DRAFT
REGIONAL ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Caribbean Digital Transformation Program (P171528)

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ABBREVIATIONS AND ACRONYMS

CARCIP	Caribbean Regional Communications Infrastructure Program
CARDTP	Caribbean Digital Transformation Project
ECCB	Eastern Caribbean Central Bank
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Framework
ESS	Environmental and Social Standards
EWMP	E-Waste Management Plan
GRM	Grievance Redress Mechanism
LMP	Labor Management Procedures
OECS	Organization of the Eastern Caribbean States
PIU	Project Implementation Unit
RPF	Resettlement Policy Framework
SEP	Stakeholder Engagement Plan

EXECUTIVE SUMMARY

This document represents the Environmental and Social Management Framework (ESMF) to be used under the Caribbean Digital Transformation Program (P171528) (CARDTP). The ESMF provides guidance to the Eastern Caribbean Central Bank (ECCB) and the national governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines on the identification of possible social and environmental risks and impacts; develop mechanisms to mitigate and comply with the relevant country and World Bank policy requirements; lay out the approach and procedures that are relevant during planning and implementation of the project investments in order to mitigate potential environmental and social impacts of the proposed investments; and describe the institutional and implementation arrangements, the monitoring mechanisms, and the capacity-building needs for effective implementation of the ESMF and other related safeguard instruments. The ESMF has the following specific objectives:

- To establish clear procedures and methodologies for the environmental and social planning, consultations, screening, review, approval/clearance, disclosure and implementation of subprojects to be financed under the Project;
- To propose broad streamlined procedures for the environmental and social assessment process and subsequent supervision of sub-projects
- To define guidelines for sub-projects which might require an environmental and social management plan (ESMP) and electronic waste management plan (EWMP) by location, size of project and other site-specific criteria and
- To develop guidelines for preparation of the operation and maintenance plans by communities and local government for new investments taking into account environmental and social considerations and mitigation measures identified during micro-project evaluation.

1. Project Background and Description:

Rapid digital transformation is re-shaping the global economy, permeating virtually every sector and aspect of daily life, changing the way we learn, work, trade, socialize, and access public and private services and information. In 2016, the global digital economy was worth some USD 11.5 trillion, equivalent to 15.5 percent of the world's overall GDP. The project countries are lagging on all foundational elements of the digital economy, with common areas requiring improvement. Varying regulatory environments and market development trajectories have resulted in differing market outcomes in areas such as broadband adoption. However, the countries are at similar, low levels of development of cross-cutting areas like cybersecurity, and the use of digital platforms – public and private. Professional digital skills development remains low and concentrated. Digital entrepreneurship lags behind countries at a similar level of socio-economic development.

The project adopts a regional approach to strengthening the foundations of the digital economy. The project is expected to contribute to increased digital connectivity, digital public services and the creation of technology enabled businesses and jobs across the participating countries: the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines. The project consists of four components:

- **Component 1: Digital Enabling Environment:** This component will support the development of a positive enabling environment for the region's digital economy that drives competition, investment and innovation while promoting trust and security of online transactions.
- **Component 2: Digital Government Infrastructure, Platforms and Services:** This component will support public sector modernization, resilience and delivery of digital public services to individuals and businesses. Digitization of government services and operations is expected to help drive a wider digital transformation across the region.
- **Component 3: Digital Skills and Technology Adoption:** This component aims to better equip individuals and businesses across the region for the jobs and economy of the future and to spur innovation and job creation.
- **Component 4: Project Implementation Support:** This component will support national and regional level Project Implementation Units (PIUs) with management and implementation of the project and associated activities.

Financing at the national level for project activities is, USD 20 million in Dominica, USD 8 million in Grenada, USD 15 million in Saint Lucia and USD 20 million in Saint Vincent and the Grenadines, and a regional grant of USD 8 million implemented by the Eastern Caribbean Central Bank (ECCB). The specific project information for each component is presented in detailed in Section 2 of this report.

2. Legal and Regulatory Framework:

This Environmental and Social Management Framework (ESMF) is developed in line with relevant national laws of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines and regulations and relevant World Bank Safeguards Policies.

Country Level:

At the national level the existing legislation for the participating countries were reviewed to identify the provisions regarding environmental and social safeguards for the Caribbean Digital transformation Program. The main pieces of existing legislation relevant to the project in each country are highlighted below:

- Commonwealth of Dominica:
  - Physical Planning Act (2002)
  - Dominica Building Code (1996)
  - Solid Waste Management Act (2002)
  - Environmental Health Services Act (1997)
  - Water and Sewerage Act (1989)
  - Kalinago Territory Act (2015)
  - Land Acquisition Act (1986)
- Grenada:
  - Environmental Management Act (2005)
  - Land Development Control Act (1968)
  - Solid Waste Management Authority (1995)
- Saint Lucia:
  - Physical Planning and Development Act (2005)
  - Saint Lucia Solid Waste Management Authority (1996)
- Saint Vincent and the Grenadines:

- Town and Country Planning Act (1976)
- Waste Management Act (2000)

These legal instruments that are likely to affect the design and implementation of the project are explained in detail in Section 4.1. **The legal and regulatory framework for the project will be further developed as the project details are developed for each country.**

World Bank Environmental and Social Framework

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements for projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The following World Bank policies and environmental and social standards (ESS) were identified for the project and will govern the project related activities throughout design and project implementation.

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts
- ESS2: Labor and Working Conditions
- ESS3: Resource Efficiency and Pollution Prevention and Management
- ESS4: Community Health and Safety
- ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- ESS8: Cultural Heritage
- ESS10: Stakeholder Engagement and Information Disclosure

ESS7 is only applicable to the Commonwealth of Dominica as it has the Kalinago's who are considered by the Bank's standard to be indigenous people. An Indigenous People Policy Framework (IPPF) has been developed for the Commonwealth of Dominica. ESS9 is not listed as it is not relevant to the project as there are no financial institutions involved.

Capacity building will be important for the implementation and monitoring of the safeguard-related instruments and national policies and regulations described above which will be required at different levels of the institutional set-up for the project. The Eastern Caribbean Central Bank (ECCB) and Governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines will need to establish regional and national Project Implementation Units (PIUs).

3. Existing Environmental and Social Baseline

Commonwealth of Dominica:

Dominica is located at 15 degrees North and 61 degrees west, occupying a central position in the eastern Caribbean archipelago. The country is bordered by the French territories of Guadeloupe and Martinique to the north and south respectively. The island is approximately 750.6 square kilometers and is the largest in the Windward and Leeward groups of the Eastern Caribbean (Figure 1). Dominica is host to an astonishing biodiversity, including more than 1,200 species of plants, and the most diverse assemblage of

wildlife in the eastern Caribbean, including 175 species of avifauna. The Biodiversity Strategy and Action Plan (2006) provide an excellent reference document and bibliography of these resources, as well as outlining national direction for the way forward. Dominica was originally populated by Amerindian peoples, known as Kalinago and is the only island in the Caribbean still to possess distinct communities of these indigenous people of the Caribbean. Population estimates for 2001 indicate that Dominica had a population of approximately 71,000 persons (a decline from 74,750 in 1994), including two thousand Kalinago's, the remaining survivors of the first inhabitants of the island. The Dominica economy reflects many of the traditional features of a small open economy. This includes a high level of dependence on external trade as a proportion of gross domestic product (GDP), dependence on single sector export products (in this case agriculture) and tourism revenue, high levels of underemployment and unemployment, and dependence on foreign capital (both public and private sector) for investment into productive sectors and for infrastructural development.

Grenada:

Grenada, byname Isle of Spice, island country of the West Indies. It is the southernmost island of the north-south arc of the Lesser Antilles, lying in the eastern Caribbean Sea about 100 miles (160 km) north of the coast of Venezuela. Oval in shape, the island is approximately 21 miles (34 km) long and 12 miles (19 km) wide. Grenada's forest cover has remained relatively stable from 2004 to 2015 mainly due to the policies put in place by the Grenadian government. The Grenadian forests are used for a variety of purposes such as the production of timber and providing habitat for the country's wildlife. The last population census conducted in Grenada in 2011 revealed that the island has 106, 667 people. The Census also showed, quite surprisingly, that there are more males than females indicating numbers of 53, 898 and 52, 769 respectively. The age group with the largest number of people is the 20-24 grouping with a percentage of 9.29 of the entire population and is closely followed by the 15-19 age range with 9.27 %. Grenada's economy over the years has been transformed into a predominantly service sector economy with the Tourism sector being the main contributor to Gross Domestic product (GDP). In recent times the Government has been placing enormous emphasis on the development of that sector by promoting the development of high-end quality resorts, investing more in promotional activities and seeking to enhance the country as pure and pristine.

Saint Lucia:

Saint Lucia is 27 miles (43 km) long and has a maximum width of 14 miles (23 km). The capital and major port is Castries. Though the island has a relatively small landmass, it possesses a high degree of biodiversity and species endemism and productive coastal and nearshore habitats, earning it international recognition as a biodiversity hotspot. Saint Lucia's marine habitats and biodiversity provide ecosystem services that buffer the impacts of storms and climate change, provide residents with valuable natural resources and opportunities for sustainable livelihoods, and support economically important agriculture and tourism industries. St Lucia's population of 183,627 compares to the 2009 census of 173,700. Despite being one of the smallest countries in the world (617 square kilometers or 238 square miles) and ranking 191st, St Lucia has a fairly high population density of 298 people per square kilometer, which ranks 41st. The country's economy depends primarily on tourism (65% of GDP), banana production, and light manufacturing. The per capita GDP increased slightly, from US$ 6,626 in 2010 to US$ 6,848 in 2014.

Saint Vincent and the Grenadines:

Saint Vincent and the Grenadines, island country lying within the Lesser Antilles, in the eastern Caribbean Sea. It consists of the island of Saint Vincent and the northern Grenadine Islands, which stretch southward toward Grenada. The island of Saint Vincent lies about 20 miles (32 km) southwest of Saint Lucia and 100 miles (160 km) west of Barbados. Saint Vincent and the Grenadines boasts a diverse collection of biological

resources. St. Vincent is rugged and mountainous with steep slopes and fertile yellow earth, volcanic ash and alluvial soils. St Vincent and the Grenadines has a population of 111,000, which has remained fairly flat since 1990. The country is densely populated with 307 people per square kilometer (792/sq mi), which ranks 39th in the world. Saint Vincent and the Grenadines' economy depends on agriculture, tourism, construction, remittances, and a small offshore banking sector.

4. Environmental and Social Impacts

The environmental risk classification for the project is moderate under the World Bank's Environmental and Social Management Framework (ESMF) since most of the project activities will involve small-scale works for the deployment of fiber optic and for the rehabilitation of existing infrastructure located in both urban and rural areas across the Commonwealth of Dominica, Grenada, Saint Lucia, and Saint Vincent and the Grenadines. An assessment of the environmental and social impacts and risk levels that the implementation of the project could create are:

Pre-construction:

- Contract negotiation
- Mobilization/transport of workers and equipment
- Waste generation including construction, municipal, and special waste (potentially dangerous)
- Preparation of construction site, including soil alteration

Construction:

- Vegetation and soil removal
- Mobilization/transport of workers and equipment
- Construction of Project infrastructures (new and rehabilitation/retrofitting works)
- Installation and use of equipment
- Atmospheric emissions
- Water emissions
- Waste generation including construction, municipal, and special waste (including e-waste)

Operation:

- Uses of Project infrastructure and equipment
- Maintenance of project equipment and infrastructures
- Waste generation including construction, municipal, and special waste (including e-waste)
- Generation (or increase of) wastewaters
- Socioeconomical implications

Based on the project specifics, the key environmental and social aspects that are been considered for the impact assessment are the following:

Physical Environment:

- Effects on the runoff by inappropriate disposal of solid wastes and garbage
- Effects on the natural waters by inappropriate disposal of solid wastes and garbage
- Effects on water quality by inappropriate disposal of solid wastes and garbage
- Effects on air quality by infrastructure construction
- Effects on air quality by particulate increased traffic and emissions by machinery and vehicles
- Effects on air quality by wastes and effluents

- Effects on soils by wastes and effluents
- Effects on soils by construction of infrastructure
- Effects on environmental quality by increase noise levels during infrastructure construction
- Effects on environmental quality by increase noise levels by increase traffic and personnel

Biological Environment:

- Effects on flora by inadequate disposition of wastes and effluents
- Effects on fauna by inadequate disposition of wastes and effluents
- Effects on habitats by inadequate disposition of wastes and effluents

Social and Economic Environment:

- Effects and changes on regional demographics
- Effects and changes on job generation and employment
- Changes in quality of life due to the increase economical activities
- Changes in quality of life due to the increase mobility, transport and job in the region
- Alterations on the regional demography
- Labor conflicts due to job expectations
- Effect on health and safety in the stakeholder's communities due to changes in lifestyles

5. Mitigation Measures

These are specific actions recommended to address the potential impacts identified for project; to reduce, avoid mitigate and or compensate the negative social and environmental impacts identified in the impact assessment of a project proposed activities. As indicated in Section 6 (Impact Analysis), these are summarized and ranked in Table below.

Impacts Analysis

Phase of the project	Impact category I	Level of Impact (+ or -)
C/O	increase expectation for new jobs	Very High (+)
C/O	affectation to the everyday life	High (+)
C/O	increase economical activities and practices	High (+)
C/O	increase request for services and equipment	Medium (+)
C	soil contamination	Very Low (-)
C	affectation air quality	Very Low (-)
C	increase of occurrence of labor accidents	Very Low (-)
C	changes in traffic patterns	Medium high (-)
C/O	changes in land values	Medium high (+)
C=Construction phase / O= Operational phase		

As a result of the analysis, is evident that the most imminent potential impacts are associated with labor and community health and safety and solid and e-waste management. These types of impacts would require additional assessment and analysis to design the appropriate mitigation measures as soon as the detailed project actions are identified. A screening process used to identify these types of risks and impacts is described in more detail in Section 9 and Annex 2 of this ESMF. General mitigation measures have been developed for the impacts identified in Section 6 and Table 9.

The general mitigation measures presented in the ESMF ae supported by an Environmental and Social Management Plan (ESMP) which are to be developed for subproject activities that are still pending for final design and site assignment. The requisite guidelines to prepare the relevant Environmental and Social Management Plans are presented in detail in Section 8 of the ESMF for:

- Waste Management Plan (WMP)
- Traffic Management Plan (TMP)
- Labor Management Procedures (LMP)
- Chance Finds Procedures (CFP)
- Cultural Heritage Management Plan (CHMP)
- Occupational Health and Safety Plan (OHSP)
- Emergency Readiness Plan
- Environmental and Social Management Plan (ESMP)

6. Institutional Arrangements for the ESMF

Implementation and monitoring of the Environmental and Social Management Framework (ESMF) and all other Environmental and Social Standards (ESS) instruments will be the responsibility of each implementing agency, that is ECCB for regional project activities, and the line ministry responsible for ICT in each country for national level project activities. Coordination with stakeholders at the national level for regionally implemented activities will be built-in to each contract implemented by the regional PIU, and they PIU will be responsible for monitoring of adherence to ESS instruments for the activities. For example, consultants conducting legislative reviews will be required to consult with relevant stakeholders in each country and also provide support to the national legislative drafting units to transpose recommendations to national legislation, while adhering to the requirements of applicable ESS instruments identified by the regional PIU. For this, both the regional and national level project implementation units, will engage Environmental and Social Specialists who will support this function, and within three (3) months of the Effective Date of the Project.

