with only 4.3% of members of the National Parliament being women (MDG 3).

1.06 The indicators of poverty showed the persistence and severity of physiological and social deprivation in Haiti. The 2013 MDG Report shows that 58.6% or 6.3 mn of the population lives in poverty in Haiti (MDG 1) and cannot meet their basic food needs. In addition, 24.7% of the population was living in extreme poverty while about one million Haitians would fall into poverty in the wake of a natural hazard or economic shock. Moreover, 5.104 mn or 48% of the total population live in multidimensional poverty with deprivations of education, health and living conditions (UNDP 2016). Among the multi-dimensionally poor, approximately 20% live in severe multi-dimensional poverty and an additional 22% of the population was identified as being vulnerable to multidimensional poverty. The extent and severity of poverty in Haiti depicts the country as the poorest in the Western Hemisphere. The characteristics of poverty reflect the need for greater endowment of human and physical capital; investments in the provision of basic human needs; and opportunities for greater income-generation and sustainable livelihoods.

INSTITUTIONAL ARRANGEMENTS FOR ENVIRONMENTAL GOVERNANCE

1.01 Primary responsibility for environmental sustainability resides within MOE. MOE is responsible for the overall management and coordination of environmental activities. It prepares, implements and monitors national policy on the environment and is also responsible for monitoring compliance with obligations made under international Conventions such as United Nations Framework Convention on Climate Change (UNFCCC).

1.02 Inadequate institutional capacity, sensitisation to CC, technical knowledge and financial resources limit MOE's ability to coordinate effective responses to natural disasters and to undertake sufficient CCA and mitigation measures. MOE is currently implementing a project with a view to strengthen institutional mechanisms, capacities and means to mainstream environmental sustainability and CCA into national development policies, strategies, programmes and projects. Additional support will be required by MOE to effectively implement, monitor and report on CCA mainstreaming projects.

1.03 MOE executes its mandate through a number of Divisions. The main responsibilities of those agencies include:

- (a) ANAP - managing the National System of Protected Areas (marine and terrestrial), protects biodiversity; (i) coordinating and implementing management plans of protected areas within its jurisdiction; and (ii) facilitating participatory/co-management arrangements with local populations and local authorities for the management of protected areas.
- (b) ONEV – is responsible for environmental data collection and production, including quality control of hydro-meteorological data, water plans, and water quality; monitoring vulnerability to natural hazards; environmental awareness and education; setting up environmental monitoring in protected areas and areas at risk; evaluation of public policies and monitoring of the impacts of environmental projects; disseminating data and information; and creating a platform of cooperation, strategic thinking, and sharing of experiences among stakeholders in the environmental sector.

1.04 Other key agencies working in close collaboration with MOE include the Ministry of Public Works, Transportation and Communication through DINEPA and Electricite d' Haiti and MARNDR through its Directorate of Fisheries and Aquaculture (DFA).

- (a) MARNDR has several agencies that are responsible for major aspects related to the current project. These agencies are the: (i) DFA involved in enforcement of fishery regulations, policy formulation on fishery, promotion of different kinds of aquaculture, and inland fisheries; (ii) Water Resources Division, including the National Meteorology Centre, is responsible for irrigation strategies management and infrastructures, EWS in relation to flooding and drought, water surface and ground water, and weather forecasting; Coordination Nationale pour la Sécurité Alimentaire (CNSA): the mission of CNSA is to influence public policies to sustainably improve national food security conditions.
- (b) MPCE: mandate includes preparing land-use policy and spatial management strategies, zoning the territory, mapping housing density, establishing spatial data bases through its GIS Centre (Centre National de l'Information Géo-Spatiale), and formulating and implementing national and regional development plans.
- (c) MICT, through its Civil Protection Directorate, which has permanent divisions for the management of risks and disasters, provides leadership for hazard and disaster management.

- (d) The Ministère du Tourisme is involved in the promotion of tourism, coastal development, and management of waterfalls and other natural sites for tourism. Some of the funding will go to Management's plans for the new Marine Protected Areas and a major tourism initiative named "Destination IAV" in the IAV National Natural Park.
- (e) MEF: MEF, through its Technical Execution Unit is involved in environmental project implementation and is becoming an obligatory partner in mobilising financing for Protected Areas.

1.05 At the local level, the "Mairie de l'IAV" (Municipality/Commune of IAV) falls under MICT. The Mayor is the elected head of the commune level of local government and serves for four years. The Mayor's office maintains management responsibilities over local development activities in the island. The Mayor chairs the communal Risk and Disaster Management Committee (RDMC) that is part of the wider SNGRD. SNGRD is structured to manage risks and disaster at the central, departmental, and communal and local levels.

1.06 At the central level, the Civil Protection Directorate (Direction de Protection Civile-DPC) in MICT acts as the office of the Executive Secretary for both the National Risk and Disaster Management Committee (Comité National de Gestion des Risques et Désastres) and SPGRD. The DPC is responsible for technical coordination and implementation of risk and disaster management action plan countrywide. The DPC establishes, supports and liaises with RDMC at the departmental, communal and local levels. The DPC is supported by the Advisory Committee on Civil Society (Comité Consultatif de la Société Civile) and the International Cooperation Support Group (Groupe d'Appui de la Coopération Internationale).

SOCIO-ECONOMIC PROFILE OF PROJECT AREA**The Commune of Ile-à-Vache**

1.01 The island of IAV is a Commune in the South Department (SD) of Haiti. The population of SD of approximately 774, 976 people live in an area of 2,653.60 km², resulting in a population density of 292 persons per km². The population is predominantly rural (77%) and women constitute about 48% of the population. The total number of households is estimated at 161,256 with an average household size of 4.8 persons. The population headcount of poverty (58.8%) and indigence (32.1%) in SD are relatively high. In addition, the percentage of the population in SD that is vulnerable to poverty (24.2) and the proportion of unemployed persons to the actual population (38.6%) are among the highest in Haiti (IMF 2014⁸). Education, health and public services are underdeveloped in the Region. Although tourism is identified as the economic sector with the greatest potential for development in SD, agriculture and fisheries remain the major economic and income generating activities.

1.02 IAV is a 46 km² remote islet. The population of IAV was estimated by the Institut Haitien De Statistique et D'Informatique ⁹(March 2015) at 15,399 persons of which 46% or 7,122 persons are women. Moreover, the population can be characterised as 'predominantly rural and youthful' with 44% below the age of 18 years. IAV, has approximately 2,811 households and is densely populated with 335 people per km².

1.03 The five main villages of Madame Bernard, Kakok, La Hatte, Baleraze and Point de l'Est serve as the hub of activities and services for the entire population. Madame Bernard is the main settlement on the western coast of the island from which an unpaved single lane rugged dirt pathway provides access to Point Est (Eastern Coastline), accommodating primarily motorcycles and mules, the principal forms of land transportation. There is a collection of five public and private sea docks facilitating the main boat routes from Madame Bernard to Kakok, Point Est and Les Cayes. There are no centralised electricity grids on IAV, a major challenge for the well-being of residents and development of the island.

1.04 The island has a deficit in all forms of social infrastructure and services. Access, distribution and quality of water resources in IAV pose significant challenges to households fulfilling their basic needs for drinking, cooking, bathing and washing. According to the TNC/United Nations Environment Program/GOH baseline 2012 report, the proportion of households using an improved drinking water sources is approximately 36%. The main water stations are located in Madame Bernard, Kakok, Baleraze, Mango Station (La Haut) and Point Est. The absence of potable water within households also affects good health and sanitation outcomes among households. Women and children, who bear the burden of water collection for household uses, travel considerable distances twice daily to collect water.

1.05 A large proportion of women within the villages are engaged in family care and community management services. Gender inequity is exhibited in socialisation, roles and relations in the household and the division of labour at the domestic and industry levels. Domestic violence is reported within households and was often targeted at unemployed women and children. Moreover, informal sector employment relieves women of economic dependence and provides greater social status and negotiating capacity within households.

1.06 Education and health care facilities are largely inadequate and difficult to access with diverse issues of affordability, quality and lack of appropriate materials, equipment and human resources. The twenty-three schools in IAV provide opportunities for early childhood development and basic education. Of the 23 schools, 18 are private, 3 public and 2 denominational schools.¹⁰ The nexus between the physical and social infrastructure in the rural area is evident. With a largely dispersed population where the unpaved dirt pathways to schools are long and isolated, school age children (vulnerable population) must travel long distances to school. In addition, the cost of school tuition, poor teacher quality and ineffective multi-grade classrooms (even when schools are accessible) contribute to low quality of education. A safe school

environment and gender responsive basic education are paramount in IAV to promote equity to the differential needs of boys and girls; create awareness of gender-based violence as well as safeguard against bias and discrimination, based on gender.

1.07 Health care services in IAV are provided at the main health centre in Madame Bernard; Kakok Dispensary; Baleraze Clinic; and periodic mobile clinics to the isolated villages. Residents also seek medical assistance in Les Cayes and Port Au Prince (PAP). Those who cannot afford medical services resort to local healers and traditional medicines. Caring for the sick, persons with disabilities, children and older persons (care economy) is largely the responsibility of women and girls within the households. Some of the most treated health conditions in IAV include malaria, intestinal parasites, respiratory infections, typhoid, headache, childhood diseases and stress-related problems. Many of these health issues are related to water-borne diseases; dominant use of wood (main form of household fuel, cooking and school meal preparation) and poor health and sanitation practices within households and communities.¹¹ Public education, information and communication programmes (especially among children and young persons) on water, health, sanitation and environment issues will help substantially, in the short term, before these challenges become unmanageable.

1.08 Residents of IAV depend almost exclusively on fisheries and subsistence agricultural output for their food and nutrition security. They are supported by an informal sector (including credit) and wide social networks in the provision of agricultural, fishing, small scale agro-processing and tourism products. Fishing constitutes the primary income generating activity on the island. High unemployment and underemployment are determining factors of poverty contributing to migration of the youthful population from IAV to Les Cayes and PAP. The most vulnerable groups are unemployed women and young persons, children residing in large poor households, persons with disabilities and the elderly.

1.09 The dynamic interplay of these physiological and social deprivations act as contributing factors to the extent and severity of poverty and inequality in IAV. Investments in improved living conditions, economic empowerment, human capabilities, organisational strengthening and environmental resilience are foundational pillars towards poverty reduction and sustainable development. Moreover, building IAV's resilience for community livelihoods, including the most vulnerable to climate related and CC shocks (fisher-folk, farmers, women, youth and people living in high risks areas) will help address some of the more critical developmental challenges.

1.10 A number of small scale initiatives exists among community based organisations, NGOs, local government and central government agencies with limited and weak institutional and managerial capacity. However, positive organisational trends have been identified, including evidence of mutual support and assistance provided among individuals, households, neighbourhoods, communities and the diaspora population. The industry, resilience and networks of mutual support and trust of the population stands out as significant efforts to overcome deprivations and vulnerabilities on the island.

Disaster Risk Reduction

1.11 The majority of the IAV population resides in coastal lowlands elevated at only 1-2 metres from sea level, making them very vulnerable to potential SLR from CC. El Fouladi (2012)¹² indicated that IAV is greatly threatened with almost 50% of its total surface at risk.

1.12 Recurrent natural hazards particularly floods and storms often result in human and economic losses and damage, that exacerbate the socio-economic situation of the poor in IAV communities whose livelihoods depend heavily on natural resources, subsistence fisheries and agricultural activities. In 2016, Hurricane Matthew devastated IAV resulting in significant loss and damage that exacerbated the socio-economic situation of local population.

1.13 Although prone to natural disasters, IAV lacks adequate DRR mechanisms and is ill prepared to deal with catastrophic events. Comprehensive climate-related hazard risk assessment, effective multi-hazard EWS and local development planning for the island are all non-existent. There is also the need to raise awareness and develop a coherent understanding by the population of slow-manifesting but longer term projected changes in climate and their likely implication for their lives and livelihoods.

Water Resources

1.14 IAV's main fresh water supply is derived predominantly from groundwater sources available from a few near surface aquifers. Sources of surface waters consist of a natural lake, small ponds and lagoons with brackish water and an artificial pond storing rainwater. Groundwater aquifers are serviced by natural underground streams that have periodic connection to the surface via openings at the surface that help to recharge the underground streams. The island's freshwater supply is primarily related to the duration and frequency of rainfall. Water is supplied from naturally occurring waterholes; wells equipped with hand pumps; wells with solar pumps distribution pipes and water storage tanks (water kiosks); and cisterns for rainwater storage. Information on water quality is limited, however available data indicates that water contamination is mainly due to coliform bacteria (E. Coli). DINEPA is in charge of developing and regulating water supply and sanitation and implementing the policy sector at national level in Haiti. The LWCs, responsible for managing the water resources and maintaining the water infrastructure, apply localised water treatments when these resources are available.

1.15 IAV's water resources, supply and quality are being affected by several factors. (a) deforestation and drought are diminishing the volume of water infiltrating into the ground to recharge the aquifers, with the result of observed decreasing flow from the wells; (b) absence of routine monitoring of available water supply and water quality; (c) lack of maintenance of the water delivery systems and training of the Local Water Committees (LWC) to undertake their responsibilities; and (d) inadequate financing available to the municipality for investment in water delivery systems.

1.16 In addition, IAV's groundwater resources are likely to be heavily impacted by CVC. SLR will affect coastal aquifers by increasing saltwater intrusion. Droughts are expected to increase in frequency and in severity. This along with a projected reduction in overall rainfall rates and a projected increase in average temperature, the recharge rate for these catchments is likely to be significantly reduced. These impacts will reduce the availability of freshwater resources in IAV and emphasises the urgent need for water resources supply and quality monitoring data network and data collection programme.

Coastal Ecosystems and Fisheries Management

1.17 Coastal ecosystems of IAV support many livelihood activities, particularly with regard to fishing and eco-tourism. Projected changes to ocean surface temperature, salinity, and turbidity can reduce fish stocks and also modify migratory patterns, while sedimentation or reefs as a result of land erosion could drive fish further out to sea (source Oxfam). Studies of the coastal ecosystems reveal that most of the coral reefs are heavily degraded due largely to unsustainable fishing practices (TNC, 2012).

1.18 The fishery sector on IAV is entirely artisanal and located in several coastal communities that surround the island. The majority of the fishing effort appears to be for reef-associated species as well as semi-pelagic species. Support from FD in the Ministry of Agriculture which provides extension services at the local level to places like IAV is inadequate as FD is currently understaffed. FAPDI was therefore established in an effort to improve management of the fishery sector. FAPDI however has weak organisational structure and limited capacity to manage the productive infrastructure and provide services and equipment in a financially sustainable manner.

1.19 Studies undertaken on IAV outline other challenges facing the fisheries sector. These include: (a) intensive over-fishing of inshore waters and limited opportunities and capacity for offshore fishing; (b) widespread use of unsustainable fishing methods and low levels of awareness about sustainable fishing practices (c) limited capacity of fisher's associations; (d) absence of post-harvest processing facilities including lack of ice; and (e) absence of fishing supply services.

DETAILED DESCRIPTION OF PROJECT COMPONENTS

1.01 The Project will be developed under a multi-sector framework, with investment activities aimed at reducing disaster risks and enhancing CC adaptive capacities of communities on IAV. A participatory approach will be utilised to undertake Project activities.

Component 1 – Improving Planning for Climate Resilience and Disaster Risk Management

1.02 The objectives of this component is to establish DRM mechanisms to strengthen institutional and community level preparedness and response capacities to assess hazards and vulnerability; establish sound scientific basis for monitoring and forecasting of hazards to generate accurate warnings in a timely manner; and disseminate and communicate risk information.

1.03 Consulting services to develop and implement a DRM-CCA plan, EWS, a Spatial Plan and a PEAP.

1.04 The main activities will include:

- (a) Establishment of Multi-hazard Monitoring, Forecasting and Warning Systems.
- (b) Development of a DRM/CCA Plan that identifies and prioritises DRM and CCA interventions.
- (c) Development of an IAV Spatial Plan, (including a Local Area Plan for Madame Bernard), analysing and mapping priority zones for economic and infrastructure development, agriculture, tourism, residential development as well as ecological hotspots. The plan will be developed within the context of sub components 1 – 2 above and the DRM/CCA Plan.
- (d) Development of a Public Awareness, Education and Outreach Communication Strategy and Plan for DRM and CC considering the impacts on the society, economy and the environment, and promoting activities to reduce vulnerability of marine and coastal ecosystems and livelihoods.

Component 2 – Supporting Sustainable Management of Coastal Ecosystems for Improved Livelihoods Options

1.05 The objectives of this component is to initiate a strategic programme to build long term adaptive capacity of the fisheries sector, reduce its vulnerability to the impacts of CC and increase the resilience of coastal ecosystems surrounding IAV; and to promote economically viable and sustainable livelihood options for communities that will reduce anthropogenic stressors on the coastal ecosystems.

1.06 Consulting services to develop and implement a sustainable fisheries and coastal ecosystem management pilot programme.

1.07 The main activities will include:

- (a) Strengthening fisheries governance through training and other capacity building interventions for associations of fisher-folk and FAPDI to apply good management practices for the development of IAV fisheries.
- (b) Development and implementation of an Education and Awareness Strategy and Action Plan for programmes conducted at the education centre.

- (c) Construction and deployment of four artisanal FADs and implementation of a safety at sea training programme.
- (d) Development and implementation of a zoning plan for fish replenishment areas demarcating the protection of key spawning grounds, and ecologically important areas and training in reef monitoring.
- (e) Establish co-management arrangements between FAPDI and public sector agencies responsible for fisheries and protected areas management to facilitate compliance with the zonation plan; and capacity building for monitoring fish replenishment zones. This will include establishment of a MOU between the FADPI and these agencies.
- (f) Construction and installation of an ice-plant consisting of a flake-ice machine, an insulated ice-room, and water supply system. The ice plant will be installed in Madame Bernard and will provide approximately 2 to 3 tonnes (2,000 to 3,000 kg) of flake-ice per day.
- (g) Design and construction of a 30ft x 40ft concrete building that will function as fisheries supply store, storage room, and educational centre. The building will also function as the IAV Project office.
- (h) One 25ft fibre glass boat and safety equipment.

1.08 Consulting services for a Livelihoods Consultant to conduct an assessment, identification and planning of viable and sustainable ventures for livelihoods options and employment opportunities. The objective of the consultancy is to prepare a diagnostic report that will assess and outline potential alternative livelihood options and make recommendations for stakeholder engagement and technical support.

1.09 Recommendations from the consultancy will be elaborated and implemented in close partnership with CDB's Caribbean Technological Consultancy Services network, NGOs, and with community groups established and working on IAV. The resources allocated will be used for targeted sensitisation and awareness building workshops; business and occupational skills training and general technical support. The Sustainable Livelihoods Consultant in collaboration with IAV Stakeholders, PC and PA, will recommend to the PSC for their approval and for transparency, the selection criteria and approval process for use of these resources, eligibility, eligible and ineligible expenditures and will incorporate these into POM.

Component 3 – Improving Water Resources Management and Access to Potable Water Supply

1.10 The objective of this component is to assess available fresh water resources to inform decisions for management of the water resources. This component will provide hydrological data collection and analysis to allow for adequate monitoring of groundwater resources (quantity and quality) on the island, and the determination of the Water Resources Inventory. The Project will supply the necessary equipment to establish a system for data collection and analysis by Directorate for potable water and sanitation (DINEPA) and the LWC and development of a system to ensure adequate monitoring, (by LWC) of quantity in selected aquifers across IAV.

1.11 Consulting services to design and establish a hydrometric network and training of technicians from the (DINEPA) and the IAV LWC and design and support services for the installation of RO water purification systems.

1.12 The main activities will include:

- (a) Design and establish a hydrometric network to determine the island's water balance and establish the basis for determination of safe/reliable yields and quality of water supply sources.
- (b) Equipment for water resources monitoring systems (quality and quantity) which will define the island's water resources inventory.
- (c) Training technicians from the LWC in hydrometric measurement, operation of water purification equipment, and protection and use of water resources.
- (d) Installation of Water Purification Equipment adjacent to existing water collection points at Madame Bernard and Baleraze to provide potable water to residents.

Component 4 – Improving Access to Sustainable Energy

1.13 The objective of this component is to increase access to energy and enable viable operation of the project infrastructure.

1.14 Consulting Services for design and construction and supervision support for a Pilot Mini-Grid System in the community of Madame Bernard.

1.15 The main activities will include:

- (a) Developing a preliminary design for the pilot mini-grid system in Madame Bernard to provide electricity for up to 250 customers and to enable the operation of the ice-plant and water purification system.
- (b) Developing a RFP to include DBO of the mini-grid system.
- (c) Support the procurement process and supervision of (DBO) contract.

1.16 Consulting Services for maintenance training of solar PV and lighting systems.

1.17 The main activities will include:

- (a) Development of a capacity building programme for technicians and potential service providers on IAV for maintenance of solar street lights and other solar PV installations.
- (b) Provide specifications for spare parts to improve the durability of the solar street lighting infrastructure.

Component 5 – Project Management, Monitoring and Evaluation

1.18 This component will provide:

- (a) Project management and implementation support including technical support and compliance with environmental and social safeguards.
- (c) M&E, data collection, and stakeholder involvement and coordination.
- (c) An independent MTE will be conducted at the mid-point of project implementation. The

MTE will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. The timing of the mid-term evaluation will be decided after consultation between MOE and CDB.

- (d) An independent final evaluation will take place three months prior to the final PSC meeting. CDB will contract an independent consulting firm to carry out a project final evaluation. The final evaluation will assess the extent to which project outcomes have been achieved, or are likely to be achieved, and evaluate the project along relevant criteria (e.g. relevance, efficiency, effectiveness, sustainability), which will be selected after the mid-term evaluation. The final evaluation will identify lessons learned, and provide recommendations for the implementation of similar projects in the future. The findings of the final evaluation will assist CDB and GOH in the preparation of the project completion report and in the development of future interventions on IAV and in Haiti.
- (e) Vehicle – Electric (4x4 off road all terrain).

DRAFT TERMS OF REFERENCE

**DEVELOPMENT OF EARLY WARNING SYSTEMS, CLIMATE CHANGE ADAPTATION
PLAN AND CLIMATE RESILIENT SPATIAL PLAN**

1. INTRODUCTION

1.01 The “Mairie de l’Ile-à-Vache” (Municipality/Commune of IAV) falls under the Ministère de l’Interieur et des Collectivités Territoriales. The island lies some ten kilometres offshore of Les Cayes, the largest town on Haiti’s southern peninsula. Approximately 25% of the land area is coastal wetland, predominantly mangrove forests. The eastern side of the island contains a lagoon with the third largest mangrove forest, (2,309 hectares [ha]), in Haiti. This coastal ecosystem supports rich biodiversity, serves as a buffer against flooding and coastal erosion and is the foundation of the island’s economic activity, which is largely dependent on fishing and subsistence agriculture. The IAV National Natural park (11,235 ha) marine protected area was declared by the Government of Haiti to protect the mangrove forests, reefs and other coastal ecosystems. Although tourism is identified as the economic sector with the greatest potential, fisheries remain the major economic and income generating activity.

1.02 Most of the population live 1-2 metres (m) above sea level, making them vulnerable to potential sea level rise (SLR) from climate change (CC). SLR projections range between 3.7m and 7.7m by 2031 for the Haitian coastline.¹³ Almost 50% of IAV total surface is at risk of inundation and subsequent loss along with almost all of its mangrove swamps. IAV is also vulnerable to the impacts of tropical storms and hurricanes which are expected to increase in frequency and intensity due to climate variability and change. IAV sustained severe damage from, Hurricane Matthew in October 2016, with severe flooding of many houses, public buildings and farms reported.¹⁴

1.03 The island lies along the seismically active Enriquillo fault system which was the epicentre of the January 12, 2010 catastrophic earthquake. An important consideration therefore is, the likelihood of future earthquake activity on the Enriquillo fault system given the devastating impact on Port-au-Prince. Seismic hazards must therefore be considered in its development process.

1.04 A comprehensive hazard risk assessment has yet to be conducted for the island despite its known vulnerability to natural hazards. In addition, there are no hazard early warning systems (EWS) for the island. A systematic and proactive approach is therefore required to build resilience and effectively manage natural hazard and climate risks of the population. Addressing these issues requires inter-agency cooperation and long-term capacity building of disaster risk management (DRM), climate change adaptation (CCA) and spatial planning with the active participation and engagement of affected communities and local focal agencies.

2. OBJECTIVES

2.01 The overall objective of this assignment is to strengthen climate and disaster risk governance for building the resilience of IAV communities. To achieve this objective, this technical assistance (TA) will adopt a comprehensive approach to risk assessment, to determine and plan for the management of disaster risk and CCA for the population, economy, and the environment.

3. SCOPE OF WORK

3.01 The scope of work is understood to cover all activities necessary to accomplish the objectives of the consultancy, whether or not a specific activity is cited in these Terms of References. A participatory and consultative approach with the population and local and national focal agencies must be adopted in the conduct of these services. Particular attention should be given to conducting gender analysis, collecting

sex-disaggregated data and ensuring that gender related DRM concerns are addressed in all relevant TA outputs.

Task 1: Risk Assessment

- 3.02 Review existing data, information, maps and studies for IAV including the Tourism Master Plan.
- (a) Identify and assess key natural hazards affecting IAV (e.g. tropical storms, hurricanes, floods, droughts, landslides, earthquakes, tsunamis.):
 - (i) analyse hazard characteristics (e.g. intensity, frequency and probability) of identified hazards taking historical data into consideration;
 - (ii) evaluate climate variable and CC scenarios:
 - (aa) determination of climate variables of interest (precipitation, drought conditions, precipitation extremes and potential flooding, temperature, winds.), and defining baseline conditions;
 - (bb) determine CC scenarios, based on the best available information; and
 - (iii) develop an integrated hazard map identifying the geographical areas and communities at high risk from the natural hazards and the interaction of multiple natural hazards.
 - (b) Community Vulnerability Analysis
 - (i) Conduct community vulnerability analysis for all relevant natural hazards, considering historical data sources and potential future hazard events in the vulnerability analysis.
 - (ii) Analyse community practices for natural resources management: identify major causes of natural resources degradation and good practices for sustainable natural resources management, and assess potential impacts on livelihoods.
 - (iii) Analyse factors affecting the community capacity to undertake risk and impact assessments, to plan and implement mitigation and adaptation actions.
 - (iv) Estimate potential human and economic losses based on the exposure and vulnerability of people (particularly youth, elderly, persons with disabilities.) buildings and infrastructure.
 - (v) Map and document vulnerabilities identified in item (iv) above.
 - (c) Risk Database and Risk Management Planning Guide
 - (i) In collaboration with “Observatoire National de l’Environnement et de la Vulnérabilité” (ONEV)/ National Observatory on the Environment and Vulnerability and “Centre National de l’Information Géo-Spatiale” / National Centre for Geographic Information System, establish a natural hazard risk database for IAV using a Geographic Information System (GIS) compatible with the existing system used by ONEV.

- (ii) Develop a risk management planning guide and provide adequate training to key local stakeholders for informed decision-making and planning.

Task 2: Monitoring and Warning Services, and Dissemination and Communication

3.03 The objective is to enable effective governance and institutional arrangements, and develop a sound scientific basis for continuous monitoring and forecasting of natural hazards and the delivery of accurate warnings in a timely fashion to reduce the risk of death, injury, loss and damage of community and private assets. In collaboration with ONEV, CNM, Direction de Protection Civile and the Mayor Office of IAV, the consultancy firm will perform the following tasks:

- (a) Establishment of a Monitoring, Forecasting and Warning Systems. Recommend appropriate locations for the installation of:
 - (i) two hydro-meteorological stations across the island to support real-time reporting into local, national and regional EWS;
 - (ii) tide and wave gauge for monitoring sea levels in IAV; and
 - (iii) a seismic station.
- (b) Governance and Institutional Arrangements
 - (i) review the existing legal and regulatory frameworks and institutional arrangements for warning services (decision-making and participation processes, roles and responsibilities of key stakeholders, coordination mechanisms, protocols for communication, channels for technical warning services, etc.) at the central government, Sud Department and local levels;
 - (ii) make recommendations for effective governance and institutional arrangements; and
 - (iii) facilitate the establishment of a functional Emergency Operation Centre in IAV.
- (c) Dissemination and Communication
 - (i) conduct stakeholder consultations to establish effective dissemination and communication systems whereby all actors clearly understand their functions, roles and responsibilities. This will include appropriate communication media for warning dissemination (e.g. radio, sirens, text messaging via mobile telephone, warning flags, etc.);
 - (ii) assist key stakeholders to develop warning alerts and messages that are specific to the nature of the threat and its potential impacts, and tailored to the needs of the groups/communities at risk; and
 - (iii) conduct mock drill exercises-early warnings in IAV.

Task 3: Community Preparedness and Response Capabilities

3.04 The objective is to empower the communities to address natural hazard risks through the development of adequate tools and strategies, and public education, outreach and awareness (PEOA) programmes.

- (a) DRM/CCA Plan:
 - (i) develop a DRM/CCA Plan that identifies and prioritises a series of disaster risk reduction (DRR) and CCA measures as well as necessary investments, stakeholder responsibilities and implementation timelines; and
 - (ii) conduct stakeholder validation workshops on the DRM/CCA Plan.
- (b) Community Capacity Building in IAV:
 - (i) conduct community capacity needs assessment in DRM and CCA;
 - (ii) design and implement training and community capacity building programmes in DRM and CCA, including but not limited to the development and implementation of communication protocols, the establishment of effective mechanisms to ensure outreach of messages to the most vulnerable. The capacity building programmes should include development and implementation of plans for vulnerable groups (Children, Older Persons, Persons with Disabilities and Gender Sensitivity) in Disaster Preparedness and Mitigation.
 - (iii) Conduct community-based training in participatory methods and gender responsive DRM and CCA to Local Disaster Committee, Local Water Committee, Fishers' Federation and Multi-Stakeholder Committee; and
 - (iv) preparation of guidelines for local institutions and non-governmental organisations to help affected communities and incorporate DRM into livelihood restoration and development programmes in IAV.
 - (v) Conduct training of Local Disaster Committees.
- (c) Spatial Plan:
 - (i) in collaboration with key stakeholder groups develop a Draft Spatial Plan (SP) for IAV, including a local area plan for Madame Bernard, analysing and mapping priority zones for economic and infrastructure development, agriculture, tourism, residential development as well as ecological hotspots;
 - (ii) make specific recommendations for mobilisation of resources and development of potential partnerships between the national and local authorities, the communities and the private sector to guide the implementation of the SP; and
 - (iii) conduct stakeholder validation workshops on the SP.
- (d) Public Education and Outreach Awareness (PEOA) for DRR and CCA
 - (i) Develop a PEOA programme targeting key stakeholders:

- (aa) conduct surveys on the level of population awareness about DRR, CCA including the most vulnerable groups such as; women, youth, the elderly and persons with disabilities; and
- (bb) assist targeted groups to design communication materials, consistent and standard messages on DRR and CCA, tailored to their needs and to deliver the messages using the most appropriate methods identified by the target groups.