7. Project Grievance Redress Mechanism

The project and its associated activities may have some short term and reversible impacts. As a result, a project level Grievance Redressal Mechanism (GRM) was developed. The GRM will enable the Project Authorities to address any grievances against the Project. It must be noted that this GRM covers grievances that relate to the impacts that the project will have on people, as presented in the Stakeholder Engagement Plan (SEP); in the Resettlement Policy Framework (RPF) and/or the Resettlement Action Plans (RAP); as well as for the implementation of the Indigenous Peoples Planning Framework (IPPF.) In the case of the IPPF, this GRM will integrate in the Grievance Committee (GRC) a Representative from the Kalinago Territory -named by their organization.

Grievances that relate to project workers will be handled by the Workers Grievance Redress mechanism (WGRM) which is included as part of the project's Labour Management Procedures (LMP) that has been prepared. The WGRM will also specify an individual who will be responsible for dealing with any gender-based violence (GBV) issues, should they arise.

The three level GRM process is presented below in below.

Project GRM process

Level One	1. Receive grievance 2. Acknowledge grievance 3. Register/Log 4. Screen 5. Investigate 6. Resolution
Level Two	Grievance Redress Committee (GRC)
Level Three	Local Courts

All complaints should be received by the Project Manager of each implementing PIU. This includes the project contact personnel in each of the participating countries. Through the consultation process in each participating country, stakeholders will be formed of various avenues through which the mechanism can be accessed. Complaints can be made in person, anonymously, writing, verbally over the phone, by fax, emails or any other media. The point of receipt of complaints and contact information of the social specialist in each PIU will be updated upon establishment and staffing of the PIUs, while temporary contact persons have been listed in the interim**.** All grievances received by the established points of contact within the individual nations should be forwarded to the respective Project Manager within 24 hours of receipt.

A complaint that is not resolved at the concerned level the grievance will be escalated to level 2, which requires the input of the Grievance Redressal Committee (GRC). A Grievance Redressal Committee (GRC) will be formed in each implementing entity, that will consist of members of their respective Project Steering Committees (Regional project Steering Committee, in the case of ECCB), civic leaders and relevant representatives. This committee will be chaired by the representative of the implementing line ministry/agency in the corresponding Project Steering Committee. The GRC will be called into place when a first-tier resolution is not found, but it could also meet on a quarterly basis to evaluate the performance of the project level GRM. From this perspective it is a standing body.

This committee will be chaired by the representative of the implementing line ministry/agency in the corresponding Project Steering Committee. The permanent secretaries of the participant ministries will assign their respective representative to the GRC. The way in which the representative of the civil society will be defined is still TBD, but line ministry or the PIU can invite active NGOs to nominate a representative.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level (3): taking legal recourse withing the local courts. A last resort for the complainant is approaching the World Bank, if they find the established GRM cannot resolve the issue. It must be noted that this GRS should ideally only be accessed once the project's grievance mechanism has first been utilized without an acceptable resolution. World Bank Procedures requires the complainant to express

their grievances in writing to World Bank office in Washington DC by completing the bank's GRS complaint form which can be found at the following URL link: http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service#5 .

Prior to project implementation, the implementing agencies (line ministries and ECCB) will initially brief all staff of the project office, their respective Project Steering Committees (PSC), the sub-projects including consultants and contractors, PIU staff, and Ministries on the Grievance Redressal Mechanism of the Project and explain to them the procedures and formats to be used including the reporting procedures.

8. Project Disclosure and Public Consultation

This draft ESMF document is being shared with the relevant stakeholders in order to inform them of project activities, identify any additional relevant concerns or issues, and thereby improve the quality and usefulness of the Final ESMF document. The ESMF, along with other safeguards instruments for the project Environmental and Social Commitment Plan (ESCP), Stakeholder Engagement Plan (SEP), Grievance Redress Mechanism (GRM), Indigenous Peoples Planning Framework (IPPF), Labor Management Procedures (LMP), Resettlement Policy Framework (RPF), Environmental and Social Management Plans (ESMPs) and E-Waste Management Plan (EWMP) which form part of the ESMF will be published to solicit stakeholder input. All these documents are being disclosed on the Eastern Caribbean Central Bank's (ECCB) and government's (Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines) website in draft form as part of the consultation process. The ECCB and the government's (Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines) undertake community consultation before and during project implementation. This will allow for the development of open communication or rapport between the community and the ECCB and governments. It will allow for concerns to be addressed upfront and the affected community would have greater tolerance to the inconveniences experience.

The ESMF will be revised to incorporate relevant stakeholder comments generated from consultation meetings and will be updated as detailed project information becomes available.

1. INTRODUCTION

This project, Caribbean Digital Transformation Program (P171528) (CARDTP) is expected to create many positive impacts and social benefits both for the governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines and digital telecommunications system. There are also potential negative consequences which may occur as a result and for which measures should be put in place to mitigate these negative impacts. To reduce or minimize these negative impacts, this ESMF was developed in keeping with the World Bank's requirements and governments (Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines) commitment to address those project-related negative outcomes which will affect the environment, communities and individuals.

This ESMF document therefore establishes the commitment that the governments (Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines) places on good environmental and social management practices throughout the project cycle. It also serves as a public document for stakeholder information and improvement of the project by providing feedback on community concerns. As the details of the site locations are not known at the time of project preparation, an Environmental and Social Management Framework (ESMF) is required. Activities with the potential for significant negative environment and social impacts are not expected, however, if any are identified, a subproject-specific environmental and/or social assessment will be prepared and subjected to review and approval by the WB. All proposed activities will be subject to environmental screening to decrease potential negative impacts through analysing design alternatives and to avoid or mitigate negative impacts. The tool for screening is in section 9.1 and Annex 2.

This Environmental and Social Management Framework (ESMF) is developed in line with relevant national laws of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines and regulations and relevant World Bank Safeguards Policies. The purpose of the condensed ESMF is to guide in screening of proposed sub projects, identify specific environmental and social risks and impacts associated with the proposed subprojects, establish mitigation measures and how to operationalize, including specific safeguards instruments, principles, organizational arrangements, and design criteria to be applied to meet the needs of the people who may be affected by the various sub-projects. The ESMF, therefore, is prepared to guide and govern the subprojects that are selected for financing and sets out the elements that will be common to all subprojects that will entail mitigation measures.

The ESMF has the following as some of the specific objectives:

- To establish clear procedures and methodologies for the environmental and social planning, consultations, screening, review, approval/clearance, disclosure and implementation of subprojects to be financed under the Project;
- To propose broad streamlined procedures for the environmental and social assessment process and subsequent supervision of sub-projects;
- To define guidelines for sub-projects which might require an environmental and social management plan (ESMP) and electronic waste management plan (EWMP) by location, size of project and other site-specific criteria; and,
- To develop guidelines for preparation of the operation and maintenance plans by communities and local government for new investments taking into account environmental and social considerations and mitigation measures identified during micro-project evaluation.

The ESMF focal point for regional project activities is the Projects and Technical Assistance Unit of the Eastern Caribbean Central Bank (ECCB), and at the country level the line Ministry or Department will be responsible for its coordination and implementation. This ESMF will be shared with the public as part of disclosure and consultation to gather feedback and input. This ESMF was prepared based on the best available information and it will be updated at the detailed design stage when more information becomes available on exact location, size, scope and methodology of the proposed activities and works.

2. PROJECT DESCRIPTION

2.1 Project Background

Rapid digital transformation is re-shaping the global economy, permeating virtually every sector and aspect of daily life, changing the way we learn, work, trade, socialize, and access public and private services and information. In 2016, the global digital economy was worth some USD 11.5 trillion, equivalent to 15.5 percent of the world's overall GDP. E-commerce is commonplace, ride sharing applications are being localized across the world, and video sharing platforms are becoming an increasingly significant source of learning and education. However, countries in the Eastern Caribbean are currently capturing only a fraction of this innovation and growth potential and need to strategically and proactively invest in the foundational elements of their digital economy to ensure that their business and citizens keep pace and thrive in a digital world.

Development of a dynamic, inclusive and safe digital economy requires a comprehensive, ecosystem approach, simultaneously building up several interlinked foundations:

- Digital Infrastructure: building the networks, nodal infrastructure and regulatory environment to ensure that every individual, business and government has access to high speed, low cost and reliable broadband on order to access the internet, digital services and participate in the digital economy;
- Digital Platforms: building the enabling platforms and components (infrastructure, software, digital ID and institutions) critical to more efficient public services delivery and an environment supportive of private sector platforms for e-commerce, value chain integration and access to information and employment opportunities;
- Digital Financial Services (DFS): ensuring that every individual, business and government has the ability to carry out financial transactions digitally, including e-payments and transaction accounts;
- Digital Skills: ensuring that every individual is digitally literate and able to access digital services and commerce, building a sufficient pool of advanced digital talent to support growth of new 'digital' businesses and drive digitization of traditional industries, and equipping all workers with the skills and lifelong learning opportunities to thrive in the economy of the future.
- Digital Entrepreneurship and Innovation: building an ecosystem that supports technology driven innovation, business creation and investment – bringing the digital economy to life with new digitally enabled services, business models, content and jobs.

The project countries are lagging on all foundational elements of the digital economy, with common areas requiring improvement. Varying regulatory environments and market development trajectories have resulted in differing market outcomes in areas such as broadband adoption. However, the countries are at similar, low levels of development of cross-cutting areas like cybersecurity, and the use of digital

platforms – public and private. Professional digital skills development remains low and concentrated. Digital entrepreneurship lags behind countries at a similar level of socio-economic development.

2.2 Project Description and List of Components

The Project's Development Objective is to increase access to digital services, technologies and skills by governments, businesses and individuals in the participating Eastern Caribbean countries.

The Project comprises three components that address key bottlenecks and harness opportunities to develop the Eastern Caribbean Digital Economy as a driver of growth, job creation and improved service delivery. It follows a comprehensive, ecosystem-based approach, bringing together multiple arms of government and multiple economic and social sectors to build the core digital economy foundations simultaneously. It aims to ensure that individuals and businesses within the region is empowered with the access to broadband, digital financial services and skills needed to actively participate in an increasingly digital marketplace and society. It leverages public sector modernization and digitization to improve service delivery and to drive creation of a digital culture across the region. It will facilitate technology adoption to improve productivity of flagship industries and create demand for digitally enabled jobs. It aims to foster regional integration and cooperation to capture the economies of scale and scope required to increase impact, value for money of the project interventions and to create a more competitive, seamless regional digital market to attract investment and provide room for growth of digital firms. The Project will promote climate resilience through support to disaster recovery/business continuity of critical communications systems, databases and services in the event of a natural disaster. It will also help contribute to reduced emissions by eliminating the need to physically travel to access services and jobs and promote the development of a clean, knowledge-based economy in the region. Countries will finance approximately, USD 20 Million Dominica, USD 8 Grenada, USD 15 Saint Lucia and USD 20 Saint Vincent and the Grenadines.

The project components and described below.

Component 1: Digital Enabling Environment

This component will support the development of a positive enabling environment for the region's digital economy that drives competition, investment and innovation while promoting trust and security of online transactions. Specific activities in this component could include the following:

- **Subcomponent 1.1: Telecommunications: Legal and Regulatory Environment, Institutions and Capacity -** This sub-component aims to support greater telecoms sector competition, investment, affordability and service quality across the region as well as enhancing resilience and emergency response capabilities for critical digital infrastructure and services.
- **Subcomponent 1.2: Digital Financial Services (DFS): Legal and Regulatory Environment, Institutions and Capacity** - This sub-component aims to spur greater innovation, investment and adoption of digital financial services across the region.
- **Subcomponent 1.3: Cybersecurity, Data Protection and Privacy: Legal and Regulatory Environment, Institutions and Capacity** - This sub-component aims to build trust in online transactions and strengthen the security of sensitive data and critical network infrastructure.

Component 2: Digital Government Infrastructure, Platforms and Services

This component will support public sector modernization, resilience and delivery of digital public services to individuals and businesses. **Digitization of government services and operations is expected to help drive a wider digital transformation across the region.** Specific activities could include:

- **Subcomponent 2.1: Cross-Cutting Enablers of Digital Government Operations and Services -** This subcomponent will support the development of key enablers of digital government services and operations, in line with regionally harmonized standards and frameworks. These include protocols and standards for digital government, a payment platform, digital identification and authentication infrastructure.
- **Subcomponent 2.2: Government Productivity Platforms and Citizen-Centric Digital Services -** This sub-component supports development of priority government productivity platforms and citizen-centric digital public services.

Component 3: Digital Skills and Technology Adoption

This component aims to better equip individuals and businesses across the region for the jobs and economy of the future and to spur innovation and job creation. Specific activities in this component could include:

- **Subcomponent 3.1: Workforce-ready digital skills** - This sub-component aims to identify the digital skills (technical and soft skills) in demand regionally and globally and to create a clear pathway of support from training to job placement in digitally enabled professions.
- **Subcomponent 3.2: Technology Adoption -** This sub-component seeks to increase adoption of digital platforms and technologies by businesses across the region and support creation and expansion of digitally enabled businesses.

Component 4: Project Implementation Support

This component will support national and regional level Project Implementation Units (PIUs) with management and implementation of the project and associated activities. The project can support capacity building initiatives, as well as PIU staffing through hiring of expert consultants for key areas such as project management, technical advisory and implementation support, procurement, financial management, environment and social safeguards, monitoring and evaluation and strategic communications. It will also support capacity development of participating regional institutions and regional knowledge sharing events and forums.

3. LEGAL AND REGULATORY FRAMEWORK

Each implementing entity will have oversight for the CARDTP project activities being implemented by them and will administer the project in line with and the relevant national policies and regulations for governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines, as well as the World Bank's policies and environmental and social framework. **The legal and regulatory framework for the project will be further developed as the project details are developed for each country.**

3.1 National Regulation

The existing national legislation for the participating countries has been reviewed to identify the provisions regarding environmental and social safeguards for the Caribbean Digital transformation Program. The main pieces of existing legislation relevant to the project are highlighted below:

3.1.1 Commonwealth of Dominica

- **Physical Planning Act (2002)**

The Act provides for the orderly and progressive development of land in both urban and rural areas, for the grant of permissions to develop land, and for other powers of control over the use of land. The Act details the application and approval process which is executed through the Physical Planning Division of the Physical Planning and Development Authority. The Act states that: 'No person shall carry out any development of land except under and in accordance with the terms of a development permission granted in that behalf prior to the commencement of such development,' and makes provision for the Authority to consult with local authorities where such consultation is desirable in the interests of good planning. 'Every application for permission to develop land, made by the owner of the land, shall be accompanied by a certified copy of the applicant's certificate of title or other relevant title document in respect of the land to which the application relates.' 'Unless the Authority otherwise determines, environmental impact assessment shall be required in respect of any application for development permission where the Authority finds that 'significant environmental harm could result'. The Authority may impose conditions on a grant of development permission to arrange for 'the preservation of any buildings or sites of importance to the cultural heritage of Dominica.' This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Dominica Building Code (1996)**

The Building Code provides the physical planning authorities with the tools for examination of development proposals to ensure that all developments are in concert with the physical, social and economic requirements of the Organization of East Caribbean States. Any building construction to be carried out in the country must comply with the Building Code. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Solid Waste Management Act 2002**

The Dominica Solid Waste Management Corporation (DSWMC) is designated by the 2002 Solid Waste Management Act to operate waste management facilities and to develop waste diversion strategies. The Act authorizes the Corporation to contract and develop guidelines and procedures for contractors that conduct waste operation in the state. The Act is applicable given the proposed rehabilitation and retrofitting of existing training centres and installation of equipment which will result in the removal of

waste (i.e. construction debris and old electronic equipment) to the DSWMC approved disposal site, Fond Cole landfill. The Government of Dominica does not have a formal electronic waste management policy, but the Dominica Solid Waste Management Corporation (DSWMC) has established standard operating procedures for the collection and disposal of electronic waste at Fond Cole Landfill.