4. REPORTING REQUIREMENTS AND DELIVERABLES

4.01 An Inception Report setting out work plan schedule, approach, methodology activities to be conducted, scheduled for completing the consultancy and sources of data to be collected.

- (a) Risk Assessment Report and Risk Database.
- (b) Monitoring and Warning Services, and Dissemination and Communication Report.
- (c) DRM/CCA Plan.
- (d) SP including Local Area Plan for Madame Bernard.

5. QUALIFICATIONS AND EXPERIENCE

5.01 The consulting team should comprise a team of professionals with the following key personnel:

(a) **Key professional 1: DRM Specialist (Lead Consultant)**

Experience: no less than ten years professional experience and a graduate degree in DRM or related fields. Experience conducting natural hazard risk assessment in the Caribbean region or similar context, development of participatory DRR and CCA Plans and EWS. Working experience as trainer and facilitator of the training for public sector or communities. The Specialist should be fluent in English and French. Fluency in Haitian Creole is an asset.

(b) **Key professional 2: Hydrometeorology/CC Expert**

Experience: no less than ten years professional experience and a graduate degree or equivalent in CC, Hydrometeorology or related fields. Experience should include developing hydro-meteorological observation networks and EWS, working with data provided by Global Circulation Models and Regional Circulation Models, and familiarity with the Fifth Assessment Report by the Intergovernmental Panel on CC. Fluency in French or Haitian Creole is an asset.

(c) **Key professional 3: Geophysicist/Seismologist**

Experience: no less than ten years professional experience and a graduate degree or equivalent in geophysics, seismology, or related fields. Experience should include identifying geographic areas where seismic activity frequently occurs, setting up devices to record and measure earth movements, and collecting and analysing this data.

(d) **Key professional 4: GIS Specialist**

Experience: no less than eight years professional experience with a graduate degree or equivalent in Cartography and GIS or related fields. Experience should include development of maps of natural hazard risks and development of database using GIS. Fluency in French or Haitian Creole is an asset.

(e) **Key professional 5: Public Education and Awareness/Communications Specialist**

Experience: no less than eight years professional experience with a Master's degree or equivalent in Communication and Public Relationship or related fields. Experience should include preparing information materials to support and encourage DRR actions. The Specialist must be fluent in French and Haitian Creole.

(f) **Key professional 6: Spatial Planner**

Experience: no less than eight years professional experience with a Master's degree or equivalent in Spatial Planning, Urban Design/Studies or related fields. Experience should include participatory-based spatial planning, local plan preparation, and environmental impact assessment. Knowledge and experience in innovative planning initiatives including smart growth, new urbanism and sustainability is desirable. Fluency in French or Haitian Creole is an asset.

(g) **Key professional 7: Agriculture/Natural Resources Management Specialist**

Experience: no less than eight years professional experience with a Master's degree in Agriculture Science, Natural Resources Management, Environmental Science or related fields. Experience should include working in developing countries on projects promoting agricultural techniques/approaches to adapt to CC, and natural resources management. Fluency in French or Haitian Creole is an asset.

6. DURATION

6.01 The Consultancy is to be implemented over a period of 36 months.

BUDGET
(USD)

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

DRAFT TERMS OF REFERENCE

**SUSTAINABLE FISHERIES AND COASTAL
ECOSYSTEM MANAGEMENT PILOT PROGRAMME**

1. BACKGROUND

1.01 Ile-à-Vache (IAV) (52 square kilometres [km²]), one of the five adjacent islands of Haiti, located off the Southern Peninsula, has an estimated population of 15,000-18,000 inhabitants. The island is characterised by a tropical dry deciduous climate and a generally flat topography with the highest point at 150 metres (m). Fishing is the main occupation of the population. Products derived from fishing represent one of the most significant sources of food for poor households in IAV.

1.02 IAV is vulnerable to the impacts of tropical storms, hurricanes, and sea level rise, which are exacerbated as a result of climate variability and change (CVC). IAV was severely impacted by Hurricane Matthew and experienced floods up to 1.2 m in depth. Damage to houses and farms was reported for the island.¹⁵ The majority of IAV inhabitants lives in the coastal lowlands with maximum elevation of 1-2m above sea level, making them very vulnerable to potential sea level rise from climate change (CC). El Fouladi (2012)¹⁶ indicated a potential sea-level rise between 3.7m and 7.7m in 2031 for the Haitian coastline, and IAV is greatly threatened with almost 50 of its total surface at risk, along with almost all of its mangrove swamps.

1.03 A report by United States Agency for International Development indicated that the island was classified as a Dry Agriculture Fishing Zone where all socio-economic groups are vulnerable to an increase in staple food prices. Under this classification, products derived from fishing represent one of the most significant sources of food for poor households.

1.04 Coastal ecosystems of the island, like coral reefs, sea grass beds and mangroves, can contribute towards reducing the negative impacts of CC/CVC. They act as defences against wave action and storm surges, thus protecting coastal populations and infrastructure. Moreover, coastal ecosystems of IAV support numerous livelihood activities, particularly with regard to fishing and tourism.

2. OBJECTIVE OF THE CONSULTANCY

2.01 The overall objective of the consultancy is to initiate a programme of climate change adaptation and resilience for the fishing communities and coastal ecosystems of IAV. The Project will develop a broader strategic programme of activities to build the long-term adaptive capacity of the fisheries sector, reduce its vulnerability to the impacts of CC and increase the resilience of coastal ecosystems surrounding IAV.

3. SCOPE OF SERVICES

3.01 The Consultant will oversee the technical implementation of the Project. The Consultant will be responsible for the following tasks:

Strengthening Fisheries Governance

3.02 Conduct a series of inception meetings in the fishing communities of IAV to explain the objectives of the programme and seek the support and engagement of stakeholders.

3.03 Coordinate the collection of baseline data and database of the fisheries sector to better understand the profiles of the communities and the status of the capture, storage and marketing activities. Information collected will include socio-economic data, a boat census, equipment types, and fishing practices.

Education and Awareness

3.04 Assess the current governance arrangements in the fisheries sector on IAV including, the status of the fishers associations, systems for registrations, processes used for decision-making and linkages with the Federation of Fisherfolk Association (FAPDI).

3.05 Conduct a series of workshops and training activities in fisheries governance for representatives of the fisher's associations and FAPDI. These training events will serve to discuss the most suitable governance processes for IAV, including elections, meetings, information sharing, membership and registration. The Fisheries Division will be directly involved in the planning and implementation of these meetings and workshops.

3.06 Assist the Ministry of the Environment (MOE) with the design and specifications of a small building attached to the ice plant to provide an office for FAPDI (the umbrella organisation of all the fisher's associations), a fishing tackle shop, storage room, and small educational centre. It is envisaged that this building will be designed to demonstrate best-practice in climate-smart construction methods.

3.07 Assist MOE with the procurement of office furniture and equipment and educational audio-visual and printed material for the education centre. The Consultant will source relevant information about fisheries management and marine conservation, which will be translated into Creole and written in the style accessible to the local population.

3.08 Conduct educational workshops for fishers from IAV to explain the importance of fisheries management, with examples of successful community-based governance systems. These will include the following topics such as: (a) principles of sustainable fishing; (b) ecosystem-based Fisheries Management; (c) community-based data collection in fisheries management; and (d) post-harvest processing and fish marketing.

3.09 Conduct a series of workshops and training activities to the Local Fishers Federation and their Associations on the elimination of all forms of violence against women and children (Gender Based and Domestic Violence).

Fishing Aggregate Devices and Safety-at-Sea

3.10 Coordinate the implementation of a Fishing Aggregate Devices (FADs) programme that will result in the construction and deployment of four artisanal FADs according to the recommended methodologies and techniques outlined by the Food and Agriculture Organisation.

3.11 Train fisher-folk in techniques for building, deploying and fishing on FADs.

3.12 Undertake surveys to map the seabed at over 3,000m. The surveys will be done in collaboration with Fisheries Directorate and MOE. The selected locations where the FADs should be deployed will be recorded on a global positioning system Unit and the coordinates saved.

3.13 Assist MOE with the procurement of equipment for a safety at sea programme and deliver training in safety at sea and in the use of very high frequency radios in collaboration with the Coastguard and the Fisheries Division.

Ice Production and Management

3.14 Assist MOE with the procurement and installation of an ice-plant in IAV. The procurement of the ice-machine will include shipping, installation and training of relevant personnel in IAV.

3.15 Develop a management plan for the ice-plant. The sale of ice is expected to generate a regular source of income to cover maintenance and provide a surplus. This surplus will provide a long term sustainable income to ensure continuation of its fisheries management and governance activities well beyond the lifespan of the project.

Ecosystem-based Fisheries Management

3.16 Assist MOE and provide support for the procurement of this patrol boat and equipment.

3.17 Assist MOE, the Agence National des Aires Protégées (ANAP) and FAPDI to develop and implement a co-management agreement and plan for an Ecosystem-based Fisheries Management programme for Ile-à-Vache. This agreement should provide details on how enforcement will be conducted, and how data collection and environmental monitoring will be done.

3.18 Develop a community-based management system of fish sanctuaries using a “bottom-up” process of consultations and discussions with stakeholders, in collaboration with the Fisheries Division and ANAP. Consultations to be held in fishing communities to discuss and develop a draft zonation plan for the management of the coastal ecosystems and the potential creation of fish replenishment zones. These meetings will use participatory mapping techniques. Individuals affected by potential fish replenishment zones will be identified and the impacts on their livelihoods discussed in relation to the short and long-term costs and benefits for the community.

3.19 A livelihood diversification programme will be implemented to provide additional household income in fishing communities. These activities are targeted at men, women and youth, and are based on products and services that are in demand, and where prospects for sustainable employment are positive.

4. QUALIFICATIONS AND EXPERIENCE

- (a) Post-graduate degree in Marine Biology/Environmental Science or related discipline, with at least ten years professional experience in tropical marine biodiversity conservation.
- (b) Extensive professional experience (minimum ten years) of working with fishing communities in the Caribbean and developing and implementing co-management plans for ecosystem-based fisheries management, marine protected areas and fish sanctuaries.
- (c) Extensive professional experience of working in fishing communities affected by poverty, natural-resource depletion and low levels of governance.
- (d) Extensive professional experience in coordinating and implementing projects with multiple stakeholders, including policy-makers, government officials, technical specialists and community stakeholders.
- (e) Ability to develop and produce high quality project documentation and monitoring data.
- (f) Working experience as trainer and facilitator of the training for public sector or communities.
- (g) Ability to collaborate and communicate effectively in a multi-disciplinary team.
- (h) Fluent in oral and writing skills in the English language and oral fluency in French essential, and a working knowledge of Haitian Creole will be useful.

5. TIMING

5.01 It is expected that the assignment will require 230 person days over a period of approximately 36 months.

6. REPORTING EQUIREMENTS AND DELIVERABLES

6.01 An Inception Report setting out work plan schedule, approach, methodology activities to be conducted, scheduled for completing the consultancy and sources of data to be collected.

6.02 Quarterly Progress Reports.

6.03 Annual Report on the status of activities outlined in the scope of services. The report will also include information on the status of the outcome-based indicators. This will include baseline data and end of Year 1 data for all indicators as shown in the project results framework.

6.04 Final Report incorporating detailed information on activities outlined in the scope of services. The Report will also include information on the status of the outcome-based indicators. This will include baseline data, and data for all indicators as shown in the project results framework.

BUDGET
(USD)

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DRAFT TERMS OF REFERENCE

**CONSULTANCY SERVICES FOR
SUSTAINABLE LIVELIHOODS CONSULTANT**

1. INTRODUCTION

1.01 Ile-à-Vache (IAV) a small island in the south of Haiti is extremely vulnerable to climate change (CC) and natural hazards. To improve its climate resilience the Government of Haiti in cooperation with the Caribbean Development Bank has embarked on a project to increase community resilience to climate and disaster risks.

1.02 Residents of IAV depend almost exclusively on fisheries and subsistence agricultural output for their food and nutrition security. They are supported by informal sector and wide social networks in the provision of agricultural, fishing, small scale agro-processing and tourism products. Fishing constitutes the primary income generating activity on the island. High unemployment and underemployment are determining factors of poverty contributing to migration of the young persons from IAV to Les Cayes and Port-au-Prince. The most vulnerable groups are unemployed women and youth, persons with disabilities and the elderly.

1.03 CC-related impacts are expected to further exacerbate the degradation of its coastal ecosystems, freshwater resources, and to generally decrease the resilience of the island's communities to adapt. Extreme poverty, isolation, reduced capacity of the natural resource base to sustain livelihoods and produce food, has contributed to a precarious existence for the island's population and this will continue to push the population into even more unsustainable environmental practices and undermine the potential for the ecosystem to regenerate itself. Communities lack the capacity and technical tools to explore alternative livelihood choices such as offshore fishing, improved farming practices and ecotourism. Currently, a range of non-government organisations provides support to the communities for basic social services such as health, sanitation and micro-credit. However, the scale of this support has not been sufficient to make significant impact to positively change the negative trajectory of the population's adaptive development capacity.

2. OBJECTIVE

2.01 The objective is to support appropriate identification and planning of viable and sustainable ventures for livelihoods options and employment opportunities for disadvantaged communities in IAV and contribute to reducing anthropogenic stressors on the coastal ecosystems. The Consultant will ensure the assignment is conducted through a participatory and consultative process involving the participation and contribution of representatives of the IAV Mayors office, local authorities, central government, community organisations, private sector and other potential partners.

3. SCOPE OF WORK

3.01 The assignment includes – but is not necessarily limited to, the following:

- (a) Conduct a participatory community needs assessments and assets and resources mapping to formulate and develop ideas for potential livelihood activities and discuss the opportunities for the development of alternative livelihoods within the context of climate change adaptation. Community mapping should include the current livelihood strategies of IAV communities including verification of the socio-economic profile of the population; and the livelihood assets and strategies of households with particular attention to the different roles of men and women, capacities and capacity-gaps for accessing employment/self-employment opportunities.

- (b) Analyse the main contextual opportunities and constraints to social and economic development from household to community level, and identify required management and technical skills. The main outputs of this process will be the:
 - (i) establishment of a common vision on how to pursue sustainable livelihood strategies;
 - (ii) active engagement of community members to ensure buy-in for identified livelihoods ideas;
 - (iii) gender empowerment by ensuring a process that seeks the input of both men and women and youth;
 - (iv) identification of actors and institutions operating in or delivering services to IAV; the accessibility of markets for goods and services; the accessibility of vocational training, financial services, and business services providers;
 - (v) identification of development processes in the area (review local development plans and identify planned or potential sources of public/private sector investment; other processes that can affect the markets);
 - (vi) policies and practices relating to employment, enterprise development, access to land etc., that influence development processes and affect livelihood opportunities in the area, as well as existing land and environmental management policies and practices and their potential threats; and
 - (vii) identification of potential business ventures and investment opportunities. These will then be prioritised based on viability and other collectively established criteria.
- (c) Assist with prioritising sub-project proposals and potential opportunities and training. This process will establish sub-project goals and objectives, identify the main activities and the target beneficiaries and budget.

4. DELIVERABLES

4.01 The Consultant will be required to provide the following deliverables in English:

- (a) prepare a work plan outlining the approach, plan, and schedule for conducting the assignment;
- (b) conduct a participatory community needs assessment report; and
- (c) report on potential business ventures and investment opportunities including prioritised sub-projects and potential opportunities and required training.

5. QUALIFICATIONS AND EXPERIENCE

5.01 The consultant is required to have:

- (a) Advanced University degree (Master's level minimum) in Development Studies, Development Economics, Agricultural Economics, Labour Economics, Socio-economic

studies, or other related field. Additional areas of experience could include poverty reduction; Economics, Business Administration or Management.

- (b) A minimum of ten years of relevant practical field experience within one or more of the following areas: Socio-economic and/or household economy assessments; risks and vulnerability assessments, market assessments, rapid and participatory rural appraisal. Experience also in livelihood programming in terms of: cooperatives and/or microfinance, employment promotion, entrepreneurship building, private sector development, local economic recovery/poverty-reduction strategies, agriculture/livestock/natural resource management, urban and rural small business development; vocational and technical education and training; income generating activities; value chain analysis.
- (c) Knowledge about the latest development in the livelihoods sector, and in-depth knowledge of at least two technical sub-sectors in livelihoods (e.g. microfinance, vocational training and technical education, business development, technology, entrepreneurship building, community contracting, employment services, agriculture/rural development).
- (d) Demonstrated experience in conducting assessments for planning and/or evaluation purposes. Familiarity with established assessment and analytical tools is desirable in the expert's specialty (e.g. Household economy approach; Sustainable livelihoods framework; Market analysis; Socio-economic profiling).
- (e) Familiarity with community-based and participatory approaches.
- (f) Experience in working effectively with, international and national non-governmental organisations, and with government authorities at national level. Previous experience in projects in developing countries, particularly in the Caribbean region, will be an advantage.
- (g) Excellent analytical and communication (writing and speaking) skills in French language and the English Language. Knowledge of Haitian Creole will be an asset.
- (h) Excellent networking skills with private and public sector institutions;
- (i) Extensive computer skills including Microsoft Excel, Word and PowerPoint.

6. DURATION

- 6.01 The assignment should be completed in a period not to exceed 12 calendar months.

BUDGET **(USD)**

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

DRAFT TERMS OF REFERENCE

WATER RESOURCES SPECIALIST

1. BACKGROUND

1.01 Haiti is highly vulnerable to the impacts of climate vulnerability and change due to a series of factors including high exposure of the population and infrastructure to multiple hazards, population poverty and inequality, and accelerated urbanisation and environmental degradation. Hydro-meteorological and hydro-climatic events have resulted in significant negative impacts in Haiti, including economic and social dislocation, and loss of life, property and livelihoods. Climate change (CC) projections for Haiti indicate that temperatures are expected to increase by 0.5 to 2.3 degrees Celsius by 2060, with warming most rapid in December-February. Also, decreases in rainfall during June-August, while rainfall projections during the remainder of the year are less certain.

1.02 The remote island of Ile-à-Vache (IAV), 46 square kilometres (km²) is a Commune in the South Department of Haiti. The population of IAV was estimated by the Institut Haitien de Statistique et d'Informatique¹⁷ (March 2015) at 15,399 persons. IAV, has approximately 2,811 households and is densely populated with 335 people per km². The island is characterised by a tropical dry deciduous climate and a generally flat topography with the highest point at 150 metres above mean sea level.

1.03 Access, distribution and quality of water resources in IAV pose significant challenges to households fulfilling their basic needs for drinking, cooking, bathing and washing. Approximately 37% of households have access to an improved water source. The absence of potable water within households affects good health and sanitation outcomes among households.

1.04 IAV's main fresh water supply is derived predominantly from groundwater sources available from a few shallow aquifers. Sources of surface waters consist of small ponds and lagoons with brackish water and an artificial pond storing rainwater. Groundwater aquifers are serviced by natural underground streams that have periodic connection to the surface via openings at the surface that help to recharge the underground streams. The island's freshwater supply is primarily related to the duration and frequency of rainfall. Water is supplied from naturally occurring waterholes; wells equipped with hand pumps; wells with solar pumps distribution pipes and water storage tanks (water kiosks); and cisterns for rainwater storage. Information on water quality is limited, however available data indicates that water contamination is mainly due to coliform bacteria (E. Coli).

1.05 The main public institution in the Haitian domestic water sector is the National Directorate for Potable Water Supply and Sanitation, called DINEPA (Direction Nationale de l'Eau Potable et de l'Assainissement). DINEPA is responsible for implementing the water sector policy, coordinating donor assistance and regulating service providers. In rural areas and some small towns, Comités d'Eau (local water committees) are responsible for water systems. They consist of elected community members. Their degree of formalisation and effectiveness varies considerably. The most effective water committees meet regularly, closely interact with the community, regularly collect revenues, perform routine repairs, and are registered and approved by DINEPA. However, many water committees fall short of these expectations.

1.06 IAV's water resources, supply and quality are being affected by several factors. (a) deforestation and drought are diminishing the volume of water infiltrating into the ground to recharge the aquifers, with the result of observed decreasing flow from the wells; (b) absence of routine monitoring of available water supply and water quality; (c) lack of maintenance of the water delivery systems and training of the local water committee (LWC) to undertake their responsibilities; and (d) inadequate financing available to the municipality for investment in water delivery systems.

1.07 In addition, IAV groundwater resources are likely to be heavily impacted by CC. Sea level rise will affect coastal aquifers by increasing saltwater intrusion. Droughts are expected to increase in frequency and in severity. This along with a projected reduction in overall rainfall rates and a projected increase in average temperature, the recharge rate for these catchments is likely to be significantly reduced. These impacts will reduce the availability of freshwater resources in IAV and emphasises the urgent need for water resources supply and quality monitoring data network and data collection programme.

2. OBJECTIVE OF THE CONSULTANCY

2.01 The Consultant will be required to:

- (a) Elaborate, design and implement a programme for the determination of the water resources inventory of IAV (quality and quantity), and the assessment of safe/reliable yields for ground/surface water on the island.
- (b) Provide equipment specifications for proposed Reverse Osmosis water purification stations at Madame Bernard and Baleraze. Also, oversee installation of equipment, training of LWC members, and the initial operation of the potable water kiosks.

3. SCOPE OF SERVICES

3.01 The main tasks for the Consultant include, but are not limited to the following:

- (a) Review available literature, reports, maps and hydrological data, relevant for familiarisation and to obtain an appreciation of the existing water resources situation in IAV.
- (b) Consult key stakeholders in Haiti (municipal authorities, community members, Ministry of Environment, DINEPA, Ministry of Agriculture, Ministry of Tourism, United Nations Environmental Programme, Inter-American Development Bank) and incorporate their views and comments in the planning for the Water Resources Assessment component of the project.
- (c) Evaluate physical site conditions and logistical support availability on IAV. Particular items of interest should include geologic and geographic settings, site access, proximal utilities, service areas, shipment facilities, and potential hazards.
- (d) Prepare and implement a work programme to design and install a hydrometric network for water resources monitoring systems (quality and quantity) which will define the island's Water Resources Inventory, and establish the basis for determination of safe/reliable yields.
- (e) Identify new well production sites. Supervise drilling and conduct pump testing to determine yield and quality fluctuations.
- (f) Install Water Purification Equipment at Madame Bernard and Balerase to provide clean potable water to residents for drinking and other domestic purposes
- (g) Train members of LWC and other community members in hydrometric measurement, operation of water purification equipment, and protection and use of water resources.

4. QUALIFICATIONS AND EXPERIENCE

The consultant is required to have:

- (a) University degree in Physical Planning/Environmental Resources Development, Water Resources Management or related discipline, with at least ten years professional experience in water resources monitoring and hydrologic analysis.
- (b) Professional experience in designing and implementing Water Resources Assessments of Hydrologic Basins.
- (c) Ability to collaborate effectively in a multi-disciplinary team.
- (d) Fluent in oral and writing skills in the English language. A working knowledge of French or Creole will be useful.

5. DURATION OF ASSIGNMENT

5.01 It is expected that the assignment will require 90 person-days over a period of approximately 36 months.

6. REPORTING REQUIREMENTS AND DELIVERABLES

6.01 Inception Report setting out work plan schedule, approach, methodology activities to be conducted, scheduled for completing the consultancy and sources of data to be collected.

6.02 Quarterly Progress Reports.

6.03 Annual Report outlining the status of the activities outlined in the scope of services. The report will also include current information on the status of the outcome-based indicators.

6.04 Final Report incorporating detailed information on activities outlined in the scope of services. The Report will also include information on the status of the outcome-based indicators. This will include baseline data, and data for all indicators as shown in the project results framework.

BUDGET
(USD)

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DRAFT TERMS OF REFERENCE

**DESIGN AND SUPERVISION SUPPORT FOR
PILOT MINI-GRID SYSTEM AND PHOTOVOLTAIC FOR REVERSE OSMOSIS SYSTEM**

1. INTRODUCTION

1.01 Ile-à-Vache (IAV) a small island in the south of Haiti is extremely vulnerable to climate change and natural hazards. To improve its climate resilience the Government of Haiti in cooperation with the Caribbean Development Bank has embarked on a project addressing:

- (a) capacity building and climate resilience planning;
- (b) sustainable management of ecosystems;
- (c) improved access to potable water; and
- (d) improved access to sustainable energy.

1.02 Madame Bernard is the commercial and administrative centre of IAV and houses the Mayor's office and two major schools: Ecole Nationale Saint Antoine de Pardoue and Lycée Sylvio Claude. An initial survey identified 185 homes, 35 small businesses, 18 medium to large facilities as potential energy users. In addition to the existing infrastructure, the Project intends to install a water purification and ice machine in Madame Bernard. The peak demand of the Project infrastructure is 34 kilowatts (kW) with an annual energy consumption of 84,300 kilowatt hour (kWh). The electricity demand of other consumers is estimated at 20,500kWh with a peak of 3.5kW.

1.03 To power the planned ice machine and water purification system, stand-alone photovoltaic (PV) systems were considered. However, the assessment showed that only 73% and 70% of the generated electricity could be effectively used and excess energy would be lost. For households electrification small solar PV systems are a good option but high upfront investment would remain as a significant barrier, especially for low income households. Therefore, a mini-grid system is the most effective way to power the Project infrastructure and offer access to energy to existing households and businesses. In such a system, excess energy is limited and 24/7 electricity supply can be provided, improving significantly living conditions, educational and business opportunities.

1.04 In a scenario with 24/7 power supply the mini-grid system requires either significant investment in batteries or a diesel backup generator. Based on the current available data the assessment showed that a hybrid system with a 140kW solar PV system, a 1200kWh battery system and a 40kW diesel generator is the most feasible option. A reference project showed that operations of the diesel generator could be below three percent of the time with an optimal mini-grid system. The proposed system will require a land area of around 900 square metres and the distribution network will be around 8 kilometres. Operational costs of the system will be recovered through a prepaid metering system, whereas tariffs could range between 10HGT/kWh and 20HGT/kWh, based on comparable data. The proposed pilot mini-grid will be based on the experience of the recently established mini-grids in Les Anglais and Roche-à-Bateaux and will provide important information, to support future extensions of the mini-grid. In absence of reliable baseline data, it is recommended that a detailed demand and design study be undertaken to determine the exact required capacity and layout of the pilot mini-grid system.

2. OBJECTIVES

2.01 The objective of this assignment is to develop a comprehensive request for proposal (RFP) based on a preliminary design for a mini-grid system in Madame Bernard. The mini-grid system shall provide

electricity to Project infrastructure and up to 250 consumers. The RFP shall cover the design, build and operation (DBO) of the mini-grid system. The Consultant shall also support the procurement process and supervision of the DBO contract.

3. SCOPE OF WORK

3.01 The assignment includes but is not necessarily limited to the following:

- (a) Developing a preliminary design for the pilot mini-grid system in Madame Bernard. Activities include:
 - (i) develop a preliminary energy demand assessment of potential customers in the Madame Bernard region, including Project infrastructure;
 - (ii) determine a mini-grid size considering the number of potential customers and required investment; and
 - (iii) determine specifications for solar PV system to support water purification system in Baleraze.
- (b) Develop a comprehensive RFP covering but not limited to the following areas:
 - (i) technical and performance specifications of the proposed mini-grid generation, transmission and distribution infrastructure;
 - (ii) establishment of local mini-grid operation company and training of local staff;
 - (iii) business plan, operational procedures and appropriate tariff system to recover operational expenses; and
 - (iv) financial and operational targets the min-grid company.
- (c) Provide evaluation criteria for the proposals and support the procurement process and development of evaluation report of the DBO contract; and
- (d) Support the supervision of the BOD contract and certification of payments.

4. DELIVERABLES

4.01 The Consultant will be required to provide the following deliverables in English:

- (a) RFP covering all items mentioned in 3.01 (b);
- (b) Tender evaluation report; and
- (c) Bi-annual progress reports covering the implementation of the DBO contract.

5. QUALIFICATIONS AND EXPERIENCE

5.01 Prospective consultants should have a minimum of the following qualifications:

- (a) A Bachelors' Degree in Civil or Electrical Engineering or its equivalent and a minimum of five years of suitable experience power generation. Candidates leading the assignment

shall have experience in the design of power infrastructure, procurement and operations of power systems in the development context. Previous experience with projects in developing countries, particularly the Caribbean region, will be an advantage.

6. **DURATION**

- 6.01 The assignment should be completed in a period not to exceed 24 calendar months.

BUDGET
(USD)

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DRAFT TERMS OF REFERENCE

MAINTENANCE TRAINING SOLAR PHOTOVOLTAIC AND LIGHTING SYSTEMS

1. INTRODUCTION

1.01 Ile-à-Vache (IAV) a small island and commune in the South Department of Haiti, is extremely vulnerable to climate change and natural hazards. To improve climate resilience of IAV, the Government of Haiti through funding of the Caribbean Development Bank has embarked on a project addressing community resilience to climate and disaster risks for IAV.

1.02 In the absence of an electricity grid, solar street lights are the most suitable option to provide lighting in public areas. In 2015, 350 solar street lamps were installed across IAV of which 100 items are currently not operational due to the lack of maintenance. If lamps stop working for several weeks, they are often vandalised and used for spare parts. A main reason for the high number of outage are a lack of local capacity and process to address maintenance. Small solar photovoltaic (PV) systems are reportedly adopted by 20-40 of the households in IAV. Several public buildings are equipped with solar PV - battery systems. Based on the stakeholder meetings there is a strong interest in a number of individuals to receive training in maintenance of solar street lights and other solar infrastructure. To ensure adequate lighting in public areas, training will be provided to local technicians and to potential service providers to maintain and repair street lights and other PV system.

2. OBJECTIVES

2.01 The objective of this assignment is to identify and train local technicians and potential service providers in IAV to maintain solar street lights and other solar PV installations. In addition, the assignment will support the sourcing of spare parts to improve durability of the solar street lighting infrastructure.

3. SCOPE OF WORK

3.01 The assignment includes but is not necessarily limited to the following:

- (a) Preparation task shall include:
 - (i) review technical specification of existing street lights and support the procurement of spare parts which will increase the durability of the lights;
 - (ii) identify and procure required maintenance tools for solar-battery equipment;
 - (iii) prepare training course and relevant capacity building material;
 - (iv) develop a simple and user-friendly handbook to maintain solar street lighting and other solar PV infrastructure describing frequent faults and repair guidelines;
 - (v) in collaboration with Mayor's office and relevant stakeholder groups, identify at least ten potential service providers for the training activity; and
 - (vi) review technical and personal skills qualifications candidates and select suitable trainees. Ensure that the principle of gender equity is applied with special emphasis on single mothers and unemployed women.

- (b) Conduct a practical-oriented training course for technicians and potential service providers, covering safety principles, identification and repair of faults; and
- (c) Plan and conduct a public awareness programme to increase local responsibility for street lighting and establish a notification process for defective street lamps.