- **Environmental Health Services Act (1997)**

The Act makes provision for the conservation and maintenance of the environment in the interest of health generally and in relation to places frequented by the public. Any environmental health issues such as asbestos handling, pest control and pollution must follow procedures set by the Environmental Health Division which is guided by an Environmental Health Board. The Act is applicable given the proposed rehabilitation and retrofitting of existing training centres.

- **Water and Sewerage Act (1989)**

The water management authority is vested in DOWASCO which includes among its functions water conservation and the preservation and protection of catchment areas. Responsibility for catchment areas is shared with the Forestry and Wildlife Division. The Act is applicable given the proposed rehabilitation and retrofitting of existing training centres.

- **Kalinago Territory Act (2015)**

The Carib Reserve Act of 1978, amended by an act of parliament in 2015, provides for the establishment of a body corporate for the administration of the Reserve and for matters connected herewith.[1] The amendment changed the name Carib to Kalinago, and since then any reference to the indigenous people of Dominica makes use of the name Kalinago. The Act gives the Kalinago Council[2] the authority and responsibility for the management of the Kalinago Territory and variously describes the establishment of the office of the Kalinago Chief, the Constitution, and powers of the Kalinago Council. Specifically, it gives various powers to the Kalinago Chief and the Kalinago Council and outlines responsibilities of the Minister responsible for the Council. Furthermore, it outlines the means of conducting elections for Council Members and the Chief. It also indicates how funds are to be used on behalf of the Territory. The Act gives the Kalinago Council powers to institute various bylaws pertinent to the management of the community. The Act is applicable given the proposed rehabilitation and retrofitting of existing training centres in the Kalinago Territory.

- **Land Acquisition Act (1946, amended in 1986)**

The Land Acquisition Act, Chapter 53:02 deals with the acquisition of land by the state, and outlines procedures in acquiring private land for a public purpose. No lands are to be acquired under this project as existing training centres are located on Government of Dominica lands.

3.1.2 Grenada

- **Environmental Management Act (2005)**

The Environmental Management Act deals with the effective management of the natural and cultural environment to ensure conservation, protection and sustainable use of its natural and cultural resources. It also ensures that any development activities which may have any adverse effect on the environment be assessed before such activity is commenced and that such adverse effects be taken into account in

[1] Carib Act of 1978 http://www.dominica.gov.dm/laws/chapters/chap25-90.pdf

[2] The indigenous people of Dominica are now referred to as Kalinago, following an Act of Parliament in 2015 (See page 5 of this document)

determining whether or not such activity may be authorised. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Land Development Control Act (1968)**

The Land Development Control Act is to make provision for the orderly and progressive development of land and to preserve and improve the amenities thereof; for the grant of permission to develop land and for other powers of control over the use of land. Notwithstanding the provisions of any other law to the contrary, no person shall commence to carry carryout development of any land in Grenada without the prior written permission of the Authority. An application to the Authority for permission to develop land shall be in triplicate in the form set out in the Second Schedule to this Act and shall be accompanied by such maps and plans as may be necessary or as may be required by the Authority. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Solid Waste Management Authority Act (1995)**

An act to establish a Solid Waste Management Authority charged with the duty of developing the solid waste management facilities and improving the coverage and effectiveness of solid waste storage, collection and disposal facilities. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

3.1.3 Saint Lucia

- **Physical Planning and Development Act (2005)**

The Physical Planning and Development Act is to make provision for the development of land, the assessment of the environmental impacts of development, the grant of permission to develop land and for other powers to regulate the use of land, and for related matters. A person shall not commence or carry out the development of any land in Saint Lucia without the prior written permission of the head of the Physical Planning and Development Division. An application to the Head of the Physical Planning and Development Division for permission to develop land shall be made on the prescribed form and shall be accompanied by:

a) a map sufficient to identify the land to which it relates and such plans, drawings and other materials as are necessary to describe the development which is the subject of the application;
b) notice in writing signed by the owner or agent of the owner of the land to which the application relates acknowledging that the owner has knowledge of and does not object to the making of the application;
c) any statutory consent which the applicant is required to obtain for or in connection with the development prior to applying for the permission of the Head of the Physical Planning and Development Division;
d) in cases where this is required by regulations made under this Act, the certificate of an engineer registered under the Engineers (Registration) Act; and
e) proof of payment of such fees as may be prescribed by regulations made under this Act.

This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Saint Lucia Solid Waste Management Authority (1996)**

The Authority was given the following mandate:

- Manage, regulate, control and treat waste in Saint Lucia

- Establish, maintain, improve and regulate the use sanitary landfills and facilities, in accordance with established scientific principles and practices
- Establish and manage facilities for the collection and treatment of all including hazardous waste
- Establish and maintain transfer stations
- Establish and promote a resource recovery system
- Oversee scheduling, safety and maintenance issues associated with solid waste management
- Promote and oversee public education related to solid waste management in collaboration with the relevant ministries
- Develop a network to receive, monitor and respond to public complaints.

This act may be relevant to the rehabilitation and retrofitting of existing training centres.

3.1.4 Saint Vincent and the Grenadines

- **Town and Country Planning Act (1976)**

The ACT to enable the orderly and progressive development of land and the proper planning of town and country areas, to make provision for the control of development. This act may be relevant to the rehabilitation and retrofitting of existing training centres. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

- **Waste Management Act (2000)**

This Act contains rules for the public management and disposal of solid waste as defined in section 2 and including hazardous waste as defined in Schedule 1 to this Act, and provides for appointment, functions, etc. of the National Solid Waste Management Authority. This act may be relevant to the rehabilitation and retrofitting of existing training centres.

3.2. World Bank Environmental and Social Framework

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements for projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The Bank believes that the application of these standards, by focusing on the identification and management of environmental and social risks, will support Borrowers in their goal to reduce poverty and increase prosperity in a sustainable manner for the benefit of the environment and their citizens. The standards aim to support Borrowers in achieving good international practice relating to environmental and social sustainability; assist Borrowers in fulfilling their national and international environmental and social obligations; enhance non-discrimination, transparency, participation, accountability and governance; and, enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

The ten (10) Environmental and Social Standards (ESSs) establish the standards that the PIU and the project will meet through the project life cycle. A summary of the key objectives of these ESSs and their relevance to the Caribbean Digital transformation Project are provided in Table 1. ESS1–10 set out the obligations of the ECCB and participating countries in identifying and addressing environmental and social risks and impacts that may require particular attention. These Standards establish objectives and

requirements to avoid, minimize, reduce and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.

Table 1. Summary of Environmental and Social Standards

Environmental and Social Standards (ESS)	Relevance to the Project
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	The standard is relevant to the project. Although the proposed project is likely to reap positive environmental and social benefits, there are potential environmental and social risks and impacts deriving from the small-scale civil works associated with the rehabilitation and retrofitting of existing training centers. The proposal of mitigation measures, activities and plans, the mitigation hierarchy will be used accordingly.
ESS2: Labor and Working Conditions	This standard is relevant given that the project will hire direct workers that will be engaged directly by the country level PIUs to work specifically in relation to the project. Occupational Health and Safety (OHS) issues throughout the entire project (preparation and implementation) will be covered. Accordingly, a Labor Management Procedures (LMP) has been prepared inclusive of the Grievance Redress Mechanism for workers.
ESS3: Resource Efficiency and Pollution Prevention and Management	The standard is relevant. The project seeks to avoid, minimize, and/or manage project-related non-hazardous and hazardous waste, including e-waste. The project will also promote the sustainable use of energy and water during the construction and operational phases as necessary.
ESS4: Community Health and Safety	The standard is relevant. Although most of the work will be confined to the existing training centers, some of the associated activities such as transportation of materials, and equipment may increase the risk of traffic hazards.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	The standard is currently relevant. There is a potential for the construction of a Data Centre in some of the participant countries, for example in SVG, and that may require minor land acquisition and /or economic displacement. For this, the Borrower has prepared a Resettlement Planning Framework (RPF), that establishes eligibility criteria for affected persons, set out procedures and standards for compensation, and incorporate arrangements for consultations, monitoring and addressing grievances. Sub-project specific RAPs setting out measures and actions to minimize, avoid or mitigate risks will be developed as needed, and before construction work begins

Environmental and Social Standards (ESS)	Relevance to the Project
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	The standard is currently relevant. Potential construction of Data Centers in participant countries, can occur near natural or critical habitats. The project will seek to avoid these areas to the extent possible. The ESMF l indicate how and which mitigation measures should be implemented following the mitigation hierarchy. The site specific ESMPs will address specific measures.
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	The standard is currently relevant for the Commonwealth of Dominica, where training centres are identified for rehabilitation or retrofitting in the Kalinago Territory. However, the standard is currently not relevant for Grenada, Saint Lucia and Saint Vincent and the Grenadines,
ESS8: Cultural Heritage	Although the project does not likely envisage any impacts on physical, cultural, and/or archaeological sites, the standard is considered relevant since small scale civil works may be required. The project will rely on a chance finds procedure contained as a precaution in the project's ESMPs and as part of construction contracts to be awarded under the project.
ESS9: Financial Intermediaries	The standard is currently not relevant, as there are no FIs involved in the project.
ESS10: Stakeholder Engagement and Information Disclosure	The standard is relevant. The ECCB and Governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines have prepared a Stakeholder Engagement Plan (SEP) and a project-wide Grievance Redress Mechanism (GRM). This document and other safeguards instruments (LMP, RPF, ESMF) will be disclosed and consultations with the relevant stakeholders have been held.

3.3 Environmental and Social Management Capacities

Preliminary findings of the overview of the capacity assessment indicate, that governance structure is weak to implement the related E&S tasks, since there is fragmentation of responsibility among country levels and with the regional level, which could lead to confusion or inefficiency; lack of clarity in terms of the responsibilities to carry out the tasks, as well as weak communication and coordination mechanisms among the institutions involved

Capacity building will be important for the implementation and monitoring of the safeguard-related instruments and national policies and regulations described above which will be required at different levels of the institutional set-up for the project.

The recommendations are to: train borrowers on the application of the ESF at the regional and country levels (procurement specialists, engineers and other government agency officials in the participant

countries); Provide continued technical support to governments in designing of sub-projects to ensure the application of the ESSs, implementation and monitoring; network and frequent knowledge exchange; promoting exchanges within and across participant countries.

The ECCB and Governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines will establish the regional and national Project Implementation Units (PIUs). Implementation and monitoring of the Environmental and Social Management Framework (ESMF) and related instruments for regional level project activities, including training, will be the responsibility of the ECCB. At a national level, the line ministry responsible for ICT and the digital economy will be responsible for the implementation and monitoring of the ESMF and all other Environmental and Social Standards (ESS) instruments, including training. For this, both the regional and national level project implementation units, will engage an Environmental Safeguards Specialist and Social Safeguards Specialist who will support this function, which will be reviewed and adapted once the project implementation begins or within three (3) months of the Effective Date of the Project. Safeguards staff (Environmental Safeguards Specialist and Social Safeguards Specialist) from the national PIUs (supported by their counterpart from the regional PIU and entities hired by the PIUs) will provide safeguards related capacity building for local government ministries and contractors.

The capacity building in environmental and social safeguards will cover three aspects.

- **Project Safeguards Staffing**: The regional and national PIUs will have at least 1 staff (one Environmental and Social Safeguards Specialist) . The tasks will include (i) participation in meetings that will be held at different stages throughout project effectiveness (ii) participation in the monitoring of ESMF compliance, and (iii) being the local focal point for the grievance redress mechanism (GRM) and responsible for data entry into the GRM database on complaints and complaints resolution.
- **Familiarization Meetings and Training: Based on this ESMF, two types of training programs on safeguards (environmental and social) will need to be developed:**
    - Familiarization meetings to all staff at the regional and national PIUs on the project's approach to management of environmental and social issues, the ESMP, and the GRM.
    - A training course for the contractors, builders and construction workers, which covers the same topics as the overall introduction, but with much more detail to make the participants fully conversant with the approach to management of environmental and social issues through the ESMP.

4. ENVIRONMENTAL AND SOCIAL BASELINE

4.1 Physical Environment

4.1.1 Commonwealth of Dominica

Dominica is located at 15 degrees North and 61 degrees west, occupying a central position in the eastern Caribbean archipelago. The country is bordered by the French territories of Guadeloupe and Martinique to the north and south respectively. The island is approximately 750.6 square kilometers and is the largest in the Windward and Leeward groups of the Eastern Caribbean (Figure 1).

The islands volcanic natural history remains evident in continuing seismic activity and in scenic attractions such as the Valley of Desolation and the Boiling Lake, which together with dense forests populated with an abundance of natural lakes and waterfalls, provide the basis for a growing eco-tourism industry. Dominica has a forest area of 45 000 hectares, more than half of the island's 75 000 hectare over all land area. Dominica has rich volcanic soil and is well served by over 365 streams and rivers. The high mountains and deep ravines are covered in rich tropical forests. Since 1975, an extensive system of national protected areas constitutes a significant carbon sink and provides protection for approximately 20% of the national territory. Protected areas include one marine park, two large forest reserves (Central and Northern), and the Morne Trois Pitons National Park, a UNESCO World Heritage.

Figure 1: Location Map and Geographical Features of Dominica

4.1.2 Grenada

Grenada, byname Isle of Spice, island country of the West Indies. It is the southernmost island of the north-south arc of the Lesser Antilles, lying in the eastern Caribbean Sea about 100 miles (160 km) north of the coast of Venezuela. Oval in shape, the island is approximately 21 miles (34 km) long and 12 miles (19 km) wide. The southern Grenadines—the largest of which is Carriacou, about 20 miles (32 km) north-northeast, with an area of 13 square miles (34 square km)—are a dependency.

The capital, St. George's, on the southwest coast, is also the main port, having a fine natural harbour, and its picturesque pastel-coloured houses rise up the hillsides from the waterfront. The waterfront itself is known as the Carenage because island schooners were once careened (beached for cleaning or repair) there. St. George's is the yachting and charter-boat centre of the eastern Caribbean.

Grenada is volcanic in origin, with a ridge of mountains running north and south—the steeper slopes to the west and a more gradual incline to the east and southeast. The highest point is Mount St. Catherine (2,757 feet [840 metres]) in the northern part of the interior. The landscape is scenic, with fairly deep steep-sided valleys and about 10,000 acres (4,000 hectares) of forest.

Figure 2: Location Map of Grenada

4.1.3 Saint Lucia

Saint Lucia, island state in the Caribbean Sea. It is the second largest of the Windward group in the Lesser Antilles and is located about 24 miles (39 km) south of Martinique and some 21 miles (34 km) northeast of Saint Vincent. Saint Lucia is 27 miles (43 km) long and has a maximum width of 14 miles (23 km). The capital and major port is Castries.

The island is of volcanic origin and is bisected from north to south by a central ridge of wooded mountains, the highest point being Mount Gimie (3,145 feet [959 metres]). Many streams flow from the mountains through fertile valleys. In the southwest are the Gros and Petit Pitons (2,619 feet [798 metres] and 2,460 feet [750 metres], respectively), two immense pyramids of rock rising sharply from the sea and enclosing a small bay. Near Petit Piton, in the crater of an ancient volcano, are the boiling sulphur springs from which the nearby town of Soufrière takes its name. A choice tourist site, the springs also contain substantial energy potential.