4. DELIVERABLES

4.01 The Consultant will be required to provide the following deliverables in English:

Item	Description	Schedule
(a)	Technical specification for the procurement of spare parts for solar street lighting.	10 days after start of project.
(b)	Training material and maintenance handbook.	20 days after start of project.
(c)	One week training course for at least ten potential service providers and local technicians.	30 days after submission of comments from CDB.
(d)	Final report including main observations and feedback of trainees.	40 days after submission of comments from CDB.

5. QUALIFICATIONS AND EXPERIENCE

5.01 Prospective consultants should have a minimum of the following qualifications:

- (a) a Bachelors' Degree in Civil or Electrical Engineering or its equivalent and a minimum of five years of suitable experience in solar PV systems;
- (b) candidates leading the training shall have significant experience in capacity building in the development context of Haiti and shall be able to hold training in Haitian Creole/French; and
- (c) previous experience in projects in developing countries, particularly the Caribbean region, will be an advantage.

6. DURATION

6.01 The assignment should be completed in a period not to exceed three calendar months.

BUDGET **(USD)**

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MONITORING FRAMEWORK

	(Baseline) 2017	Targets					Report and Frequency	Responsibility for Data Collection
		2018	2019	2020	2021	2022		
Project Outcome Indicators								
Component 1 -								
National agencies with annual work plans and budgets that integrate DRM-CCA Plan and Spatial Plan recommendations (no.)							M&E consultant reports	M&E consultant
LDRMC effectively performs its devolved DRM functions (y/n)	N				Y		M&E consultant reports	M&E consultant
Households better prepared through DRM PEAP (%)	TBD	65	70	85	95		M&E consultant reports	M&E consultant
Component 2 -								
Total fish catch (by weight) from offshore FADs (%)	0	30	40	45	50		FAPDI records	LPC, PC
Fishers accessing goods and services from FAPDI (%)				70	80		FAPDI records	LPC, PC
Fishers adhering to recommended safety practices (%)			75	85	95		M&E consultant reports	M&E consultant
Biomass of fish within replenishment zones (25% above baseline by 2021).	TBD							
Replenishment zones are effectively managed and individual parties comply with the MOU.							M&E consultant reports	M&E consultant, PC
Trained beneficiaries apply business and occupational skills towards sustainable livelihoods ventures (%).			25	30	40		M&E consultant reports	M&E consultant
Component 3 -								
Households using the potable water sources provided under the Project.					60		M&E consultant reports	M&E consultant
LWC performs its devolved management and technical O&M functions.	N				y		M&E consultant reports	M&E consultant
Component 4 -								
Customers in Madame Bernard purchasing electricity supplied by the mini-grid (no.)					50		mini-grid operator Accounting reports	PC
Streetlight outages addressed within five days.	N				Y		Complaints records, Mayor's office	LPC, PC
Persons (men and women) trained in operations and maintenance of solar powered infrastructure are applying skills (%).					50			PC
Project Output Indicators:								
Component 1								
EWS developed and operational.	N						DRM consultant reports	DRM consultant, PC
DRM/CCA plan completed.	N						DRM consultant reports	DRM consultant, PC
CRSP completed.	N						DRM consultant reports	DRM consultant, PC
Community DRM education and awareness programme developed and implemented.	N	Y	Y	Y			DRM consultant reports	DRM consultant, PC
LDRMC trained to perform devolved DRM functions.	N						DRM consultant reports	DRM consultant, PC
Hydro-meteorological and seismic monitoring data reports prepared.	N						DRM consultant reports	DRM consultant, PC
Component 2								
Ice plant constructed and operational.							Engineers' progress reports	Engineering consultants
Fisheries office and education facility constructed.	N	Y					Engineers' progress reports	Engineering consultants
Four FADs built and deployed (No.).	0	4					Fisheries Consultant report	Fisheries consultant
60 fishers complete safety at sea training (No.).	0	30	30				Fisheries Consultant report	Fisheries consultant
Memorandum of Understanding (MOU) for co-management of the replenishment zones.	N			Y			Fisheries Consultant report	Fisheries consultant, PC
Awareness and education programmes implemented.		Y	Y	Y			Fisheries Consultant report	
Alternative livelihoods assessment report on feasible sustainable livelihoods interventions.		Y					Sustainable Livelihoods Consultant Report	

		Targets					Report and Frequency	Responsibility for Data Collection
	(Baseline) 2017	2018	2019	2020	2021	2022		
Beneficiaries complete business and occupational skills training (%)	0		80					
Component 4								
Community potable water supply systems installed		1	1				Hydrologist Reports	Hydrologist Consultant
Water resources assessment report				Y			Hydrologist Reports	Hydrologist Consultant
LWC trained to perform its devolved management and technical O&M functions.	N	Y					Hydrologist Reports	Hydrologist Consultant
Education and awareness programme designed and implemented.		Y	Y	Y			Hydrologist Reports	Hydrologist Consultant
Component 3								
140 kW mini grid in Madame Bernard installed and operational			Y				Engineers' progress reports	Engineering consultants
Standalone Solar PV for Baleraze water purification system installed		Y					Engineers' progress reports	Engineering consultants
Public buildings connected to mini-grid	0		2	3			Engineers' progress reports	Engineering consultants
20 persons trained in operations and maintenance of solar powered infrastructure.	0	10	10				Engineers' progress reports	Engineering consultants
Maintenance manual for solar PV equipment completed.			Y				Engineers' progress reports	Engineering consultants
Education and awareness programme designed and implemented.		Y	Y				Engineers' progress reports	Engineering consultants

GENDER MARKER

Project Cycle Stage	Criteria	Score
Analysis:	Consultations with relevant categories of males and females and relevant gender-related public/private sector organisations and NGOs/Community-Based Organisations will take/have taken place. Socioeconomic, Sector and/or Institutional analysis considers gender risks and/or gender disparities that impact the achievement of project outcomes.	0.5 0.5
Design:	Project interventions/policies address existing gender disparities. Project objective/outcome includes the enhancement of gender equality or the design of gender-responsive policies or guidelines.	0.5 0.5
Implementation:	Implementation arrangements include either: (a) capacity building initiatives to enhance gender mainstreaming of the executing and/or implementing agency; or (b) active participation of representatives of gender-relevant stakeholders in project execution.	0.5
Monitoring and Evaluation:	At least one gender-specific indicator at the outcome and/or output level in the RMF.	0.5
Maximum Score:		3
Scoring Code		
Gender Specific (GS) and Gender Mainstreamed (GM): if 3 to 4 points		

Gender Mainstreamed (GM): the Project has the potential to contribute significantly to gender equality.

GENDER ACTION PLAN

Output	Activity	Responsibility	Time
Component 1 Training in gender-sensitive participatory methods	Training in participatory methods and gender-sensitisation of LDC, LWC, FADPI, LPCC.	Natural Hazards Consultant/Disaster Risk Management Consultant	Q1, 2018
	Application of gender-sensitive differential participatory methods for gender- responsiveness and to empower women in community decision-making. Consultant/LDC, LWC and FADPI LFF in selected communities and associations.	Natural Hazards Consultant/Disaster Risk Management Consultant	Q2, 2018
	LDC, LWC LPCC and FAPDI use participatory methods and systematically integrates women in community development.	LPCC, LDC, LWC and FAPDI	Q2, 2018 to end of project.
	M&E integrates gender-responsive and sex-disaggregated data.	M&E Specialist	Q4, 2018 to end of project.
Capacity Building and Technical Assistance	CCA-DRM planning includes vulnerable groups (children, older persons, persons with disabilities and gender sensitivity considerations.	Natural Hazards Consultant/Disaster Risk Management Consultant	Q2, 2018 to end of project.
Component 2	Training of FAPDI and associated organisations on the elimination of all forms of violence against women and children (Gender Based and Domestic Violence)	Lead Technical Consultant/Gender Specialist	Q2, 2018
Component 3	Inclusion of single mothers and unemployed women in maintenance training sessions of solar PV Repairs and Installation.	Solar PV Training Consultant	Q2, 2018
Component 4	Public education, information and awareness programme on water, health and sanitation for diverse groups, audiences (including children), oral traditions and local knowledge (adopting local practices, traditions and networks most effective in communicating to residents).	Water Resources Management Consultant	Q3, 2018 to end of project

DRAFT TERMS OF REFERENCE

PROJECT COORDINATOR

1.01 The Project Coordinator (PC) will be responsible for coordinating and monitoring all aspects of the implementation of the Project and will work in close collaboration with the Project Advisor (PA). Additional administrative support for activities on Ile a Vache will be provided by the Local Project Coordinator. The PC will be an ex-officio member of the Project Steering Committee (PSC). The PC's duties will include, but will not be limited to:

- (a) assisting the PA in preparing the Operations Manual to guide project implementation;
- (b) preparing and submitting to GOH and CDB annual and quarterly work plans for the Project;
- (c) directing and supervising the day-to-day operations of the Project, guided by the project documents and the annual work plans;
- (d) ensuring that stakeholders are kept informed about the progress of the Project, including work schedules of contractors and consultants in all components;
- (e) monitoring of the Project outputs and outcomes, in a manner consistent with the Project's Monitoring and Evaluation (M&E) Framework – developed by the M&E Specialist;
- (f) supervising all components, including ensuring that activities and procurement schedules are carefully executed and that there is adherence to CDB's procurement procedures;
- (g) developing close working relationships with all project participants and stakeholders (including, but not limited to, government agencies, private sector entities, and Local Government officials) to achieve a shared vision of the Project and its objectives;
- (h) representing GOH in all its dealings with all consultants, suppliers and contractors;
- (i) serving as Secretary to PSC;
- (j) establishing mechanisms for the airing of community grievances;
- (k) preparing and expediting the submission to CDB of claims for disbursement for all components financed from the Grant, in accordance with CDB's policies and procedures;
- (l) preparing the annual consolidated budget, controlling the budget and introducing safeguards acceptable to CDB to prevent funds and assets misuse;
- (m) maintaining accounts on project-related expenditure and disbursement activities;
- (n) ensuring that all contractual obligation are adhered to and make all necessary arrangements to ensure implementation meets projected targets;
- (o) updating the project Procurement Plan and Operations Manual;
- (p) submitting to CDB, within the stipulated timeframe reports on implementation of all components of the Project as referred to in the Reporting Requirements contained in CDB's

Appraisal Report, including monthly progress reports on all aspect of project implementation and reporting on formal community participation in implementation of the Project; completion reports;

- (q) liaising with CDB on all relevant technical, financial and administrative aspects of the Project;
- (r) preparing and submitting to CDB a Project Completion Report by the deadline specified in the Reporting Requirements contained in CDB's Appraisal Report; and
- (s) submission of monthly implementation progress reports to the Directorate of Climate Change/Ministry of Environment management, or as otherwise required, including reports that may be required to inform the PSC of progress.

DRAFT TERMS OF REFERENCE

PROJECT ADVISOR

1. BACKGROUND

1.01 Ile-à-Vache (IAV), 46 square kilometres is one of the five adjacent islands of Haiti, located in the Southern Peninsula and is characterised by a tropical dry deciduous climate and a generally flat topography with the highest point at 150 metres (m). While the island has groundwater and some wells, rain harvesting systems from roofs are mainly used as source of water for domestic use and as drinking water. The majority of the population resides in coastal lowlands elevated at only 1-2m from sea level, making them very vulnerable to potential sea level rise from climate change (CC). Studies show that IAV is greatly threatened with almost 50 of its total surface at risk to inundation. Fishing is the main occupation of the population and thus its core source of income.

1.02 Coastal ecosystems of the island, like coral reefs, sea grass beds and mangroves, can contribute towards reducing the negative impacts of climate variability and change (CVC). They act as defences against wave action and storm surges, thus protecting coastal populations and infrastructure. Moreover, coastal ecosystems of IAV support numerous livelihood activities, particularly with regard to fishing and tourism.

1.03 The Government of Haiti intends to implement a project that sets a long term sustainable climate resilience agenda for IAV, through a systematic and proactive approach to adequately manage the risks associated with the effects of natural hazards and the increasing vulnerability of the residents; developing adaptation interventions to maintain sustainable fisheries; improving electrification; and water quality and improving livelihoods of the local communities.

2. OBJECTIVES

2.01 The overall objective of the services is to ensure effective and efficient implementation of the project, a consultant - Project Advisor (PA) is required to provide advisory services as outlined below. The PA will be responsible for providing overall technical support to the Project Coordinator (PC). The PA will report directly to the Chief de Cabinet in the Ministry of Environment (MOE) and may consult with the Caribbean Development Bank's (CDB) Lead Project Supervisor in case of conflict or delicate issues.

3. SCOPE OF CONSULTANCY SERVICES

3.01 The PA will conduct all necessary activities to smoothly implement the Project and will provide guidance on the implementation of the Project activities. Specifically, the scope of work of the PA will include the following:

- (a) prepare draft project operations manual for review and approval by the Project Steering Committee (PSC) and the Technical Advisory Group (TAG);
- (b) provide technical expertise and strategic guidance to all project components, assuming quality control of interventions, and support the PC in the coordination of the implementation of planned activities under the project as stipulated in the project documents/work plan;
- (c) facilitate skills transfer to the PC. Provide hands-on support to the PC, MOE in the areas of project management and planning, management of site activities, monitoring and final evaluation of the Project;

- (d) support the PC in coordinating the work of all consultants ensuring the timely delivery of expected outputs, and effective synergy among the various technical assistance activities;
- (e) assist the PC in the preparation of the Project Annual Work Plans and budgets;
- (f) assist the PC with preparation of the Quarterly, Semi/Annual Project Reports and other reports for submission to CDB, as required in the Project Reporting Schedule in the Project Appraisal report;
- (g) assist the PC in liaison work with project partners, donor organisations, non-governmental organisations and other groups to ensure effective coordination of project activities;
- (h) assist the PC with communications and awareness-raising and documenting lessons from project implementation;
- (i) make recommendations to the PSC for more effective implementation and coordination of project activities; and
- (j) assist the PC with project phasing out activities such as project final evaluation, and completion report as required.

4. CONSULTANT(S) REQUIREMENTS

4.01 The Consultant is required to have:

- (a) post graduate degree in the area of Natural Resource Management, Environmental Science, or related field;
- (b) at least ten years of professional experience, in the field of climate change adaptation and mitigation, environmental management and livelihood improvement;
- (c) demonstrated experience in project development, implementation and management;
- (d) substantive experience of the Haitian public administration system;
- (e) experience working with the Caribbean Development Bank (CDB);
- (f) working knowledge of CDB's policies and procedures;
- (g) proven experience drafting technical reports or scientific papers;
- (h) knowledge and understanding of CC issues;
- (i) proven experience of at least three years in advising on projects in developing countries. Experience working in Haiti will be an asset;
- (j) experience of working and collaborating with governments and multi-lateral agencies;
- (k) good written and verbal communication skills in the English Language; and
- (l) working knowledge of the French Language and Haitian Creole.

5. DURATION OF THE CONTRACT

5.01 The consultancy is expected to take nine man-months which will be distributed over a period of approximately three years.

BUDGET
(USD)

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DUTIES AND COMPOSITION OF
THE PROJECT STEERING COMMITTEE

1. OBJECTIVE

1.01 PSC is to provide a mechanism for support, feedback, guidance, stakeholder participation and inter-agency coordination during project implementation. The Committee will be required to meet as required, but not less than once every two months. Representatives from Department/Local Government to report back to Financial Institutions and feedback to PSC.

2. SCOPE OF SERVICES

2.01 The duties of PSC shall be as follows:

- (a) familiarisation with the arrangements for project implementation, including the intended project outcome, outputs, scope, financing arrangements, reporting requirements, implementation schedule, and other details contained in the appraisal report and financing agreements;
- (b) monitor progress in implementation of the Project towards achievement of the project output and project outcome and provide guidance on implementation;
- (c) ensure that potential threats to timely project implementation are identified and addressed;
- (d) facilitate the taking of policy decisions by the relevant authorities to ensure timely fulfilment of Grant conditions;
- (e) review work plans on a semi-annual basis and ensure that recommendations with respect to adequate budgetary allocations are made, procurement activities are executed as scheduled, and that there are adequate controls;
- (f) approve any revisions to the Project Implementation Schedule and/or Procurement Plan;
- (g) ensure that stakeholder participation is appropriate and sustained throughout implementation and that stakeholder expectations are addressed;
- (h) ensure that the project remains aligned to the policy and strategic objectives of GOH;
- (i) discuss the perspective of the entities from which its members are drawn on various issues, informed by the consultation of PSC members with their respective organisations;
- (j) monitor the performance of the project management team;
- (k) champion the project, advocating for achievement of the project outcomes; and
- (l) issue directives aimed at resolving any issue of a policy nature that arises during implementation.

3. COMPOSITION

3.01 PSC will be chaired by the DCC of MOE. It is proposed that the PSC comprises representatives of the following:

- (a) PC;
- (b) MOE/DCC or his/her nominee;
- (c) Director, MARNDR/DFA or his/her nominee;
- (d) Director, CNSA or his/her nominee;
- (e) Director, Ministry of Tourism or his/her nominee;
- (f) Director, Ministry of Women's Affairs or his/her nominee;
- (g) Director, Chamber of Commerce or his/her nominee;
- (h) Director, ANAP or his/her nominee;
- (i) Director, DINEPA or his/her nominee;
- (j) Director, Ministry of Planning and External Cooperation (MPCE) or his/her nominee;
- (k) Director, Disaster Management office or his/her nominee;
- (l) Director, ONEV or his/her nominee;
- (m) Director, Ministry of Finance and Economy (MEF) or his/her nominee;
- (n) Director, Office of the Mayor of IAV or his/her nominee;
- (o) Head, Haitian Civil Society Platform for CC or his/her nominee; and
- (p) Director, EDH or his/her nominee.

3.02 The quorum for conducting a PSC meeting will be eight members and the PC.

DUTIES AND RESPONSIBILITIES

LOCAL PROJECT COORDINATOR

1. BACKGROUND

1.01 The LPC will assist the PC with the implementation of the project activities on IAV. LPC will be responsible for providing logistic and administrative support for the implementation of all project activities in IAV. LC will report to PC. LC will also work in collaboration with the Office of the Mayor. The position is expected to be full-time.

2. SCOPE OF SERVICES

2.01 LC's duties will include but not be limited to:

- (a) Communication and coordination
 - (i) work closely with PC and MOE and other agencies as determined by MOE and specifically the Technical Consultant–Sustainable Fisheries and Coastal Ecosystem in the implementation of the project activities;
 - (ii) oversee local activities and report to the PC on a weekly basis;
 - (iii) provide administrative and logistic support to the PC during visits by project consultants and other project related persons requiring travel on the island to conduct work activities; and
 - (iv) assist with strengthening channels of communication to support the project activities and enable effective information dissemination and coordination.
- (b) Data collection and monitoring
 - (i) assist in data collection and update and training activities;
 - (ii) work with Technical Consultant –Sustainable Fisheries and Coastal Ecosystem to train Community-based Assessors;
 - (iii) assist in the collection of raw data (e.g. fisheries) and input into computer (Word or Excel); and
 - (iv) update the database of IAV fisher-folk.
- (c) Meetings and workshops
 - (i) coordinate logistical arrangements for the conduct of meetings, training and capacity-building activities including follow-up to meeting invitations;
 - (ii) participate in meetings related to project activities and assist in taking notes and translation (French-Creole) when needed;
 - (iii) maintain a record of participants attendance at meetings and workshops; and
 - (iv) assist in taking notes and translation (French- Haitian Creole) as required.

3. QUALIFICATIONS AND EXPERIENCE

3.01 The qualifications and experience of LPC are:

- (a) very good organisational and interpersonal skills;
- (b) previous experience with project management and coordination;
- (c) good oral and written communication skills in French and Haitian Creole;
- (d) good understanding of social, cultural, political and environmental situation in IAV;
- (e) some knowledge of marine ecosystems and fisheries in Haiti;
- (f) good computer skills and knowledge of using Word, Excel, email (Outlook or Mail) and Skype (or equivalent like Facebook, Messenger);
- (g) self-motivated, hard-working, reliable, friendly and with an open disposition; and
- (h) comfortable on a boat (snorkelling skills desirable but not essential).

4. TIMING

4.01 It is expected that the assignment will require 26 months over a period of approximately 36 months.

5. REPORTING AND DELIVERABLES

5.01 LPC will be required to prepare and submit to PC, brief Monthly Reports that provide information on the status of the activities at the end of each calendar month.

BUDGET
(USD)

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

DRAFT TERMS OF REFERENCE

MONITORING AND EVALUATION CONSULTANT

1. MONITORING AND EVALUATION

1.01 The Monitoring and Evaluation (M&E) component of the project is designed to: (a) monitor the progress on achievement of outputs and outcomes across all project components and to identify any difficulties or impediments that may occur and guide remedial actions to ensure that the project achieves its intended objectives; (b) ensure frameworks, baseline and performance data necessary to monitor performance and make the project 'evaluation-ready' are in place. The M&E approach will be gender-sensitive, with all relevant baseline and monitoring data disaggregated by sex, age group.

2. OBJECTIVES

2.01 The overall objective of the services is to develop (including collecting baseline data), manage, and implement a quality M&E system facilitating effective implementation of the Project, assessment of its performance, and evaluation-readiness.

3. SCOPE OF CONSULTANCY SERVICES

3.01 The Consultant (s) will carry out all research, data collection, analysis, reporting, and related work required to attain the objectives outlined above. The Consultant will be expected to, among other things:

- (a) prepare a work plan outlining the approach, plan, and schedule for conducting the M&E consultancy;
- (b) finalise the Design and Monitoring Framework, including desired output, outcome, and impact indicators, baselines and targets. These will be gender-sensitive, with all relevant baseline, monitoring, and target data disaggregated by sex, age group, and poverty status;
- (c) detail and finalise the Results Monitoring Plan which clearly outlines the methods, sources, responsibilities and timelines for data collection. The Plan will be gender-sensitive, with all relevant baseline, monitoring, and target data disaggregated by sex, age group, and poverty status;
- (d) assist the Project Coordinator (PC) to manage and implement the Results Monitoring Plan to track project implementation and measure the development achievements of the project. This includes:
 - (i) preparing and populating suitable electronic templates/databases and information systems to facilitate the data collection, generation, and analysis;
 - (ii) scheduling and conducting data collection, analysis and reporting during project implementation;
 - (iii) identifying mechanisms for the local collection of data during project implementation;
 - (iv) identifying any difficulties or impediments that may occur and guide remedial actions to ensure that the project achieves its intended objectives. Ensuring frameworks, baseline and performance data necessary to make the project evaluation-ready are in place.

- (v) assisting the Government of Haiti and the Caribbean Development Bank with development of the Terms of Reference for the independent mid-term project evaluation and final project evaluation;
- (vi) reporting to key stakeholders on project progress and performance; and
- (vi) conducting workshops/coaching with the Project Coordinator and Technical Advisory Group.

4. CONSULTANT(S) REQUIREMENTS

4.01 The Consultant is required to have:

- (a) a first degree in a Social Science discipline, or a related field. Postgraduate studies are desirable;
- (b) at least five years' work experience in the development arena including at least four years' experience in monitoring or evaluation of development assistance projects;
- (c) completed specialised training in M&E (official degree or certificate programme, or a recognised training programme);
- (d) a broad-based understanding of development issues and operational and technical issues affecting project design and implementation. Exposure to project management would be an asset;
- (e) work experience in developing countries in the analysis and evaluation of development programmes/projects;
- (f) strong demonstrated ability in evidence-based research using qualitative and quantitative research methods;
- (g) good written and verbal communication skills in the English Language. A working knowledge of the French Language and Haitian Creole will be an asset; and
- (h) the ability to work as part of a team.

5. SUPERVISION OF THE CONSULTANT

5.01 The Consultant(s) will report to the PC, who will be responsible for routine supervision of the consultant and monitoring the progress of this consultancy.

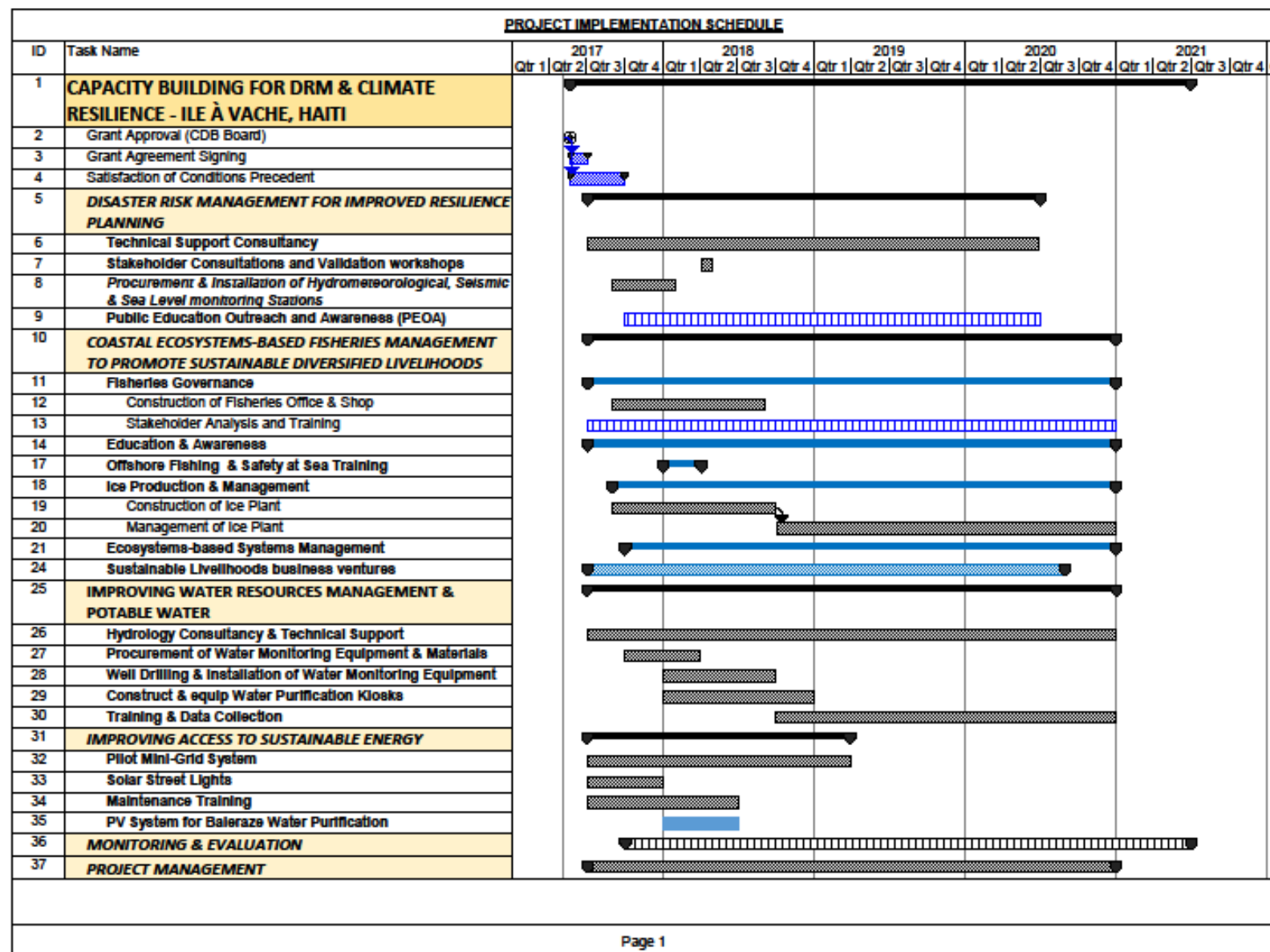
6. DURATION

6.01 The expected level of effort of this consultancy is ten months, which will be distributed over the duration of the Project.

BUDGET
(USD)

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

IMPLEMENTATION SCHEDULE



IMPLEMENTATION SUPPORT PLAN

1. The implementation support will be provided as part of CDB's project supervision functions and will include among other things:
 - (a) reviewing implementation progress and achievement of project outcomes;
 - (b) addressing implementation issues;
 - (c) monitoring systems to ensure their continued adequacy through monitoring reports and field visits; and
 - (d) monitoring changes in risks and compliance with legal agreements as needed.
2. The ISP will be reviewed annually to ensure that it continues to meet the implementation support needs of the Project. In addition to reviewing implementation progress, the ISP aims at providing technical support to GOH/MOE in the achievement of the results.
3. The ISP has been developed based on the risk profile of the Project with particular focus on implementation and capacity risk, as well as the traditional supervision focus areas of financial management, contract management and procurement.

Strategy and Approach for Implementation Support

4. Supervision of the Project will be undertaken by a team comprising the lead supervisor supported by legal counsel and specialists in the areas of social analysis, renewable energy, water resources engineering, disaster risk management, and procurement. The Team will be supported by a PA. Given the relatively complex nature of the Project, it is anticipated that services of the Consultant Project Advisor will be utilised intensively during Year 1 of project implementation – an estimated 40 man-days – and that CDB staff will engage in formal supervision and field visits at least 3 times per year.
5. The first formal supervision activity will be the PLW. The objective of PLW is to review the implementation arrangements, project results and monitoring framework, orient MOE, PSC and other key stakeholders in the use of CDB's fiduciary management and procurement systems, and discuss arrangements for project start-up and project supervision arrangements. PLW is scheduled for the third quarter of 2017, following signature of the Grant Agreement and confirmation by GOH that PC and LPC are assigned and PSC, TAG and LPCC have been established.
6. The supervision team will prepare an Aide Memoire after each supervision mission as well as annual Project Supervision Reports (PSRs). These reports will, *inter alia*, compare planned versus actual progress on each component, comment on compliance with Grant covenants, CDB procurement and contracting policies and any issues requiring resolution.
7. Within six months of project completion, Staff will conduct an Exit Workshop to assess results, discuss implementation issues, and identify lessons learnt. A draft PCR will be prepared and discussed with the client during the Exit Workshop. The final PCR will be validated by the Office of Independent Evaluation (OIE). Staff will prepare a Management Response to OIE's validation report.