Figure 3: Location Map of Saint Lucia

4.1.4 Saint Vincent and the Grenadines

Saint Vincent and the Grenadines, island country lying within the Lesser Antilles, in the eastern Caribbean Sea. It consists of the island of Saint Vincent and the northern Grenadine Islands, which stretch southward toward Grenada. The island of Saint Vincent lies about 20 miles (32 km) southwest of Saint Lucia and 100 miles (160 km) west of Barbados. It is 18 miles (30 km) long and has a maximum width of 11 miles (18 km). The larger islands of the Grenadines associated with Saint Vincent are Bequia, Canouan, Mayreau, Mustique, Prune (Palm) Island, Petit Saint Vincent Island, and Union Island. The Tobago Cays, just to the east of Mayreau, have been designated a wildlife reserve.

The island of Saint Vincent has thickly wooded volcanic mountains running north-south and many short swift streams. Though numerous, the streams are small except after heavy rains. There are no navigable rivers. The island's two highest peaks are both on the volcano Soufrière (4,048 feet [1,234 metres] and 3,864 feet [1,178 metres]), in the north, which erupted disastrously in 1812 and 1902, seriously affecting the country's agriculture and temporarily displacing residents of communities around the foothills of the volcano. The 1902 eruption coincided with that of Mount Pelée on Martinique. Soufrière became active again in 1979, repeating the cycle of agricultural damage and massive evacuation. The volcanic ash, which spread as far as Barbados, is said to have enhanced the fertility of the soil. Other noteworthy peaks on the island include Grand Bonhomme and Mount St. Andrew.

Figure 4: Location Map of Saint Vincent and the Grenadines

4.2 Biological Resources

4.2.1 Commonwealth of Dominica

Dominica is host to an astonishing biodiversity, including more than 1,200 species of plants, and the most diverse assemblage of wildlife in the eastern Caribbean, including 175 species of avifauna. The Biodiversity Strategy and Action Plan (2006) provide an excellent reference document and bibliography of these resources, as well as outlining national direction for the way forward. About 60% of the island is forested, with a variety of vegetation types represented because of the island's large elevation change, rain shadow effects and rugged topography. About one-third (about 20%) of Dominica is contained within protected areas such as designated Forest Reserves and National Parks, which are also recognized as Important Bird Areas (IBAs). Ocean and coastal resources include two protected marine areas on the north and south ends of the island.

4.2.2 Grenada

Data indicated that in 2015, nearly 50% of Grenada's total area was covered in forests. Grenada's forest cover has remained relatively stable from 2004 to 2015 mainly due to the policies put in place by the Grenadian government. The Grenadian forests are used for a variety of purposes such as the production of timber and providing habitat for the country's wildlife. The Grenadian forests are also crucial to the country's economy because they attract significant numbers of tourists each year.

4.2.3 Saint Lucia

Saint Lucia is part of the Lesser Antilles, an arc of volcanic peaks located in the Eastern Caribbean. Though the island has a relatively small landmass, it possesses a high degree of biodiversity and species endemism and productive coastal and nearshore habitats, earning it international recognition as a biodiversity hotspot. The island and its waters support a number of globally and regionally important habitats and species, including 17 major vegetation types (e.g., dry forest, mangroves, rainforest), the Pitons Management Area United Nations Educational, Scientific, and Cultural Organization World Heritage site, the Ma Koté Mangrove and Savannes Bay Ramsar sites, and over 200 endemic species (e.g., the pygmy gecko, the Saint Lucia racer snake, and the Saint Lucia parrot). Saint Lucia's marine habitats and biodiversity provide ecosystem services that buffer the impacts of storms and climate change, provide residents with valuable natural resources and opportunities for sustainable livelihoods, and support economically important agriculture and tourism industries.

4.2.4 Saint Vincent and the Grenadines

Saint Vincent and the Grenadines boasts a diverse collection of biological resources. St. Vincent is rugged and mountainous with steep slopes and fertile yellow earth, volcanic ash and alluvial soils. The country has about 12,700 ha of tropical forests, including primary and secondary rainforest, palm brakes, elfin woodland, littoral woodland, dry scrub woodlands and mangrove forest. The significant tropical forests provide natural habitat for wildlife including the St. Vincent Parrot and other endemic species. The Grenadines, in contrast, consists of low dry islands surrounded by extensive coral reefs and sea grass beds.

4.3 Physical Cultural Resources, Human Settlement and Land Use

4.3.1 Commonwealth of Dominica

Dominica was originally populated by Amerindian peoples, known as Kalinago and is the only island in the Caribbean still to possess distinct communities of these indigenous people of the Caribbean. Population estimates for 2001 indicate that Dominica had a population of approximately 71,000 persons (a decline from 74,750 in 1994), including two thousand Kalinago's, the remaining survivors of the first inhabitants of the island. 27.0% of the Dominican households live below the poverty line (based on the latest available figures), Topographic conditions have forced human settlements onto narrow coastal areas particularly in the south and west with approximately 44,000 persons (62%) living along the coast (Figure 4). The largest community is Roseau (the capital city) and its environs with 14,847 persons representing almost 21% of the total population.

The rich culture and history of Dominica has created physical cultural resources, which are features or objects of interest and value to nation's people because of their archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. These may include Amerindian sites, relicts of forts or plantations, shipwrecks, or historic buildings which may have great local or international value, thus meriting attention and preservation.

4.3.2 Grenada

The last population census conducted in Grenada in 2011 revealed that the island has 106, 667 people. The Census also showed, quite surprisingly, that there are more males than females indicating numbers

of 53, 898 and 52, 769 respectively. The age group with the largest number of people is the 20-24 grouping with a percentage of 9.29 of the entire population and is closely followed by the 15-19 age range with 9.27 %. The Census also confirmed a well acknowledged belief held by many in regards to the youthfulness of the population. Sixty three percent (63 %) of the population are below 40 years old. The Census also showed that the highest concentration of the population is concentrated in the St. George's area (35.9 %). That is not at all surprising given the fact that it is the parish where the capital is located and quite understandably, is the main commercial and industrial centre. The parish with the second highest concentration of the population is that of St. Andrews with 24.8 %. So essentially, over 60 % of the entire population reside in St. Georges and St. Andrews. The St. Andrews parish is considered as the main breadbasket of the island, having the highest agricultural production output.

4.3.3 Saint Lucia

St Lucia's population of 183,627 compares to the 2009 census of 173,700. Despite being one of the smallest countries in the world (617 square kilometers or 238 square miles) and ranking 191st, St Lucia has a fairly high population density of 298 people per square kilometer, which ranks 41st. The capital and largest city is Castries, with a 2014 population of 70,000, or more than one-third of the total population. Castries is a major tourist destination and a cruise ship port.

St Lucia's population is evenly split between rural and urban areas, despite the high population in Castries. The population is mostly African or of mixed African-European descent, with a small population of Indo-Caribbeans (3%). Afro-Caribbeans account for 68% of the population, followed by mixed (17%) and European (5%).

4.3.4 Saint Vincent and the Grenadines

St Vincent and the Grenadines has a population of 111,000, which has remained fairly flat since 1990. The country is densely populated with 307 people per square kilometer (792/sq mi), which ranks 39th in the world. The capital and largest city is Kingstown, with a population estimated at 35,000.

4.4 Socio-Economic

4.4.1 Commonwealth of Dominica

The Dominica economy reflects many of the traditional features of a small open economy. This includes a high level of dependence on external trade as a proportion of gross domestic product (GDP), dependence on single sector export products (in this case agriculture) and tourism revenue, high levels of underemployment and unemployment, and dependence on foreign capital (both public and private sector) for investment into productive sectors and for infrastructural development.

The island has always been in a vulnerable position economically, socially, culturally, and environmentally. Economic developments, in particular, are significantly affected by both natural and man-made external factors as is increasingly evidenced by the negative impact on the local economy of changes associated with such international phenomenon as globalization and trade liberalization. The dependence of the economy on the constricting banana industry exposes its high economic vulnerability. Attempts to diversify are slow, however, recent trends indicate that the island is moving towards tourism/ecotourism, as it markets its unique environment and culture. In doing so Dominica has become more acutely aware

of the need to protect the environment and of the growing threat to its vulnerable natural resources presented by climate change.

Dominica, by its very nature is vulnerable, given its susceptibility to natural disasters and its ecological and economic fragility. Vulnerability to climate change in Dominica, like many developing countries, is aggravated by external pressures affecting its resilience and adaptive capacity such as terms of trade, impacts of globalisation (both positive and negative), financial crises, international conflicts, rising external debt, and internal local conditions such as rapid population growth, rising incidence of poverty, political instability, unemployment, reduced social cohesion, and a widening gap between poor and rich, together with the interactions between them. It is widely acknowledged that climate change can exacerbate natural disasters with enormous human and economic costs.

4.4.2 Grenada

Grenada's economy over the years has been transformed into a predominantly service sector economy with the Tourism sector being the main contributor to Gross Domestic product (GDP). In recent times the Government has been placing enormous emphasis on the development of that sector by promoting the development of high-end quality resorts, investing more in promotional activities and seeking to enhance the country as pure and pristine. Grenada has a lot of attractions to offer, very favourable weather conditions, excellent beaches, lakes, waterfalls, very friendly and hospitable people, low crime rate, good infrastructure, exceedingly clean and pristine environment, fairly close proximity to the USA market etc. have placed Grenada in a very advantageous position to capitalize on the tourism market.

4.4.3 Saint Lucia

The country's economy depends primarily on tourism (65% of GDP), banana production, and light manufacturing. The per capita GDP increased slightly, from US$ 6,626 in 2010 to US$ 6,848 in 2014. According to an International Monetary Fund report, Saint Lucia's economic activity has recovered, and the country's fiscal situation became stronger in 2014, mainly due to strong tourism inflows and lower oil prices. After the 2012 recession and close-to-zero growth in 2013, in 2014 the economy was again showing signs of recovery, with GDP growth reaching 0.5%, mainly driven by the transportation and hotel industries, although the construction, communication, and agriculture sectors remained in decline

4.4.4 Saint Vincent and the Grenadines

Saint Vincent and the Grenadines' economy depends on agriculture, tourism, construction, remittances, and a small offshore banking sector. Many fundamentals for greater economic freedom, such as flexible regulations, an efficient legal system that secures private property, and macroeconomic stability, are in place. Greater access to private financing and more openness to trade and international investment would improve the business climate. The economy was negatively affected by U.S. economic sanctions imposed on Venezuela in 2018.

5. ENVIRONMENTAL AND SOCIAL ASSESSMENT OF THE PROJECT

The environmental and social risk classification for the project is Moderate under the World Bank's Environmental and Social Framework (ESF) given that project activities will involve small-scale works for the rehabilitation and retrofitting of buildings and the construction of the Data Center. Countries will finance approximately, USD 20 Million Dominica, USD 8 Grenada, USD 15 Saint Lucia and USD 20 Saint Vincent and the Grenadines.

The anticipated potential environmental impacts may include: (i) soil removal and vegetation clerance for the construction of the new data center; (ii) generation of solid waste from residual construction materials; (iii) management and disposal of e-waste waste as a result of the decommission of old equipment; (iv) nuisance related to dust generation, vibration and noise during construction activities; and (v) occupational health and safety hazards for the workforce. The impacts are expceted to be be site-specific, short-term and reversible. The exact scale of the works will be determined during preparation, and the risk rating may be updated proportionately with the level of risk if deemed necessary as preparation advances.

The Social risk of the project is expected to be moderate because the project will be implemented in a context where social exclusion patterns exist, and where processes of community consultation and grassroots participation seems to be weak as well as the capacity for the management of the World Bank's Environmental and Social Framework. Inequitable distribution of project benefits is a risk, whose effect would produce a disproportionate impact on the most vulnerable and disadvantage: The poor, women, young girls, youth at risks, disables, the Kalinago indigenous territory of Dominica, among others. Project's activities may also require physical or economic displacement (in a small number of cases, if any) that would lead to loss of income sources or other means of livelihood or both.

The Project will include activities that address cybersecurity, data protection and privacy protections, financial sector regulation, and continuity of operations for critical infrastructure and information systems and efforts to ensure that vulnerable people are not locked out of an increasingly digitized economy and society. The project has an explicit focus on digital skills training for job seekers which will also support integration in an increasingly digitized economy and society.

5.1 Environmental and Social Impacts Identification

The identification and assessment of environmental and social risks and impacts are considered key as these will be the foundation for the proposal of the mitigation and remediation measures necessary to anticipate, minimize, reduce and/or compensate for the negative effects that the project may cause to the environment and the society. This chapter presents the main impacts identified considering the characteristics and conditions of the physical environment and socioeconomic areas of influence.

The main characteristics of the project are as follows:

I. The project will support the development of the core foundations of the region's digital economy. The project will aim to bring together all arms of government and multiple economic and social sectors using an ecosystem approach.
II. The project comprises three components that address the key bottlenecks and harness opportunities to develop the Eastern Caribbean Digital Economy as a driver of growth, job

creation, and improved service delivery. Project activities will be implemented at regional and

COMPONENTS	ECCB	Dominica	Grenada	St. Lucia	SVG
Component 1 - Digital Enabling Environment					
1.1 - Telecommunications: Legal and Regulatory Environment, Institutions and Capacity	X				
1.2 - Digital Financial Services (DFS): Legal and Regulatory Environment, Institutions and Capacity	X	X		X	
1.3 - Cybersecurity, Data Protection and Privacy: Legal and Regulatory Environment, Institutions and Capacity	X	X	X	X	X
Component 2 - Digital Government Infrastructure, Platforms and Services					
2.1 - Cross-Cutting Enablers of Digital Government Operations and Services		X	X	X	X
2.2 - Government Productivity Platforms and Citizen-Centric Digital Services		X	X	X	X
Component 3 - Digital Skills and Technology Adoption					
3.1 - Digital Skills-to-Jobs Pipeline	X	X	X	X	X
3.2 - Technology Adoption and Digital Entrepreneurship		X	X	X	X
Component 4 - Project Implementation Support					
4.1 - Project Implementation Support	X	X	X	X	X

national levels.

III. The project incorporates themes of inclusion, citizen-centric design and citizen feedback to inform activity selection and implementation models.

The activities and countries were the project will be implemented are summarized in the following Table 2.

Table 2. Project Components

Table 3. Preliminary Environmental and Social Impact/Risk Assessment by Components/Scope

Component	Subcomponent	Scope	Activity	Preliminary Environmental Risk/Impact assessment	Preliminary Social Risk/Impact assessment/measures
Component 1: Digital Enabling Environment	Subcomponent 1.1: Telecommunications: Legal and Regulatory Environment, Institutions and Capacity	Regional	Support greater telecoms sector competition, investment, affordability and quality of digital connectivity services across the region as well as enhancing resilience and emergency response capabilities for critical digital infrastructure (development of communications infrastructure resilience and disaster response mechanisms and conduct of emergency drills)	This subcomponent represents a positive environmental impact as it will promote telecom companies to share their infrastructure with each other.	This subcomponent represents moderate risks/ regulations further exacerbate existing exclusion patterns/ implement the SEP and IPPF
	Subcomponent 1.2: Digital Financial Services (DFS): Legal and Regulatory Environment, Institutions and Capacity	(Regional); (Dominica & St. Lucia - national)	Aims to spur greater innovation, investment and adoption of digital financial services across the region. It will support modernization of the policy, legal and regulatory frameworks and underlaying payment infrastructure.	This subcomponent will not generate impacts	This subcomponent represents moderate risks/ Policies further exacerbate existing exclusion patterns/ implement the SEP and IPPF
	Subcomponent 1.3: Cybersecurity, Data Protection and Privacy: Legal and Regulatory Environment, Institutions and Capacity	(Regional); (Dominica, Grenada, St. Lucia, SVG - national)	This sub-component will support the development of cybersecurity capacity and enabling environment improvements to protect the public and private sectors from virtual and physical cyber vulnerabilities and threats. At a national level, it will support the establishment of Computer Emergency Response Teams (CERTs). The sub-component will also include the procurement of computers.	This subcomponent will generate minor negative environmental impacts, in particular, e-waste generation is expected as the result of decommissioning of old equipment for the procurement of IT hardware.	This subcomponent represents moderate risks/ vulnerable people could be locked out of an increasingly digitized economy and society/ / implement the SEP and IPPF
Component 2: Digital Government Infrastructure, Platforms and Services	Subcomponent 2.1: Cross-Cutting Enablers of Digital Government Operations and Services	(Dominica, Grenada, St. Lucia, SVG - national)	This subcomponent will support the development of key enablers of digital government services and operations, in line with regionally harmonized standards and frameworks. These include standards and protocols for digital government, data storage, digital identification, authentication, and digital payment. The activity will entail limited physical infrastructure development to facilitate efficient storage of government data. Preference will be given to in-building refurbishment to develop such storage facilities (data center). While currently, no participant country has prioritized investment in a data center, this will be finalized during appraisal.	This subcomponent represents Low risks/ will generate low to moderate impacts. Some activities could include in-building expansion of existing data centers, equipment installation and internal works in existing facilities; Potential construction of a modular, green data center in SVG – to be confirmed during appraisal.	This subcomponent represents moderate risks/ / minor land acquisition that can cause resettlement and/or economic displacement / implement the RFP and RAP, and LMP

Component	Subcomponent	Scope	Activity	Preliminary Environmental Risk/Impact assessment	Preliminary Social Risk/Impact assessment/measures
	Subcomponent 2.2: Government Productivity Platforms and Citizen-Centric Digital Services	(Dominica, Grenada, St. Lucia, SVG - national)	This sub-component supports the development of priority government productivity platforms and citizen-centric digital public services	This subcomponent will not generate impacts	This subcomponent represents moderate risks/ development priorities further exacerbate existing exclusion patterns/ implement the SEP, citizen engagement approach and IPPF
Component 3: Digital Skills and Technology Adoption	Subcomponent 3.1: Digital Skills-to-Jobs Pipeline	(Regional; Dominica, Grenada, St. Lucia, SVG national)	This sub-component aims to identify the digital skills (technical and soft skills) in demand regionally and globally and to create a clear pathway of support from training to work opportunities in digitally-enabled professions. Regional level activities will target more advanced and specialized digital skills development and remote working placements with global firms and clients. National level activities will be targeted at digital skills in demand among local and regional industry through a combination of online and face-to-face training.	This subcomponent will generate low to moderate negative environmental impacts. Waste generation, in particular, e-waste as the result of decommissioning of old equipment for the procurement of new IT hardware. Moderate negative environmental impacts are anticipated from in-building retrofitting of rooms in existing facilities.	This subcomponent represents moderate risks/ the identification process further exacerbate existing exclusion patterns/ implement the SEP citizen engagement, gender approach and IPPF
	Subcomponent 3.2: Technology Adoption and Digital Entrepreneurship)	(Dominica, Grenada, St. Lucia, SVG - national	This sub-component seeks to increase adoption of digital platforms and technologies by businesses across the region and support the creation and expansion of digitally enabled businesses. It aims to support the increase in productivity and competitiveness of traditional industries, initiate a cultural shift towards modernization and innovation in the private sector and to overcome the current lack of demand for digitally skilled professionals and IT services in the regional market. The sub-component will also include entrepreneurship support activities in St. Lucia.	This subcomponent will generate low to moderate negative environmental impacts. Waste generation, in particular, e-waste as the result of decommissioning of old equipment for the procurement of new IT hardware. Moderate negative environmental impacts are anticipated from in-building retrofitting of rooms in existing facilities.	This subcomponent represents moderate risks/ The poorest are frequently left out of business opportunities/ implement the SEP, citizen engagement and gender approach and IPPF.
Component 4: Project Implementation Support		(Regional; Dominica, Grenada, St. Lucia, SVG - national)	This component will support national and regional level Project Implementation Units (PIUs) with management and implementation of the project and associated activities.	This subcomponent will not generate impacts	This subcomponent represents moderate risks/ / relatively weak governance structure, and risk reflected in the LMP/ implement the LMP and capacity building related activities that are in the ESCP.

Table 4. Detailed Environmental and Social Impact/Risk Assessment by Components/Scope

Component/subcomponent activities	Environmental/Social Impacts	Potential Risks and Opportunities	Proposed mitigation measures	Risk level Low (L) Medium (M) High (H)	Duration/Effect (Short =S) (Eventual =E) (Permanent -P)	Stage of occurrence (Construction =C) Operations =O)	Project recommended actions
Component 1: Digital Enabling Environment/ Subcomponent 1.1: Telecommunications: Legal and Regulatory Environment, Institutions and Capacity	This component does not represent risks or impacts of concern	None	None				None
Component 1: Digital Enabling Environment/ Subcomponent 1.2: Digital Financial Services (DFS): Legal and Regulatory Environment, Institutions and Capacity	This component does not represent risks or impacts of concern	None	None				None
Component 1: Digital Enabling Environment/ Subcomponent 1.3: Cybersecurity, Data Protection and Privacy: Legal and Regulatory Environment, Institutions and Capacity	This subcomponent will generate minor negative environmental impacts, in particular, e-waste generation is expected as the result of decommissioning of old equipment for the procurement of IT hardware	low	Implement appropriate measures to dispose e-wastes and Health and Safety (H&S) practice during construction phase	(L)	(S)	(C) and (O)	E-Waste MF OHSMF
Component 2: Digital Government Infrastructure, Platforms and Services/ Subcomponent 2.1: Cross-Cutting Enablers of Digital Government Operations and Services	This subcomponent represents Low risks/ will generate low to medium impacts related to the construction of infrastructures and replacement of old equipment and hardware in the participating institutions and stakeholders	low	Implement appropriate measures to dispose e-wastes and H&S practice during construction phase	(L)	(S)	(C) and (O)	E-Waste MF OHSMF

Component/subcomponent activities	Environmental/Social Impacts	Potential Risks and Opportunities	Proposed mitigation measures	Risk level Low (L) Medium (M) High (H)	Duration/Effect (Short =S) (Eventual =E) (Permanent -P)	Stage of occurrence (Construction =C) Operations =O)	Project recommended actions
Component 2: Digital Government Infrastructure, Platforms and Services/ Subcomponent 2.2: Government Productivity Platforms and Citizen-Centric Digital Services	This component does not represent risks or impacts of concern	None	None				None
Component 3: Digital Skills and Technology Adoption / Subcomponent 3.1: Digital Skills-to-Jobs Pipeline	This subcomponent represents Low risks/ will generate low to medium impacts related to the construction of infrastructures and replacement of old equipment and hardware in the participating institutions and stakeholders	low	Implement appropriate measures to dispose e-wastes and H&S practice during construction phase	(L)	(S)	(C) and (O)	E-Waste MF OHSMF
Component 3: Digital Skills and Technology Adoption / Subcomponent 3.2: Technology Adoption and Digital Entrepreneurship	This subcomponent represents Low risks/ will generate low to medium impacts related to the construction of infrastructures and replacement of old equipment and hardware in the participating institutions and stakeholders	low	Implement appropriate measures to dispose e-wastes and H&S practice during construction phase	(L)	(S)	(C) and (O)	E-Waste MF OHSMF
Component 4: Project Implementation Support	This component does not represent risks or impacts of concern	None	None				None

5.2 Environmental and Social Impact Assessment

The purpose of an environmental impact assessment is to identify and measure those effects by projects engineering that can't be eliminated; thus, the result of the exercise, allows to choose the adequate engineering and/or methods to utilize in order to eliminate and/or minimize those relevant impacts generated by the project activities. The impact assessment was based on an analysis of the impacts of the Project on the existing environment. A description of the existing conditions for each valued aspect was provided as a basis for the evaluation of impacts. A valued aspect is the way the project activity impacts the environment.

5.2.1 Selection of Valued Aspects

The aspects considered for this impact assessment are the ones that have been previously identified as activities that will generate environmental and social risks and impacts during the construction and implementation. During construction, these aspects are related to the rehabilitation of existing infrastructure, the construction of a new data centers, and the telecommunication equipment modernization. During implementation, these aspects are not expected to generate significant negative environmental or social impacts.

The phases identified for the project is as follows:

Pre-construction

- Contract negotiation
- Mobilization/transport of workers and equipment
- Waste generation including construction, municipal, and special waste (potentially dangerous)
- Preparation of construction site, including soil alteration

Construction

- Vegetation and soil removal
- Mobilization/transport of workers and equipment
- Construction of Project infrastructures (new and rehabilitation/retrofitting works)
- Installation and use of equipment
- Atmospheric emissions
- Water emissions
- Waste generation including construction, municipal, and special waste (including e-waste)

Operation

- Uses of Project infrastructure and equipment
- Maintenance of project equipment and infrastructures
- Waste generation including construction, municipal, and special waste (including e-waste)
- Generation (or increase of) wastewaters
- Socioeconomical implications

Based on the project specifics, the key environmental and social aspects that are been considered for the impact assessment are the following:

Physical Environment

- Effects on the runoff by inappropriate disposal of solid wastes and garbage
- Effects on the natural waters by inappropriate disposal of solid wastes and garbage
- Effects on water quality by inappropriate disposal of solid wastes and garbage
- Effects on air quality by infrastructure construction
- Effects on air quality by particulate increased traffic and emissions by machinery and vehicles
- Effects on air quality by wastes and effluents
- Effects on soils by wastes and effluents
- Effects on soils by construction of infrastructure
- Effects on environmental quality by increase noise levels during infrastructure construction
- Effects on environmental quality by increase noise levels by increase traffic and personnel

Biological Environment

- Effects on flora by inadequate disposition of wastes and effluents
- Effects on fauna by inadequate disposition of wastes and effluents
- Effects on habitats by inadequate disposition of wastes and effluents

Social and Economic Environment

- Effects and changes on regional demographics
- Effects and changes on job generation and employment
- Changes in quality of life due to the increase economical activities
- Changes in quality of life due to the increase mobility, transport and job in the region
- Alterations on the regional demography
- Labor conflicts due to job expectations
- Effect on health and safety in the stakeholder's communities due to changes in lifestyles

5.2.2 Methodology of the Impact Assessment

The evaluation methodology used in this project follows two stages:

1. Relevant environmental and social impacts are identified based on their effects on the environment and social aspects and context of the project.
2. Once those impacts are identified, these are then ranked, rated and measured on regards to their effects, severity and persistence in time.

The first part of the methodology used for this assessment is based on a Simple Interactive Matrix (SIM) which has the objective of evaluating qualitatively the environmental and socials impacts as result of the project activities. The SIM methodology lists all potential environmental and social aspects in the vertical axis, while detailing all project activities in the horizonal axis. An "X" is then used to mark on the intersection of these, identifying the impact that could be generated by a specific project activity. The application of the SIM methodology is shown in Table 5.

As a result of this SIM assessment, a list of possible effects or consequences is prepared. Then as a continuation of the process a ranking analysis is prepared using the Impact Ranking Matrix (IRM). This matrix compares the project activities with those identified effects in the long list, and every time it

appears a point number is assigned X. In this way with a sum operation a total value for each one the affectation (impacts) is generated. The methodology of the IRM assessment in detailed in Annex 1.

Table 5. Simple Interactive Matrix Impacts Analysis

SIMPLE INTERACTIVE MATRIX IMPACTS ANALYSIS

POTENTIAL IMPACTS			ACTIVITIES/PHASES																			AMOUNT IMPACTS
			PRECONSTRUCTION				CONSTRUCTION												OPERATIONS			
			permits proccess	contracting labor process	procurement and equitment adquisition	labor camps and workshops	layout process	concrete constructions	wood construction	paint construction	transport of construction material	equitment and machinery operations	removal of old equiptment	instalation of new equitment	construction waste management	electrical waste management	hazardous wastes management	effluent management	maintenance of buildings	operation and maitenances of new instalations	management of solid waste (including e-waste)	
	Soil	Contamination of soils				X		X		X	X		X		X	X	X	X	X	X	X	12
	Air	Changes in air quality due to construction process and emisions						X	X	X	X	X			X				X	X	X	9
SOCIAL AND ECONOMICS		Increase expectation for new jobs	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	17
		Affectation to the everyday life					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	15
		Increase occurance of labor accidents				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Changes in traffic patterns						X	X	X	X	X	X	X	X	X	X	X	X		X	13
		Increase economical activities and practices	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	19
		Increase request for services and equipment		X	X	X	X	X	X	X	X	X			X	X	X		X	X		14
		Changes in land value				X	X	X	X	X	X	X						X	X	X	X	11
TOTAL AMOUNTS IMPACTS			2	3	3	6	6	9	8	9	9	8	5	5	7	7	7	7	9	8	8	126

Based on the application of the SIM assessment, the key environmental and social impacts evaluated for the project, per their occurrence in the physical, biological and socioeconomical environments are as follows:

Physical and Natural Environment

- Soils contamination
- Affectation on air quality

Socioeconomics

- Increase expectation for new jobs
- Affectation to the everyday life
- Increase occurrence of labor accidents
- Changes in traffic patterns
- Increase economical activities and practices
- Increase request for services and equipment
- Changes in land values

Once these impacts have been identified, then, they are evaluated and ranked following the IRM assessment. The IRM method aims to obtain a numerical value using an indicator for each impact that the project could cause/creates, these indicators are: Probability, Intensity, Extension, Duration, Development and Reversibility. For the description and evaluation of impacts, they encompass the following aspects:

- **Environ affected Physical**, biological, socioeconomical, cultural
- **Activity** that generates the impact
- **Project Phase/stage**, in which the impact activity Will be carried out (construction, operation or closing of the project)
- **Summarized description of activities** that could generate impacts
- **Other potential impacts** being other impacts created by the evaluated impact.
- **Impact description**, describe the affected components and implications
- **Ranking the impact**, valued -rank by each indicator
- **Summary of the valuation informs** the Environmental and Social Impact Value obtained
- **List of the mitigating measures proposed** to prevent, correct, control, mitigate or compensate those identified impacts.
- **Identifications or Qualitative index** using a selection table

Using the IRM assessment, key environmental and social impacts of the project previously identified have been ranked. Table 6 shows the valuation of these environmental and social impacts.

Table 6. Valuation of Environmental and Social Impacts

CARIBBEAN DIGITAL TRANSFORMATION PROGRAM (CARDTP)/ VALUATION OF ENVIRONMENTAL AND SOCIAL IMPACTS											
	Impacts	**type of Impacts (-) or (+)**	**Intensity (I)**	**Extension (E)**	**Duration (D)**	**Development (T)**	**Reversibility (R)**	**Impact Value (IV)**	**Probability of occurrence**	**Impact Category**	**Recommended Measures**
Soil	soil contamination	**N**	1	2	2	7	2	**2.1**	**LOW**	**V**	preventive
Air	affectation air quality	**N**	2	2	2	5	2	**2.3**	**LOW**	**V**	preventive
Socioeconomics	increase expectation for new jobs	**P**	8	8	8	10	10	**8.6**	**HIGH**	**I**	compensate
	affectation to the everyday life	**P**	8	6	8	9	6	**7.3**	**MEDIUM**	**II**	compensate
	increase occurrence of labor accidents	**N**	3	2	2	3	1	**2.3**	**LOW**	**V**	preventive, corrective
	changes in traffic patterns	**N**	3	6	8	7	6	**5.1**	**MEDIUM**	**V**	corrective, mitigation
	increase economical activities and practices	**P**	3	5	5	6	7	**4.7**	**HIGH**	**III**	compensate
	increase request for services and equipment	**P**	3	3	3	4	4	**3.3**	**MEDIUM**	**IV**	compensate
	changes in land values	**P**	5	5	7	7	7	**5.8**	**MEDIUM**	**V**	compensate

(0.2*E) + (0.1*D) + (0.1*T) + (0.2*R)

Using the values and information from the previous table, it is possible to rank the relevant environmental and social impacts of the project. Table 7 below summarizes these impacts through the construction and operation phase.