TABLE 1: STAFF SKILLS REQUIRED

Time	Focus	Skills Needed	Resource and Estimated Input
Board of Director's Approval to 12 months.	Specific <ul style="list-style-type: none"> • PLW • Support in satisfying Conditions Precedent. • Review of contract documents, evaluation reports, and draft contracts. • Procurement support. • Monitoring of Project Implementation and Results. • Contract Management Support: finalisation of TORs. • Review of monthly implementation reports. • Review of TA reports. • Preparation of annual Supervision Report. 	<ul style="list-style-type: none"> • Lead Project Supervisor • Legal • Procurement • Engineering • Social • RE/EE • DRM • Claims Processing 	<ul style="list-style-type: none"> • Lead Project Supervisor – 7 weeks • Legal Counsel – 1.5 weeks • Procurement Specialist –1.5 weeks • Engineer – 4 weeks • Social Specialist – 3 weeks • RE/EE Specialist - 3 weeks • DRM Specialist – 3 weeks • Administrative Assistant– 2 weeks • Unit Secretary -2 weeks
Plan Review After Year 1			
12-24 months	<ul style="list-style-type: none"> • Monitor Project Budgeting and allocations. • Monitor Project Physical Works progress and quality. • Monitor Project implementation and Results. • Contract Management Support: finalisation of TORs. • Preparation of annual PSR. • Review and certification of requests for disbursement. • Review of TA reports. • Review of monthly Implementation Reports. • Preparation of annual Supervision Report. 	<ul style="list-style-type: none"> • Environment • Social • Management • Legal • Engineering • RE/EE • DRM • Claims Processing 	<ul style="list-style-type: none"> • Lead Project Supervisor – 8 weeks • Legal Counsel – 0.5 weeks • Engineer – 4 weeks • Social Specialist – 3 weeks • RE/EE Specialist - 3 weeks • DRM Specialist – 3 weeks • Administrative Assistant– 2 weeks • Unit Secretary - 1 week
24-42 months	<ul style="list-style-type: none"> • Monitor Project Budgeting and allocations. • Monitor Project Physical Works progress and quality. • Monitor Project implementation Risks and Results. • Preparation of annual PSR. • Review and certification of requests for disbursement. • Review of TA reports. • Review of Monthly and Quarterly Implementation Reports. 	<ul style="list-style-type: none"> • Environment • Social • Legal • Engineering • RE/EE • DRM • Claims Processing 	<ul style="list-style-type: none"> • Lead Project Supervisor – 8 weeks • Legal Counsel – 1.5 weeks • Engineer – 5 weeks • Social Specialist – 4 weeks • RE/EE Specialist - 4 weeks • DRM Specialist – 4 weeks • Administrative Assistant– 2 weeks • Unit Secretary - 1 week
	<ul style="list-style-type: none"> • Monitoring of compliance with legal covenants 		
	<ul style="list-style-type: none"> • Preparation of PCR and Exit Workshop. 		
Plan Review and Modification As Required			

REPORTING REQUIREMENTS

REPORT		TIME OF SUBMISSION TO CDB	RESPONSIBILITY
1.	An AWPB by project component detailing planned activities associated cost and timing.	The first AWPB should be submitted within three months of the PLW.	PC, PA
2.	Semi-annual Report on Implementation status of the Project in relation to the AWPB (including works completed and expenditure incurred – planned versus actual); and outcome indicators being monitored. Minutes of PSC and TAG meetings should be included as appendices.	No later than July 15 th in the applicable year and continuing until submission of PCR.	PC, PA with support from the M&E Consultant
3.	Annual Reports on Implementation Status of the Project in relation to the AWPB (including works completed and expenditure incurred – planned versus actual); and outcome indicators being monitored. Minutes of PSC and TAG meeting should be included as appendices.	No later than December 15 th in the applicable year and continuing until submission of the PCR.	PC PA with support from the M&E Consultant.
4.	Monthly reports on progress of project implementation.	Within one week of the end of each quarter, commencing one quarter after appointment of PC.	PC, PA
5.	Reports On Community Engagement Meetings.	Within one week following meetings	PC, PA
6.	Consultants' Reports on TA and related components.	As per TOR	PC
7.	PC's Project Implementation Completion Report.	Within one month of practical completion of all works, contracts and of completion of all TA services.	PC, PA

PROCUREMENT PLAN

May 2017

(All costs are shown in United States dollars)

A. General

1. Project Information

Country: Haiti

Project Name: Building Capacity for Disaster Risk Management and Climate Resilience Project, Ile a Vache - Haiti

Project Implementing Agency: MOE

Project Executing Agency: Directorate of Climate Change

2. Bank's Approval Date of the Procurement Plan: May 22, 2017

3. Date of Procurement Notice: June 15, 2017 (General Procurement Notice)

4. Period covered by this Procurement Plan: July 2017 – December 2017¹

B. Goods, Works and Non-Consulting Services

1. Prior Review Threshold: Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement as determined by the Procurement Specialist based on the assessment of the implementing agencies' capacities.

2. Prequalification: See Section 5 of this Procurement Plan.

3. Reference to (if any) Project Operational/Procurement Manual: CDB Guidelines for Procurement (January 2006)

4. Any Other Special Procurement Arrangements:

- (a) Financing for Planning for Resilience and Improved DRM shall be provided under the ACP-EU-CDB NDRM in CARIFORUM Countries Agreement and thus, in accordance with that Agreement eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries.
- (b) With respect to the mini-grid, a waiver of CDB's Guidelines for Procurement (2006) to extend eligibility to all countries for the contractor, and the origin and source of the batteries.
- (c) With respect to the vehicle, a waiver of CDB's Guidelines for Procurement (2006) to extend eligibility for the source and origin of the vehicle to all countries.

¹ Refer to clause 1.17 of CDB Guidelines for Procurement

5. Procurement Packages with Methods and Time Schedule

Ref No.	Contract (Description)	Cost (\$'000)	Proc. Method	Pre-qual.	Review by Bank	Bid Opening	Comment
Construction							
N1	Design and Construction of Ice Plant Complex (incl. Fisheries Office, Shop and Education Centre), also Water Purification Kiosks.		ICB	No	Prior	Q4 2017	Design-Build
N2	Design and Construction of Electrical mini-grid (in Madame Bernard) and PV System (in Baleraze).		ICB	No	Prior	Q4 2017	DBO
N3	Well Drilling and Installation of Water Monitoring Equipment (Hydrology).		ICB	No	Prior	Q2 2018	
Supply Equipment/Tools, and Materials							
E1	Hydrometeorological, Seismic and Sea Level Monitoring Stations (DRR).		ICB	No	Prior	Q4 2017	
E2	Ice Complex Equipment (Coolers, Ice Chests etc.)		ICB	No	Prior	Q2 2018	
E3	Patrol Boats, VHF and Fisheries Equipment.		ICB	No	Prior	Q1 2018	
E4	Water Monitoring Equipment and Materials (Fresh Water Resources).		ICB	No	Prior	Q4 2017	
E5	Water Purification RO Systems.		ICB	No	Prior	Q4 2018	
E6	Spare parts for Solar Street Lights		ICB	No	Prior	Q3 2017	
E7	Off-road All-Terrain Vehicle (ATV)		ICB	No	Prior	Q3 2017	
Non-Consultancy Activities							
A1	GOH Contribution (Land, Office, Staff)		NBF				Procurement Plan will be updated during implementation to reflect the specific contracts against these activities. This will be subject to CDB's "no objection".
A2	Public education, outreach and awareness		TBC				
A3	Training and Data Collection		TBC				
A4	Sustainable Livelihoods		TBC				

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

C. Consultancy Assignments with Selection Methods and Time Schedule

1. **Prior Review Threshold:** Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for the Selection and Engagement of Consultants.
2. **Short list comprising entirely of national consultants:** N/A
3. **Reference to (if any) Project Operational/Procurement Manual:** CDB Guidelines for Selection and Engagement of Consultants (October 2011).
4. **Any Other Special Procurement Arrangements:** Financing for Planning for Resilience and Improved DRM shall be provided under the ACP-EU-CDB NDRM in CARIFORUM Countries Agreement and thus, in accordance with that Agreement eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries.

Ref. No	Description of Assignment	Cost (\$'000)	Selection Method	Review by Bank	Proposals Submission Date	Comments
C1	Disaster Risk Reduction Consultancy		QCBS	Prior	Q4 2017	
C2	Fisheries Consultant		CQS	Prior	Q3 2017	
C3	Sustainable Livelihoods Consultant		CQS	Prior	Q4 2017	
C4	Water Resources Consultant		CQS	Prior	Q3 2017	
C5	Renewable Energy Consultant (Solar Lights)		CQS	Prior	Q3 2017	
C6	Renewable Energy Consultant (Mini-grid RFP & Construction Supervision)		CQS	Prior	Q3 2017	
C7	Monitoring and Evaluation Consultant		CQS	Prior	Q3 2017	

D. Implementing Agency Capacity-Building Activities with Time Schedule

Ref. No	Expected Outcome / Activity Description	Cost (\$'000)	Estimated Duration	Start Date	Comments
T1	Project Launch	n/a	2 days	Q4 2016	

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E. Summary of Proposed Procurement Arrangements

Ref	Project Element /Contract	CDB/ACP-EU (USD '000)					Country (USD '000)	Total Cost (USD '000)
		NCB	ICB	QCBS	CQS	TBC	NBF	
N1	Design and Construction of Ice Plant Complex (incl. Fisheries Office, Shop and Education Centre), also Water Purification Kiosks.	-						
N2	Design and Construction of Electrical mini-grid (in Madame Bernard) and PV System (in Baleraze).	-						
N3	Well Drilling and Installation of Water Monitoring Equipment (Hydrology).	-						
	Supply Equipment/Tools, & Materials							
E1	Hydrometeorological, Seismic and Sea Level Monitoring Stations (DRR).	-						
E2	Ice Complex Equipment (coolers, ice chests, etc.)	-						
E3	Patrol boats, VHF and Fisheries Equipment	-						
E4	Water Monitoring Equipment and Materials (fresh water resources)	-						
E5	Water Purification RO Systems	-						
E6	Spare parts for solar street lights	-						
E7	Off-road all-terrain vehicle (ATV)	-						
	Non-Consultancy Activities							
A1	GOH Contribution (Land, Office, Staff)	-						
A2	Public Education, Outreach and Awareness	-						
A3	Training and Data Collection	-						
A4	Sustainable Livelihoods	-						
	Consultancies							
C1	DRR Consultancy	-						
C2	Fisheries Consultant	-						
C3	Sustainable Livelihoods Consultant	-						
C4	Water Resources Consultant	-						
C5	RE Consultant (solar lights)	-						
C6	RE Consultant (mini-grid, RFP and Construction Supervision)	-						
C7	M&E Consultant	-						
	Sub-Total	-						
	Project Management							
	Physical Contingency							
	TOTAL PROJECT COST							

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Any small differences in the figures are due to rounding errors.

Abbreviations:

NCB – National Competitive Bidding

ICB – International Competitive Bidding

NBF- Non-Bank Financed

QCBS- Quality and Cost Based Selection

CQS- Selection based on Consultants' Qualifications

TBC – To be confirmed

EUROPEAN UNION ELIGIBILITY RULES
AFRICAN CARIBBEAN PACIFIC – EUROPEAN UNION
NATURAL DISASTER RISK MANAGEMENT

PARTICIPATION IN PROCEDURES FOR THE AWARDING OF
PROCUREMENT CONTRACTS OR GRANT CONTRACTS

1. Participation in procedures for the award of procurement contracts financed under the EU Contribution Agreement for the Implementation for the Action entitled: “Africa Caribbean Pacific – European Union – Caribbean Development Bank (ACP-EU-CDB) Natural Disaster Risk Management in CARIFORUM Countries” (ACP – EU NDRM Resources)”, is open to international organisations and all natural persons who are nationals of, or legal persons who are established in, an eligible country.

2. Eligible countries¹ are deemed to be:

(a) Caribbean Development Bank Member Countries:

Anguilla, Antigua and Barbuda, Barbados, Belize, Brazil, British Virgin Islands, Canada, Cayman Islands, China, Columbia, Dominica, Germany, Grenada, Guyana, Haiti, Jamaica, Italy, Mexico, Montserrat, St Kitts and Nevis, Saint Lucia, St Vincent and the Grenadines, Suriname, The Bahamas, Trinidad and Tobago, Turks and Caicos Islands, the United Kingdom and Venezuela.

(b) Members of the “African, Caribbean and Pacific (ACP) Group of States”²:

Africa:

South Africa³, Angola, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Cameroon, Cape Verde, Chad, Comoros Islands, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Uganda, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Zambia and Zimbabwe.

¹ Note some countries may be eligible by virtue of more than one category

² Cotonou Partnership Agreement of 23 June 2000 (as amended by the provisional application of Decision No 1/2000 of the ACP-EC Council of Ministers of 27 July 2000, Decision No 1/2000 of the ACP-EC customs cooperation committee of 18 October 2000, Decision No 1/2001 of the ACP-EC customs cooperation committee of 20 April 2001, Decision No 2/2001 of the ACP-EC customs cooperation committee of 20 April 2001, Decision No 3/2001 of the ACP-EC customs cooperation committee of 10 May 2001, Decision No 4/2001 of the ACP-EC customs cooperation committee of 27 June 2001, Decision No 5/2001 of the ACP-EC customs cooperation committee of 7 December 2001, Decision No 2/2002 of the ACP-EC customs cooperation committee of 28 October 2002, Decision No 1/2003 of the ACP-EC Council of Ministers of 16 May 2003, Council Decision (EC) of 19 December 2002, Decision No 1/2004 of the ACP-EC Council of Ministers of 6 May 2004, Decision No 2/2004 of the ACP - EC customs cooperation committee of 30 June 2004 and Decision No 4/2005 of the ACP-EC customs cooperation committee of 13 April 2005).

³ Natural and legal South African persons are eligible to participate in contracts financed by the 10th/11th EDF. However, the 10th/11th EDF does not finance contracts in South Africa.

Caribbean:

Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

Pacific:

Cook Islands, East Timor, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, the Solomon Islands, Western Samoa, Tonga, Tuvalu, Vanuatu.

Overseas Countries and Territories:

Anguilla, Antarctic, Netherlands Antilles, Aruba, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Falkland Islands (Malvinas), French Polynesia, French Southern Territories, Greenland, Mayotte, Montserrat, New Caledonia, Pitcairn, Saint Helena, Saint Pierre and Miquelon, South Georgia and South Sandwich Islands, Turks and Caicos, Wallis and Futuna Islands.

(c) A Member State of the European Union:

Austria, Belgium, Bulgaria, Croatia, Czech republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

An official candidate country of the European Union:

The Former Yugoslav Republic of Macedonia, Turkey, Iceland, Montenegro.

A Member State of the European Economic Area: Iceland, Lichtenstein, Norway.**(d) All natural persons who are nationals of, or legal persons who are established in, a Least Developed Country as defined by the United Nations:**

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Dem. Rep. Congo, Equatorial Guinea, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao PDR, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Djibouti, Solomon Islands, Somalia, South Sudan, Sudan, Tanzania, The Gambia, Timor-Leste, Togo, Tuvalu, Uganda, Vanuatu, Yemen, Rep. and Zambia.

(e) Participation in procedures for the award of procurement contracts or grants financed from the Facility shall be open to all natural persons who are nationals of, or legal persons established in, *any country other than those referred to in paragraph 1, where reciprocal access to external assistance has been established.* Reciprocal access in the Least Developed Countries as defined by the United Nations (UN) shall be automatically granted to the OECD/DAC members: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States.

3. Services under a contract financed from the Facility may be provided by experts of any nationality, without prejudice to the qualitative and financial requirements set out in the Bank's procurement rules.

4. Supplies and materials purchased under a contract financed from the Facility must originate in a State that is eligible under paragraph 1. In this context, the definition of the concept of 'originating products' shall be assessed by reference to the Bank's prevailing procurement guidelines/procedures, and supplies originating in the EU shall include supplies originating in the Overseas Countries and Territories.

5. Whenever the Facility finances an operation implemented through an international organisation, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraphs 1, care being taken to ensure equal treatment of all donors. The same rules apply for supplies and materials.

6. Whenever the Facility finances an operation implemented as part of a regional initiative, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraph 1, and to all natural and legal persons from a country participating in the relevant initiative. The same rules apply for supplies and materials.

7. Whenever the Facility finances an operation co-financed with a third entity, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons eligible under paragraph 1, and to all persons eligible under the rules of the third entity. The same rules shall apply to supplies and materials.

Caveat: The Bank and EU eligibility requirements are subject to change by the Bank and the EU. The applicant is responsible for checking whether there have been any updates on the eligibility requirements, as well as the UN's list of Least Developed Countries.

PROJECT COST, PHASING AND FINANCING PLAN

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

**TERMS AND CONDITIONS FOR
THE OPERATION OF THE SPECIAL ACCOUNT**

1. After CDB has received evidence satisfactory to it that the SA have been duly opened by GOH, GOH shall make a request to CDB for an amount not exceeding three months eligible expenditure to be withdrawn from the Grant and deposited in the SA ("the Authorised Allocation"). On the basis of such request or requests, CDB shall, on behalf of GOH, pay from the Grant and deposit in the SA such amount or amounts as GOH shall have requested.
2. Payments out of the SA shall be made exclusively for expenditures in respect of the reasonable cost of goods, works and services required for the components of the Project allocated for financing by CDB as shown in the Budget up to the respective limits specified therein ("Eligible Expenditures").
3. GOH shall furnish to CDB, at regular intervals, requests for subsequent payments from the Grant Account to be deposited into the SA to replenish that account. Prior to or at the time of each such request, GOH shall furnish to CDB the documents and other evidence required by CDB for the payment or payments in respect of which replenishment is requested. On the basis of each such request, CDB shall, on behalf of GOH, pay from the Grant and deposit into the SA such amount as GOH shall have requested and as shall have been shown by said documents and other evidence to have been paid out of the SA for Eligible Expenditures.
4. For each payment made by GOH out of the SA, GOH shall, at such time as CDB shall reasonably request, furnish to CDB such documents and other evidence showing that such payment was made to meet expenditures in connection with the Project as they were actually incurred.
5. Notwithstanding the provisions of paragraph 2 hereof, CDB shall not be required to make further deposits into the SA:
 - (a) if, at any time, CDB shall have determined that all further payments should be made to GOH directly from the Grant in accordance with the provisions of the Grant Agreement;
 - (b) if GOH shall have failed to furnish to CDB, within the period of time to be specified in the Grant Agreement any of the audit or other reports required to be furnished to CDB pursuant to the said Grant Agreement in respect of the monitoring and audit of the records and accounts for the SA; or
 - (c) if, at any time, CDB shall have notified GOH of its intention to suspend in whole or in part the right of GOH to receive payments from the Grant pursuant to the provisions of the Grant Agreement; and
 - (d) once the total unpaid amount of the Grant allocated to the Eligible Expenditures, less the amount of any outstanding special commitment entered into by CDB pursuant to the Grant Agreement with respect to the Project, shall equal ten per cent (10%) of the amount of the Grant.
6. Within the period of six months prior to the terminal disbursement date of the Grant, payments from the Grant of the remaining unpaid amount of the Grant allocated to the Eligible Expenditures shall follow such procedures as CDB shall specify by notice to GOH. Such further payments shall be made only

after and to the extent that CDB shall have been satisfied that all such amounts remaining on deposit in the SA, as of the date of such notice, will be utilised in making payments for Eligible Expenditures.

- (a) If CDB shall have determined at any time that any payment out of the SA:
 - (i) was made for an expenditure or in an amount not eligible pursuant to paragraph 3 hereof; or
 - (ii) was not justified by the evidence furnished to CDB, GOH shall, promptly upon notice from CDB:
 - (aa) provide such additional evidence as CDB may request; or
 - (bb) deposit into the SA (or, if CDB shall so request, refund to CDB) an amount equal to the amount of such payment or the portion thereof not so eligible or justified.

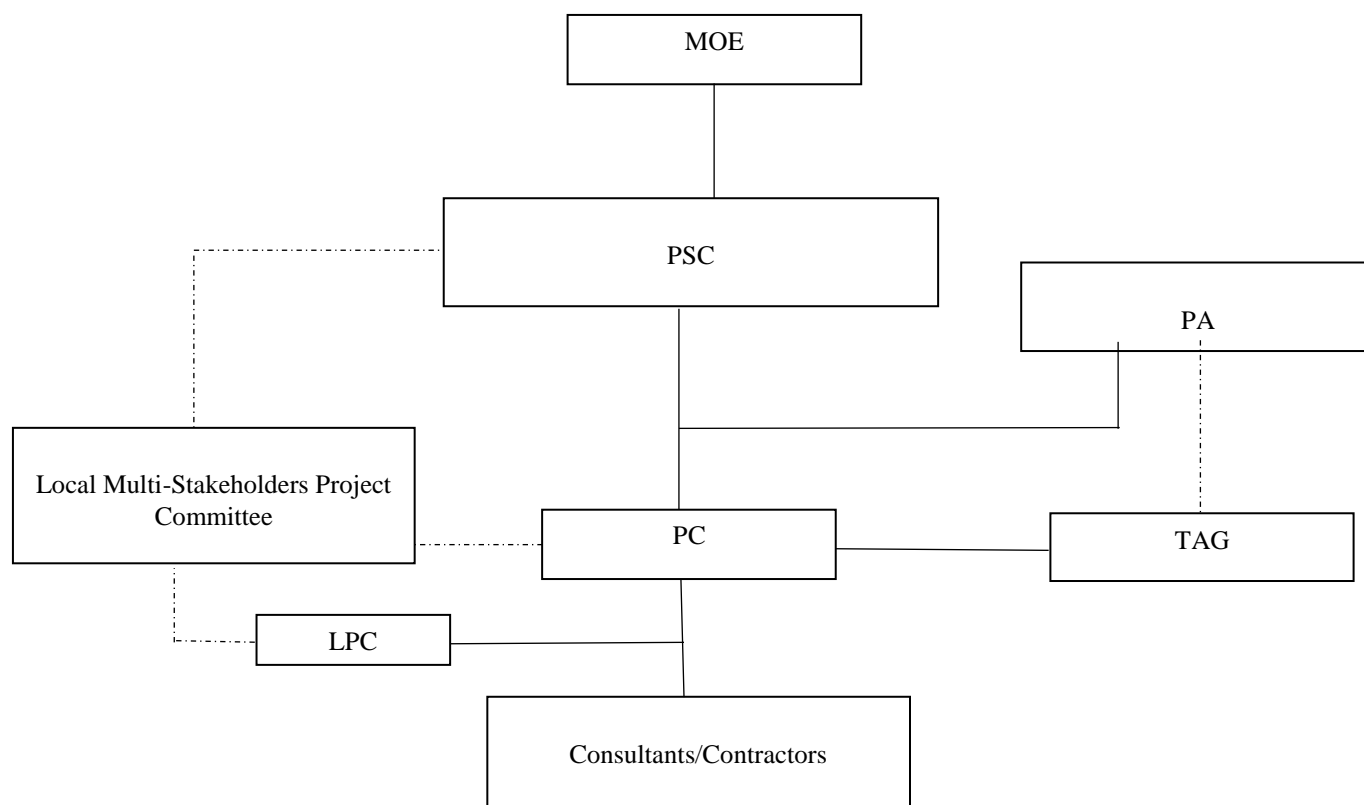
Unless CDB shall otherwise agree, no further deposit by CDB into the SA shall be made until GOH has provided such evidence or made such deposit or refund as the case may be.

- (b) If CDB shall have determined at any time that any amount outstanding in the SA will not be required to cover further payments for Eligible Expenditures, GOH shall, promptly upon notice from CDB, refund to CDB such outstanding amount.
- (c) if the SA is inactive for a period of six (6) months, CDB shall notify GOH that it will request a refund of the outstanding balance unless, within ninety (90) days GOH submits evidence satisfactory to CDB of Eligible Expenditure financed through the SA.
- (d) GOH may, upon notice to CDB, refund to CDB all or any portion of the funds on deposit in the SA.
- (e) Refunds to CDB made pursuant to sub-paragraphs 6 (b), (c) or (d) hereof shall be credited to the Grant for subsequent payment or for cancellation in accordance with the relevant provisions of the Grant Agreement.

7. Once CDB has received satisfactory documentation from GOH for all amounts advanced to the SA, GOH shall furnish a bank statement to CDB showing that the account balance has been reduced to zero and the SA shall be closed.

FIGURE 1

PROJECT MANAGEMENT ORGANISATIONAL STRUCTURE



MINISTRY OF THE ENVIRONMENT **ORGANISATIONAL STRUCTURE 2015**

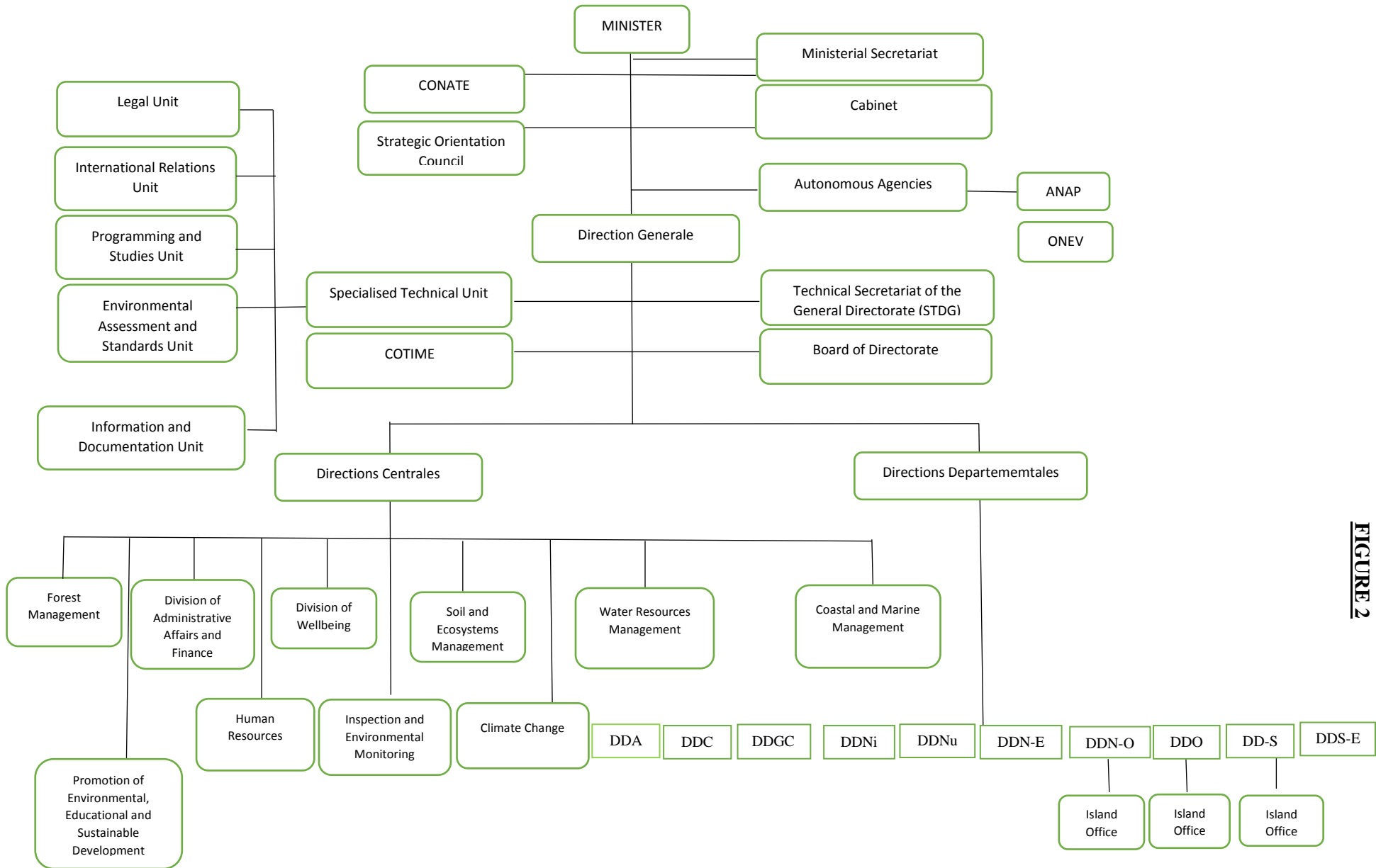


FIGURE 2

MAP OF PROJECT AREA

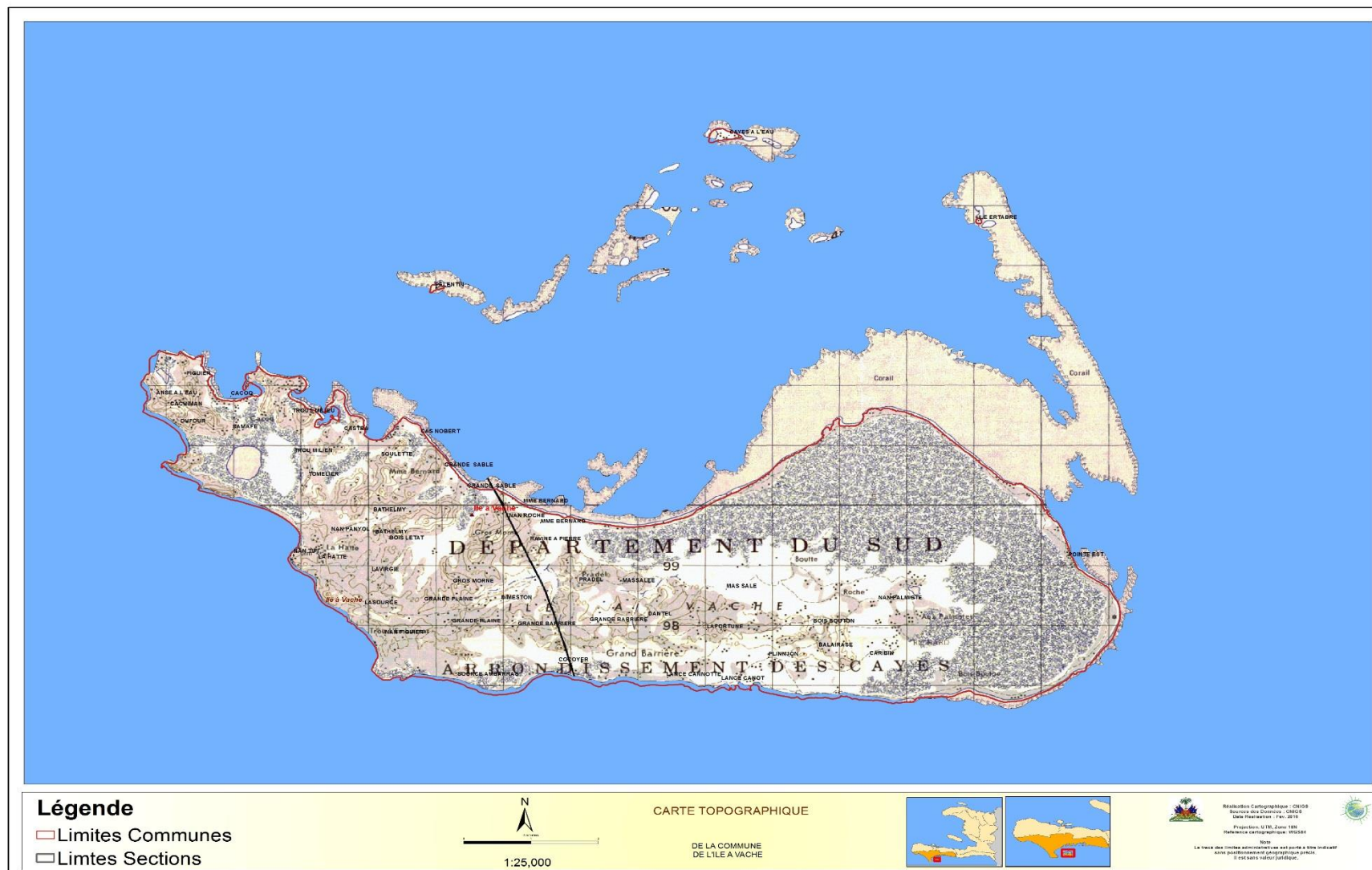


FIGURE 3

MAP OF HAITI



FIGURE 4

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