Table 7. Impacts Ranked by Category and by Phases during the project implementation

Phases	Impact name	Impact Values (IV)
Impact category I		
C/O	Increase expectation for new jobs	8.6
Impact Category II		
C/O	Affectation to the everyday life	7.3
Impact Category III		
C/O	Increase economical activities and practices	4.7
Impact Category IV		
C/O	Increase request for services and equipment	3.3
Impact Category V		
C	Soil contamination	2.1
C	Affectation air quality	2.3
C	Increase occurrence of labor accidents	2.3
C	Changes in traffic patterns	5.1
C/O	Changes in land values	5.8
C=Construction phase	O= Operational phase	

With this analysis it is clear to identify, rank and determine the potential occurrence of the relevant environmental and social impacts of the activities that the project will finance. Mainly positive social impacts should be expected as all project activities will benefit and strengthen the telecom sector of the countries related to the project. All negative environmental impacts are temporary, located, preventable, mitigable and can be compensate if needed. No significant environmental and social risks and impacts representing a significant threat to nature or humans have been identified. Overall, the risk rating for the project is categorized as moderate.

6. ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES

Both environmental and social risks and impacts of the project are related to the expansion of IT hardware, rehabilitation and retrofitting of existing training center activities, and construction of new data centers. The link between the predicted environmental impacts, the needed mitigation measures identified during the screening and assessment process, provisions for budgeting the costs of such measures, and the roles of those responsible for ensuring that the mitigation measures that will be carried out are summarized in the Site-specific Environmental and Social Management Plans (ESMPs).

6.1 Mitigation measures

These are specific actions recommended to address the potential impacts of projects; to reduce, avoid mitigate and or compensate the negative social and environmental impacts identified in the impact assessment of the project proposed activities. As indicated in chapter 5, these are summarized and ranked in Table 8 below.

Table 8. Impacts Analysis

Phase of the project	Impact category I	Level of Impact (+ or -)
C/O	Increase expectation for new jobs	Very High (+)
C/O	Affectation to the everyday life	High (+)
C/O	Increase economical activities and practices	High (+)
C/O	Increase request for services and equipment	Medium (+)
C	Soil contamination	Very Low (-)
C	Affectation to air quality	Very Low (-)
C	Increase of occurrence of labor accidents	Very Low (-)
C	Changes in traffic patterns	Medium high (-)
C/O	Changes in land values	Medium high (+)
C=Construction phase / O= Operational phase		

As a result of the analysis, it is evident that the most imminent potential impacts are associated with labor and community health and safety, and solid and e-waste management. These type of impacts would require additional assessment and analysis to design the appropriate mitigation measures as soon as the detailed project actions are identified. A screening process that shall be used to identify the type and scope of risks and impacts of all sub-projects is described in detail in Section 9 and Annex 2 of this ESMF.

Additional mitigation measures would be derived from any conditions imposed by any statutory agency who reviewed the sub-projects and provided recommendations or conditionalities. These could also be converted to contract clauses as necessary.

6.2 General Considerations

This section of the report is related to the identification of appropriate measures that need to be considered in order to minimize or eliminate negative impacts and to enhance positive impacts. In any event, the application of good implementing activities and management practices is of paramount importance. Public consultation is also necessary. The affected persons should be informed of the

potential problems and mitigation measures. Their concerns and suggestions should also be given due consideration. Wherever possible, employment should be considered for the local people. This will enhance cooperation and support for the project. Although most of the negative impacts are minor, the following mitigation measures are necessary because of their significance.

6.3 Specific Considerations -Depreciation of the Natural Environment

A general issue for any activity of the project is the generation of wastes and/or leftover substances and materials. As such, all materials and substances such as oil, grease, toxic substances, and liquid wastes are not disposed-off in open soils, streams, rivers or places where they can eventually run-off into the surface and underground water system. Also, in order to prevent soil loss and erosion, indiscriminate land clearing and excavation are not be permitted.

6.4 Labor and Working Conditions

For the prevention and mitigation of potential risks and impacts for labor and working conditions, an instrument has to be prepared to meet the requirements of the Environmental and Social Standard of the World Bank (ESS2); This standard is relevant for this project, given the fact that the project has the potential for hiring specialized personnel and laborers for different aspects and phases of its implementation. Worker categories under this standard, that may be relevant for the project includes direct contracted and primary supply workers. To comply with the ESS2 and national laws, a project-level Labor Management Procedures (LMP) has been prepared that identifies the different types of project workers that are likely to be involved in the project, as well as workers management procedures. The LMP contains measures to address potential risks and impacts that may arise from the interaction between project workers and local communities.

It also includes an Occupational Health and Safety Plan (OHSP) that is in line with the ESMF and the World Bank Group EHS Guidelines to ensure health and safety conditions of workers during construction activities. Some OHS hazards identified with the project activities are, but not limited to: (i) falls from heights; (ii) electric shocks; and (iii) failure to use proper protective equipment during the installation of hardware, equipment, and construction.

It is important that the project complies with the WBG policies: not hiring children, promoting transparency in terms and conditions of employment, non-discrimination and equal opportunity. In order to comply with these requirements a Labor Management Procedures has been prepared which includes a GRM specifically for project workers to ensure they have a mechanism in place for complaints and grievances.

6.5 Mitigation specifications

There are always impacts associated with the implementation of projects activities. Most of the negative impacts associated with the sub-components for this project, are expected to occur during the construction/installation phase. While these impacts are not expected to be major, the careful implementation of mitigation measures will allow for the reduction or avoidance of any adverse effects. These general impacts have been identified in chapter 5 and Table 9 below indicates the list of all potential mitigation measures related to these activities. The measures are presented in a manner that makes them easy to be incorporated into an Environmental and Social Management Plan (ESMP) and, with appropriate

adjusting, can become contract clauses for the contractor who will undertake the civil works. This also allows for ease of monitoring activities throughout the project cycle. Pesticides (e.g. for termite treatments of building foundations, or for extermination) use is also included in the standard ESMP below (note that the use or purchase of significant amounts of pesticides is not eligible under the Project).

Table 9. Impact and General Mitigation Measures

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
Sourcing of construction materials	The excavation of quarries and borrow pits, used for obtaining rocks, soil and aggregate materials for the activities proposed under this project will be sourced from outside. Materials such as sand cement, steel rods and other would be required during construction.	(a) The construction materials such as sand, clay, aggregates etc. shall be sourced from sustainable certified quarries and sellers.
Construction site	Construction areas are properly delimited with physical barriers	(a) Construction areas are safeguarded with fences and safety barriers to keep the project and the workers on the site safe from trespassers, interruptions, and other inconveniences, and prevent passers-by from accidentally entering the site and being hurt by equipment or falling material.
Soil Erosion and Slippage	Indiscriminate land clearing and excavation should not be permitted. Appropriate drainage system should be implemented. Direct disposal of waste (dangerous, oil, e-waste) ground and open soil should not be permitted.	(a) Contractors must ensure that appropriate erosion control measures such as silt fences are installed. (b) Proper site drainage must be implemented, including drainage at the tops of slopes, around slopes, and beneath roadways. Any drain clogged by construction material or sediment must be unclogged as soon as possible to prevent overflow and flooding. (c) The use of retaining structures and planting with deep rooted grasses to retain soil during and after works must be considered. d)The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. (d) Keep angle of slopes within limits of soil type.

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
		(e) Balance cut and fill to limit steepness of slopes. All slopes and excavated areas must be monitored for movement.
Air Quality	Air pollution: in order to help mitigate; regular inspections of machinery and equipment used in the operation must be performed, to ensure their good working condition, and dust prone areas and material should be covered.	(a) Construction materials such as sand, cement, or other fines should be kept properly covered. b) Cement should be kept stored within a shed or container. d) The sand and fines should be kept moistened with sprays of water. Unpaved, dusty construction roads should be compacted and then wet periodically. During interior demolition debris-chutes shall be used above the first floor. c) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust. During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site d) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust. There will be no open burning of construction / waste material at the site. e) There will be no excessive idling of construction vehicles at sites. The bins of all haulage vehicles transporting aggregate or building must be covered on all public roads
Noise (Vibration and noise nuisance)	For these impacts, supervision of working conditions has been included as a routine measure and includes: Daily regular inspection of machinery and equipment used in the operation to ensure that they are in good working condition, thus avoiding excessive vibration and noise. Noise generating sources must be located away from residential or	(a) Construction / work activities will occur within specified daylight hours (as stablish by local legislatures) (b) Temporary noise barriers will be installed in the construction site to minimize harmful the noise levels. (c) Community / public to be informed in advance of any work activities to occur outside of normal working hours or on weekends.

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
	noise sensitive receptors to meet the noise emission levels provided by the local legislation or in its case those as are indicated in World Bank IFC's General EHS Guidelines. Workers in noisy working environment must use of noise suppression PPE, and those noise emitting sources must be shielded and mufflers.	(d) Sites should be hoarded wherever possible. During operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible. (e) There will be no excessive idling of construction vehicles at sites. Noise suppression equipment or systems supplied by manufacture will be utilized. (f) Ensure all vehicles and equipment are properly serviced. Contractors must develop and implement a public notification and noise management plan, consulted and agreed with the local community were works are taking place
Non-Hazardous waste	Waste Management (general)	(a) Contractors to develop and implement waste management plan in consultation with the local solid waste authorities. (b) Contractors to abide by all pertinent waste management and public health laws. (c) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities. (d) Construction and demolition wastes will be stored in appropriate bins. (e) All waste will be collected and disposed of properly in approved landfills by licensed collectors. The records of waste disposal will be maintained as proof for proper management as designed. (f) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos or other hazardous material

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
Hazardous waste	Solid (E-Waste) and Liquid Waste Management for hazardous substances	(a) Contractors must provide temporary storage on site for all hazardous or toxic substances in safe containers labelled with details of composition, properties and handling information. The containers of hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching. The wastes shall be transported by specially licensed carriers and disposed in a licensed facility. (b) E-waste generated as part of the project activities of replacement of computers and other digital devices will be removed and properly stored under leak proof conditions until it is transported by specially licensed carriers and disposed in a licensed facility for recycling or are sold for certified refurbishment facilities. (c)Paints with toxic ingredients or solvents or lead-based paints will not be used. (d) Banned chemicals will not be used on the project. If termite treatment is to be utilized, appropriate chemical management measures will be implemented to prevent contamination of surrounding areas and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques. (e) Any project which involves the purchase or use of pesticides, other than incidental amounts (for example termite treatment in item (c) above), will be excluded during the screening project.
Wastewater	Wastewater pollution management	(a) Liquid and chemical wastes will be stored in labelled containers which will be separated and secure places (out of reach of the public). (b) Construction related liquid wastes must not be allowed to be

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
		accumulated on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its contents.
Hazardous Materials	Solid and Liquid Waste Management for asbestos	(a) If asbestos is located on the project site, it shall be marked clearly as a hazardous material. If work has already commenced, all work in the area must stop immediately. An asbestos management plan must be prepared by the contractor and approved by the relevant local health and waste management authorities. b) Where possible the asbestos and its location must be appropriately contained and sealed to minimize exposure. The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust. (c) Asbestos will be handled and disposed of by skilled & experienced professionals using appropriate PPE (personal protective equipment) such as respirators and tyvec suits (disposable coveralls or jumpsuits). (d) If asbestos material is to be stored temporarily, the wastes should be secured within closed containments and marked appropriately. Security measures must be implemented against unauthorized removal of asbestos from the site. No removed asbestos will be reused.
Biodiversity	Pollution terrestrial environment (flora/fauna) Encroachment on protected, sensitive /fragile ecosystems should be avoided for any activity of the project.	Ensure that all project activities are not located on or close proximity to natural or critical habitats or areas of high ecosystem value.
Chemicals	Oil, grease, toxic substances and waste should not be disposed-off on streams, rivers or places where	(a) The contractor must implement all necessary waste management plans and measures.

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
	they can eventually end up in the sea or soils. In order to ensure environmental mitigation and good practice; A Pollution Implementation Plan (PIP) must be prepared and approved by the relevant authorities when the exact location of proposed project activities is identified. It should indicate the precise location of the activities, in relation to existing environmental resources and implementation process. It should also include a) spill Prevention and Control Plan; b) Waste Management Plan, c) Hazardous Materials Management Plan; d) E-Waste Management Plan	(b) All construction materials, including chemicals, must be properly stored. The contractor will establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, and / or silt fences and traps to prevent sediment from moving off site and causing excessive turbidity in nearby streams, rivers, wetlands, and coastal waters. (c) If works are to be done along coastal marine areas or near major streams and rivers, water quality monitoring must be done before construction, and at regular intervals during construction to determine turbidity levels and other quality parameters. (d) See soil erosion and slippage mitigation measures below. e) Construction vehicles and machinery will be washed only in designated areas no runoff to waters
Energy Efficiency	Energy consumption and efficiency Energy efficiency measures will be considered for all project activities	(a) Project activities will promote the use of energy efficiency and feasible and where possible the project will promote consumption of renewable energy. (b)Advanced designs and construction techniques shall be considered. These may include reduce heating, cooling, ventilation and lighting energy consumption. The project will also upgrade buildings and replace equipment with energy-saving devices.
Water efficiency	Water consumption and efficiency Water-efficiency measures will be considered for all project activities	(a) Project activities will promote the use of water efficiency measures such as low-flow fixtures, sensors, use of non-potable water for irrigation applications.
Occupational Health and Safety	Occupational Health and Safety	(a) Contractors must ensure that an Occupational Health and Safety Plan is in place to guide work activities and provide a safe environment for workers.

IMPACTS	GENERAL MITIGATION MEASURES	SPECIFIC MITIGATION MEASSURES
		(b) Contractors must ensure that all workers have received regular training to perform their job, as well as daily inductions prior to work activities have taken place. (c) Contractors must ensure that all workers operate within a safe environment. All relevant Labor and Occupational Health and Safety regulations must be adhered to ensure worker safety. c) Workers must be provided with necessary equipment as well as protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. (d) Sanitary facilities must be provided for all workers on site. Contractors must ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. (e) Appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.
Cultural heritage	Accidental destruction of cultural heritage (Chance-finds)	(a) Contractors must ensure that provisions are put in place so that artefacts or other possible "chance finds" encountered in excavation or construction are noted and registered, and responsible authorities contacted, and works activities delayed or modified to account for such finds. (b) No item believed to be an artefact must be removed or disturbed before cleared by responsible authorities.

7. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

This instrument is prepared as a guideline for the preparation of site-specific Environmental and Social Management Plans (ESMP) for subprojects activities that are still pending for a final design and site assignment. Usually, the ESMF is used to guide the development of specific ESMPs, in view that general activities and impacts for the project concept design have been identified, but that specific details on the activities for the implementation of the subproject are not known. As such, a template of a generic ESMP for the project has been included below. The number, scope, and type of plans, procedures, programs, to be included in each ESMP is not limited, and it should be developed according to the project needs. It is also expected that in the case of environmental and social risks or impacts that have not been identified or included in this ESMF, a plan can and should be prepared using the recommended formats.

7.1 Environmental and Social Management Plans: Guidelines for Subprojects

An Environmental and Social Management Plan (ESMP), is a technical assessment document for identifying environmental and social impacts. This instrument predicts those relevant environmental and social impacts that a project and its activities could create during its implementation (construction, operations, and closure). The ESMP includes environmental and social impact mitigation and control measures, as well as its predicted costs, and also the time and length for those measures to be implemented, and the responsible parties for it. The responsibility to prepare the ESMP plans rely on the environmental and social specialists at the Project Implementation Unit (PIU).

7.1.1 Subprojects Identification Procedures

In order to determine the extent of the environmental and social management plans for each subproject; an identification procedure will be performed using a specially designed form (Annex 2 and further detailed in Chapter 9). The form is used to determine what type of ESMP will be needed for each case. The identification process for subprojects will also ensure that its implementation activities that could generate a potential negative impact will not be non-compliant with the Environmental and Social Standards of the WBG (ESS-WBG). These are:

- ESS 1: Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2: Labor and Working Conditions;
- ESS3: Resource Efficiency and Pollution Prevention and Management;
- ESS 4: Community Health and Safety;
- ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
- ESS8: Cultural Heritage;
- ESS 9: Financial Intermediaries; and
- ESS 10: Stakeholder Engagement and Information Disclosure

7.1.2 Risks, Strategies and Mitigation Opportunities for Subprojects

In section 6 of this Environmental and Social Management Framework (ESMF), the general potential environmental and social impacts and risks for the project activities have been identified. As the project

implementation will occur in different countries and different time, also by different agencies and contractors with different skill levels; also, and the moment the specific activities and their location for these have not been defined as yet. This section analyzes and identifies those similar activities for the project Caribbean Digital Transformation Program (CADTP) design that will occur in all locations during implementation (construction, operation and closure).

In order to ensure good practices and attention to those identified risks and impacts, and in accordance to the mitigating recommended, a list of strategies is presented for the subproject ESMP's preparation. These will be included in the Terms of Reference (TORs) of the future contractors to be hired by each country CADTP; this will ensure that a specific ESMP for each subproject action will be prepared and fully implemented. Table 10 presents the risks, strategies and mitigation for subproject of this program (CADTP)

Table 10. Risks, and Mitigation Opportunities

Media	Risk and Impacts	Mitigation opportunities
Environ/ Natural	Risks of a reduction of air quality (increased particulate matters and gas emissions, radiation, etc.)	Include adequate insolation and other procedures to ensure emission controls from sources point
	Affectation by increase in vehicular traffic	A plan and procedure will be prepared to control and organize traffic in and around the project premises during construction and operations, this will also include accident prevention (routing and signalling)
	Labor and working accidents	An Occupational Health and Safety plan would be prepared specifically for all project implementation locations
	Lack of signalling and warnings sings	A signalling protocol will be prepared for all project implementation location. This protocol will include prevent and danger notifications to ensure secure access to individuals
	Gases generated by construction and services vehicles	Proper maintenance of combustion machineries and motors will be required, periodically
	Dust and Noise generation	Use of water spray for dusty roads, daily cleaning of work areas. Use of face masks and filters for workers in dusty areas For noise control, adjust working schedule to those hours allowed by local legislation. Workers in noise work areas, must use muffled earwear to reduce potential health issues
	Soil contamination by spills of substances, (oils, chemicals, etc.)	For the management and storage of these type of substance, a special infrastructure will be construction to prevent direct contact to the soil by the containers of these substance. Its use must follow manufacture instructions and precaution measures. For final disposal of these substance types must follow and comply with local legislature, and authorized operators

Media	Risk and Impacts	Mitigation opportunities
	Solid waste without treatment	For this purpose, a solid waste management plan will be prepared. This must include waste separation/classification and separation. Organic wastes must be maintained under refrigeration during temporal storage, before final disposition by authorized operators (in accordance with the local legislation)
	Water usages during construction	A water rationale use must be implemented to reduce and avoid excessive and uncontrolled uses of water. Revisions of temporary infrastructure must be performed frequently during construction to prevent leakages
	Stagnant residual waters and potential proliferation of vectors and diseases	All puddles and stagnant waters must be eliminated in the project premises during construction and operation phases
	Unnecessary uses and abuse of electricity and or fuel consumption during construction and operating phases	Promote and make an efficient use of equipment and machinery, using them only when needed. Turn off equipment not in use, such as: lights, refrigeration (AC), etc.
	Biodiversity impacts and affectations	It will be avoided the construction and installation of any project activities in areas with biodiversity and natural interest to prevent negative impacts and ensure the adequate sustainable environmental management. this procedure will occur during the project identification phase
	Affectation on the land scape and surroundings	Work debris and other solid wastes and materials used during construction will not be kept uncared off, also avoid dispersing along the project site. All debris and solid waste shall be covered with liners and be stored in places to avoid being dragged away by rain runoff. Debris must be removed from premises every 5 days
	Inadequate uses of water and production of residual waters	Install adequate infrastructure to supply water for general use, also potable water for human consumption. Install adequate infrastructure to store and appropriately dispose of residual waters during construction and operational phases, in accordance with the local legislation mandates in these matters
	inadequate uses of construction materials, such as lead paints, asbestos and such	All materials used for the project will be from authorized sources, quarries, wood storehouses, etc. Prevent and avoid uses of toxic materials in the project
	Inadequate segregation and temporary storage of toxic and dangerous materials, including Electrical Wastes during construction and operational phases	Prepare and implement a Toxic and Dangerous Management Plan that include Electrical wastes (E-Wastes). This plan must include monitoring and registry
	Improvement in working conditions to ensure	Prepare and implement a Labor Management Procedure for the project's different implementation sites

Media	Risk and Impacts	Mitigation opportunities
	better environmental practices	
	Risks of electrical current tension/voltage alteration that could cause fires	Implement tension and voltage stabilizing equipment to prevent alteration on the electrical installations
Social	Risk to create access barriers to handicapped	Assurance to include the appropriate measures to avoid this issue in all rehabilitating infrastructure activities
	Improve the access standards to ensure vulnerable groups	Include measures that improve access in this project and others in the future
	Risks of burglary and destruction	Include adequate security process to ensure the project equipment and installations. Include proper labelling
	Risks of not sufficient trained personnel	Initially reinforcement with international expertise. Initiate training processes for local individuals

7.2 Guidelines for the Preparation of the Environmental and Social Management Plans (ESMP)

These site specific ESMPs will be prepared based on the technical norms and local legislations that are pertinent to the project design and implementing process during the construction, implementation and closing phases. The following plans have been identified for the project based on the activities to be financed.

7.2.1 Environmental and Social Management Plan

An ESMP must include the following items, as indicated in the above-mentioned sections:

- **Legal Framework**

This will support the bases of the ESMP's in each one of the project implementation locations, and this is based in the National legislature, regulations, resolutions, norms, international treaties, and other legally binding instruments that applies to the project.

- **Institutional Framework**

This includes the institutions involved in the project administration, management and operations. These will be identified and their roles and responsibilities during project phases (pre-construction, construction and operations) will be defined.

- **Implementation Plan**

Without considering the size and complexity of a project a schedule, all project activities must be prepared using a double entry matrix were activities are set against execution time, with estimative starting and finishing dates for the project implementation.

- **Environmental and Social Risks: Mitigation Measures Adopted**

Specific risks analysis of the specific subproject implementation will be required to be part of all ESMP's for each implementation project sites, including those regarding violence and gender issues. These specific ESMP's must include prevention, avoidance and mitigation measures that will be identified, and previously approved by projects authorities before the ESMP's implementation.

- **Budget and Costs**

In each phase of the project a budget with the costs of the ESMP must be prepared, specifically for each managerial action proposed. These budgets must be prepared in charts showing costs estimations categorized for each managerial activity presented, including those contingency expenditures and expending charted chronogram. The budget will be itemized, following the project administrative/financial organization protocols

- **Public Consultation Mechanism**

The information provided to the project participants and workers, as well as the communities and stakeholders must be early and appropriate. Procedures must be established for solicitation, convened and training to workers and affected communities. Amongst the potential topics to cover are: labor ethics, responsibilities and rights, sustainable daily issues and behavior, care for nature and biodiversity, environmental management. For information mechanisms to communities and workers the following could be included: written information (press), radio, internet, social medias, workshops, etc. For public consultation of project activities must be preform before the project implementation, at the design level in the pre-construction phase. This activity is a mandate of ESS10 and demands the local stakeholder's active participation and will be continuous throughout the all the project phases and live. The resultant consultations will be included in the ESMP's for the different project activities.

- **Grievance Redress Mechanism (GRM)**

The procedures for the GRM is based on the ESS10 of the WB, this process will follow a format as presented in Section 11of this ESMF. In general terms will include actions such as registry and chart log of visits, complains, observations, and comments of all interest parties.

- **Follow-up and evaluation**

The mechanisms for follow-up and evaluation must be design and implemented throughout the project phases, to have controls of all actions, by measuring its efficiency and effectiveness and compliance. This will assist in preparing evaluation reports that will address the improvement or actions required. This mechanism will include project supervision from the Project Implementation Unit, contracted supervision and World Bank supervision. It will require reporting (weekly, monthly, quarterly), inclusive of daily logs, verification and technical, environmental and engineering reports as agreed

- **Adaptive management arrangements**

These are defined as alternative managerial actions different from what was originally planned. These managerial arrangements are to be adopted due to changes that occur during project implementation, caused by unforeseen events that generate a need for an adaptive management decision in view of the new and unexpected situation

7.2.2 Waste management during construction, operational and closure phase (WMP)

The following guidelines are included in order to develop the Waste Management Plan during the construction, implementation and closing phases. The WMP must follow and comply with the ESS1 of the Environmental and Social Framework, and its extent of application will depend on the project activities that will be performed at each project site. It will include the integral management of solid, liquid, and gases wastes. It shall include measures to manage asbestos and other dangerous materials (electrical wastes, toxic chemicals and paints, etc.), that could be used or be generated during the demolition, construction, upgrade or renewal of installations and infrastructure; as well during implementing activities (paper, office materials, paints, etc.), replacement of electrical equipment (computers, servers, cables, etc.). This plan must comply with the existing country legislation and regulations. The basic content should include:

- Objective of the managerial waste plan
- Legal frame
- Institutional frame
- Site and surroundings diagnostics and characteristics
- Possible environmental and social impacts
- Evaluation of the environmental and social impacts
- Measurements for waste management during construction and operational phase of the project
- Arrangements for permits for final disposal of the different types of wastes that the plan entitles
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redress Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Waste Management Plan

Based on ESS1, the plan must stablish responsibilities in relation with the risk and impact levels during the different project phases. Thus, the generation of waste must be considered from the very beginning; during the predesign contracting, construction and implementing phases. In all cases previsions shall be taken in order to minimize the production of waste, and those that can be minimized must follow an integrated management plan to properly reduce, manage, and dispose all types of waste that could be generated by all the different project activities. By doing so, the project will avoid a negative affectation to stakeholders and livelihood, biodiversity and habitats nearby and surroundings of the project site and activities.

Given that the project will include the replacement of electronic equipment, a specific guideline to develop an Electronic Waste Management Plan (EWMP) has been prepared for the Project and is presented in Annex 3.

7.2.3 Traffic Management Plan (TMP)

Following the mandates in the Environmental and Social Framework: ESS1, ESS2 and ESS4, and taken into consideration each project phase and that all the location of the project activities will have different landscape configuration, roads, access, etc., this plan will provide specific measures to be implemented to ensure a proper traffic management while minimizing security risks and impacts to the affected

communities. This plan must consider the following: amount of vehicular traffic, pedestrian, the universal principle of open access to sites, the uses of signs, and control mechanisms to allow the free and orderly movement, safe and predictable, guided and a warning to school, hospitals, neighbours and stakeholders nearby the project installations during construction and operational hours. The basic content of a traffic management plan should include:

- Objective of Traffic Management Plan
- Legal frame
- Institutional frame
- Site and surroundings diagnostics and characteristics
- Possible environmental and social impacts
- Evaluation of the environmental and social impacts
- Measurements for traffic management during construction and operational phase of the project
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redressal Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Traffic Management Plan

These objectives are based on the guidelines of the Environmental and Social Framework of the WB: ESS1, ESS2 and ESS4, and determine the responsibilities in relation of the evaluation, management and follow-up of the environmental and social impacts associated to the project implementation phases. In the case of Traffic Management Plan (TMP), this must include the predesign, construction and operational phases, with recommended actions to avoid, reduce and minimize those potential impacts generated by traffic and increase traffic in and around the project site, during construction and operation. This plan will avoid all major disturbance of existing traffic, prevent blockages, and permits free flow of vehicles in the community were the projects are installed.

7.2.4 Labour Management Procedures (LMP)

This procedure seeks to ensure the inclusion of measures, to manage risks associated with employment under the project, and to help determine the resources needed for planning and management. It sets out the approach to meet the national requirements, as well as the objectives of the World Banks's Environmental and Social Framework, specifically the objectives of ESS2: Labour and Working Conditions and Occupational Health and Safety. Based on the Project's Environmental and Social Assessment, for this project, risks are considered minimal in regard to labour and working conditions, as well as occupational health and safety. During operations the Plan will ensure that project management will be committed on a continuous basis throughout the life of the project, to evaluate risks and impacts and to have in place adequate measures and procedures to manage adverse impacts. The Code of Conduct will also be adopted throughout project implementation (Annex 4). It is important to note the LMP is a live document and can be updated to meet the demands of the project. The basic contents of a Labor Management Procedures include:

- Objective of Labour Management Procedure
- Legal frame

- Institutional frame
- Standard code of conducts for workers
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redress Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Labour Management Procedure

These are based to comply with the ESS1, ESS2 and ESS4 (Environmental and Social Standard of the World Bank), in relation with the evaluation and level of the project site, implementation phase and the risks that it imposes, for the safety and health of workers, nearby communities and stakeholders. This activity and its codes of conduct are designed in phases and in joint and inclusive effort. All workers must adhere to this procedure and ensure to fulfil their contracted duties and assignments, obeyance and respect to gender and ranks, care and well behaviour and good practice at work and with natural surroundings and biodiversity.

Stand-alone LMP is developed for the project.

7.2.5 Occupational Health and Safety Plan (OHSP)

During project implementation and with the implications that involve, creates the need of an Occupational Health and Safety, measures to be developed to prevent harm and ensure the health and safe working conditions and security to the personnel involved in the project activities. Occupational Health and Safety measures are reflected in the LMP.

Objective of Occupational Health and Safety Plan

This specific instrument is based on those mandates of ESS1 and ESS2, that establish the mechanism for the Occupational Health and Safety Plan (OHSP) and ensure that is in line with the World Bank Group EHS Guidelines and its specific Occupational Health and Safety (OHS), to ensure health and safety of workers during construction activities during a project implementation, with the purpose to avoid, minimize and mitigate those potential impacts that the activity could cause, and to avoid harm or any danger to peoples.

Annex 4 includes a generic guideline to be used for the development of the code of conduct.

7.2.6 Code of Conduct

The guideline for preparing the Standard Code of Conduct aim at workers who participate in various stages of the project: pre-investment, preparation and implementation. This guidance follows the objectives of Environmental and Social Standard of the WB: ESS1, ESS2, and ESS4 and the content of it will depend upon the specific characteristics of each subproject. The code of conduct applies to workers classified as direct, hired and community or voluntary. For the project, this code of conduct will specifically apply to direct workers, PIU workers, Infrastructure Management Personnel, Builders and Construction Supervisors, and others as defined necessary during project implementation. Hired workers Contractors and subcontractors, hire workers to carry out construction, supervision, supply of materials and equipment. The basic content for the code of conduct should include:

- Objective of the Standard Code of Conduct for Workers
- Legal framework
- Institutional Framework
- Standard Code of Conduct for Workers
- Implementation schedule
- Costs and budget
- Information and consultation mechanism
- Mechanism for handling complaints and claims
- Monitoring and evaluation
- Arrangements for adaptive management

Annex 5 includes a generic guideline to be used for the development of the code of conduct.

7.2.7 Chance Finds Procedures (CFP) at the project sites

This guidance follows the objectives of the Environmental and Social Standard of the WB: ESS1 ESS2, ESS5, ESS8. During project activities that involve remodelling, upgrading or constructing infrastructures, some of these actions can produce unexpected events such as findings of important scientific, cultural or social structures or artifacts that could be considered of national, cultural or historical values. Thus, a specific procedure must be implemented were responsibilities and actions must be in placed to deal with these chance finds events. Most countries have specific legislation to comply with on these matters. A specific Chance Finds Clause must be included in all contracts for the project implementation activities. The basic procedure to follow in the Plan must be required: i) stop all activities in and nearby the findings, ii) inform the local pertinent national authority, iii) place barriers and security to guard and protect from vandalism, iv) await instructions and clearance by local pertinent authorities before proceeding and continuation of works. The basic content of a Chance Find Procedure should include:

- Objective for the Chance Finds Procedure
- Description of the Project and site characteristics
- Legal Frame
- Institutional frame
- Potential environmental and social impacts
- Values and compensation for losses
- Measures to protect and guard chance finds
- Permits arrangements
- Standard code of conducts for workers
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redress Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Chance Find Procedure

This specific instrument is based on those mandates of ESS8-WB, that establish the mechanism to follow in the case of a Chance Find event during a project implementation, with the purpose to avoid, minimize and mitigate those potential impacts that the activity could cause, and to avoid harm or any danger to people's cultural heritage.

7.2.8 Cultural Heritage Management Plan (CHMP)

The following guidelines are presented in order to elaborate the Cultural Heritage Management Plan (CHMP). This are conceived to be implemented during different phases of a project: pre-investment, design and construction phases. These guidelines follow the mandates of the Environmental and Social Standards (ESS-WB), ESS1, ESS2, ESS7, ESS8. Its applicability will be depending on; project site location and national legislation. This plan purpose is to avoid any negative impact or potential risks to the national, cultural or natural heritage of a nation were a project is implemented. The basic contents of a Cultural Heritage Management Plan should include:

- Objective for the Cultural Heritage Management Plan
- Description of the Project and site characteristics
- Legal Frame
- Institutional frame
- Potential environmental and social impacts
- Values and compensation for losses
- Measures to protect and guard National, Cultural and Natural Heritages
- Permits arrangements
- Standard code of conduct for workers
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redress Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Cultural Heritage Plan

This specific instrument is based on those mandates of ESS8-WB, that establish the mechanism to protect cultural heritage during project implementation, with the purpose to avoid, minimize and mitigate those potential impacts that the activity could cause, and to avoid harm or any danger to beliefs, knowledge and traditions. Annex X contains a detailed

7.2.9 Emergency Readiness Plan

The following guidelines are presented in order to elaborate an emergency readiness plan that could be implemented during the implementation process of project activities. These guidelines follow the mandates of ESS1, and its conditions will be dependent upon each activity phase and site. The risk and hazards to confront can be from natural or anthropic origin, quakes, hurricanes, contamination, fires; in all cases the plan is designed to avoid and prevent these events or in case of unavoidable events, to react and reduce its effect and harm in the community, workers and infrastructures. The basic contents of an Emergency Readiness Plan should include:

- Objective for the Emergency Readiness Plan
- Description of the Project and site characteristics
- Legal Frame
- Institutional frame
- Potential environmental and social impacts
- Values and compensation for losses
- Permits arrangements
- Standard code of conducts for workers
- Implementation plan
- Budget and costs
- Stakeholders Consultation plan
- Grievance Redressal Mechanism
- Follow up and evaluation
- Adaptive management arrangements

Objective of Emergency Readiness Plan

These objectives must be conceived to comply with ESS1, in regard to the evaluation, management and follow-up of risks and environmental impacts for the project phases. In the case of the Emergency Readiness Plan must be conceived since early stages of the project, pre-construction, construction and operational phases, in order to ensure minimal effects and damage by catastrophically and or accidental events.

8. ENVIRONMENTAL AND SOCIAL SCREENING PROCEDURES

8.1 Screening Process

The Environmental and social screening is intended to ensure that proposed country level subprojects projects are subject to the appropriate extent and type of environmental and social assessment (ESA) needed. The first step of the screening procedure will be the preparation/provision of a screening form designed to capture the necessary information about potential environmental and social impacts associated with the proposed activities. The screening form will have to be completed by the Proponent of the country level subproject and submitted to the PIU for review. The country level subproject Screening Procedures have been included in Annex 2.

If, through the use of "Form A. Sub Projects Screening Procedures" the subproject analyzed is found to have no impacts on the environment and social aspects, no further action will be required. However, if impacts are identified, whether they may be mitigated or not, the sub-project screening results are to be brought to the attention of the PIU.

Depending on the results of the completed checklist, the Environmental and Social specialists of the PIU will guide the subproject level project to either complete a Simple Environmental and Social Assessment (ESA) (Form C) or a Limited Environmental Social Assessment (LEAS) (Form D). Limited Environmental Assessment applies if the sub-project may create minor environmental and social problems that require frequent monitoring or sub-project design modifications to minimize or eliminate the impacts. In accordance with normal procedure, copies of the above will then be submitted to the relevant environmental and social official/authority by the PIU for review also.

8.2 Permitting

The Regional and National PIUS will be required to consult the relevant authority with legislated responsibility for granting planning permits or approvals for project related activities. For all World Bank projects all laws and regulations and guidelines pertaining to planning an environmental protection in the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines must be followed and obtained.

The evaluation, screening and scoping of activities and projects by the relevant Planning authority may conclude that certain projects or activities require that an EIA be conducted. In such cases, then any mitigation requirements or conditions from that EIA should be included in the relevant contracting language to ensure that they are carried out.

9. INSTITUTIONAL ARRANGEMENTS FOR IMPLEMENTING THE ENVIRONMENTAL AND SOCIAL FRAMEWORK

9.1 Structure of Management and Supervision Teams

The ECCB has some familiarity with the World Bank safeguards policy requirement. However, they do not have a dedicated unit or staff on environmental and social issue management. The ECCB will need to hire the service of an environmental and social specialist(s) as individual consultant or supervision consultant with environmental and social monitoring and reporting included within the Scope of Work. This will ensure that the contractor(s) follow the environmental and social requirements under the contracts and implement the Environmental and Social Management Plans for the duration of the work.

9.2 Roles and Responsibilities

Implementation and monitoring of the Environmental and Social Management Framework (ESMF) and all other Environmental and Social Standards (ESS) instruments will be the responsibility of each implementing agency, that is ECCB for regional project activities, and the line ministry responsible for ICT in each country for national level project activities. Coordination with stakeholders at the national level for regionally implemented activities will be built-in to each contract implemented by the regional PIU, and they PIU will be responsible for monitoring of adherence to ESS instruments for the activities. For example, consultants conducting legislative reviews will be required to consult with relevant stakeholders in each country and also provide support to the national legislative drafting units to transpose recommendations to national legislation, while adhering to the requirements of applicable ESS instruments identified by the regional PIU. For this, both the ECCB and the project implementation units at the national levels, will engage Environmental and Social Specialists who will support this function, and within three (3) months of the Effective Date of the Project. Table 4 provides details on the roles and responsibilities for the ESMF.

Table 4. ESMF roles and responsibilities

Role/Position Title	Responsibilities
ECCB Regional Project Manager ECCB Regional Environmental & Social Specialist(s)	• Dissemination of project information pertaining to implementation of regional level project activities (financed by the regional IDA grant) • Manage and implement the Environmental and Social Framework (ESMF) for regional level project activities
National PIU Project Manager(s) National PIU Environmental & Social Specialist(s)	• Dissemination of project information pertaining to implementation of national level project activities (financed by national IDA credits for each country) • Manage, monitor and enforce World Bank Environmental and Social Standards and the relevant national legislation pertaining to labor, health and safety, grievance redress mechanism, environmental and social

Role/Position Title	Responsibilities
	performance throughout the implementation of the project in their respective countries.

9.3 Supervision, Monitoring and Reporting

The CARDTP will be supervised by Regional PIU staff, National PIUs staff, Contractor and other relevant government agencies.

Monitoring during project implementation provides information about key environmental and social aspects of the project, particularly the environmental and social impacts of the project and the effectiveness of mitigation measures. This allows the Project to evaluate the success of mitigation as part of project supervision and allows corrective action to be taken when needed.

9.4 Budget and Resources

Table 5 below summarizes the estimated costs and schedules for the items associated with the implementation of the ESMF. These will be updated by the Regional and National PIUs and subject to clearance by the World Bank.

Table 5. ESMF Estimated Costs and Schedules

Item	Schedule	Cost/annual
Revise ESMF and ESMPs based on final design	First year of project implementation	USD$10,000
Implement ESMF	Throughout project implementation	No additional cost
Recruit Environmental and Social Safeguards Specialist(s)	Full-time throughout project implementation (within 3 months of the Effective Date of the Project)	USD$195,000
Implement ESMPs	Throughout project implementation	No additional cost

The updating of the ESMPs and E-Waste Management Plan (EWMP) will take place once details become available during the design phase. The costs associated with the implementation of the ESMPs are not likely to change because the nature of the project but updating of the ESMP and EWMP may however require the services of an external consultant, for which a budget of USD$10,000 is estimated.

10. GRIEVANCE REDRESS MECHANISM (GRM)

The project and its associated activities may have some short term and reversible impacts. In order to ensure the implementation of the Project in a timely manner and effectively address any anticipated and unanticipated risks that would be encountered during implementation, including the development of the necessary actions of mitigation and avoidance, a robust Grievance Redressal Mechanism (GRM) was developed. The GRM will enable the Project Authorities to address any grievances against the Project. It must be noted that this GRM covers grievances that relate to the impacts that the project may have on people as presented in the Stakeholder Engagement Plan (SEP); in the Resettlement Policy Framework (RPF) and/or the Resettlement Action Plans (RAP); as well as for the implementation of the Indigenous Peoples Planning Framework (IPPF.) In the case of the IPPF, this GRM will integrate in the Grievance Committee (GRC) a Representative from the Kalinago Territory -named by their organization.

Grievances that relate to project workers will be handled by a separate Workers Grievance Redress Mechanism which is included as part of the project's Labour Management Procedures (LMP) that has been prepared. The WGRM GRM will also specify an individual who will be responsible for dealing with any gender-based violence (GBV) issues, should they arise

10.1 Objectives of the Grievance Redress Mechanism

The objectives of the Grievance Redress Mechanism are as follows:

1. Ensure that the World Bank Environmental and Social Standards are adhered to in all subprojects and activities;
2. Address any negative environmental and social impacts of all sub-projects and activities;
3. Resolve all grievances emanating from the project activities in a timely manner;
4. Establish relationships of trust between project staff and stakeholders;
5. Create transparency among stakeholders including affected persons through an established communication system;
6. Bolster the relationship trust amongst the project staff and the affected parties.

10.2 Grievance Redressal Process

The key stages involved in the project's grievance redressal process are summarized in Figure 5 and described in the sections that follow.

Figure 5: Project GRM process

Level One	1. Receive grievance 2. Acknowledge grievance 3. Register/Log 4. Screen 5. Investigate 6. Resolution
Level Two	Grievance Redress Committee (GRC)
Level Three	Local Courts

10.2.1 First Level of Redress

Receive Grievance

All complaints should be received by the Project Manager of each implementing PIU. This includes the project contact personnel in each of the participating countries. Through the consultation process in each participating country, stakeholders will be formed of various avenues through which the mechanism can be accessed. Complaints can be made in person, writing, verbally over the phone, by fax, emails or any other media. The point of receipt of complaints is listed in Table 11.

Table 11. Contacts for Grievance

Contact	Dominica	Grenada	St. Lucia	SVG	ECCB
Name	Jermaine Jean-Pierre	Rhonda Jones (Ms.)	Marlon Narcisse (Mr.)	Marcelle Edwards-John (Mrs.)	Imran Williams (Mr.)
Title	Director of ICT Unit	Permanent Secretary for Public Administration	Director of Public Service Modernization, Ministry of Public Service, Information, and Broadcasting	Deputy Director of Planning (Ag), Ministry of Finance, Economic Planning, Sustainable Development, and Information Technology	Project Officer, Projects and Technical Assistance Unit (GIO)
Telephone	(767) 266 3524	473) 440-2255	(758) 468-2285	(784) 457-1746	869) 465 2537
Email address	jeanpierrej@dominica.gov.dm	pmsec@gov.gd	marlon.narcisse@govt.lc	medwards-john@svgcpd.com	Imran.Williams@eccb-centralbank.org

Contact	Dominica	Grenada	St. Lucia	SVG	ECCB
Physical Address	1st Floor, Government Headquarters, Kennedy Avenue, Roseau, Dominica	Ministerial Complex, 6th Floor, Botanical Gardens, St. George's, Grenada	2nd Floor, Greaham Louisy Building, Waterfront, Castries, St. Lucia	1st Floor, Financial Complex, Kingstown, St. Vincent and the Grenadines	Bird Rock, Basseterre, St. Kitts and Nevis

All grievances received by the established points of contact within the individual nations should be forwarded to the Project Manager of the respective PIU within 24 hours of receipt.

Modes of Receiving Grievances

Complaints can be made in person, writing, verbally over the phone, by fax, emails or any other media. The person receiving the complaint will try to obtain relevant information regarding the grievance and the complainant and will immediately inform the Project Manager (PM) at the each PIU in the format – Grievance Information Form (GIF) as given in Annex 5.

Acknowledge Grievance

All grievances will be acknowledged by telephone or in writing by the PM using the Grievance Acknowledgment Form (Annex 6) within 48 hours of receipt and the complainant informed of the approximate timeline for addressing the complaint, if it can't be addressed immediately. The PM will work with the Country Ministries or contractors to ensure the speedy resolution of the grievance. If the complaint cannot be resolved at this level it is taken to the next level.

Register/Log Grievance

After receiving and recording the grievance on the GIF, it will be registered in the Grievance Redressal Registration and Monitoring Sheet (GRRMS) (Annex 7).

Screen

The concerned PM review the complaint and assign a grievance owner. The complaint will be forwarded to the grievance owner who will be responsible investigating the claim and liaising with both the aggrieved party and project staff in order to come to a mutually acceptable resolution. The grievant owner will be given a specific timeline for resolving the claim. Meetings with grievant/complainant will be held, if necessary, in an attempt to resolve the matter.

Investigate

The grievance owner will investigate the complaint. This investigation will include, but is not limited to, meetings with the grievant/complainant, site visits, meetings/interviews with project staff and collection of relevant documentation and other forms of evidence. For meetings, the deliberations and decision will be recorded on the Meeting Record Form included as Annex 8. Community representatives or representatives of the complainant will be allowed to sit in on these meetings.

Resolution

The resolution at the first tier should normally be completed within 15 working days of receipt of grievance and notified to the concerned party through the Disclosure Form (Annex 9). If the grievance is

not be resolved within this period, it can be referred to the next level of the Grievance Redressal system. However, once it is determined that progress is being made towards a resolution, the grievance will be retained at this first level. The complainant will be informed of this decision and an estimated time for the resolution of the matter will be given either verbally or in writing. If the issue cannot be resolved within 25 working days, it will be transferred to the next level. Once a resolution has been agreed and accepted, the complainant's acceptance will be obtained on the Disclosure Form included as Annex 9. If the proposed resolution is not accepted the grievance will be escalated to level 2.

NB The complainant may request that the issue be transferred to the next level if he or she does not feel that the grievance is being adequately addressed by the PM.

10.2.2 Second Level of Redress

A Grievance Redressal Committee (GRC) will be formed in each implementing entity, that will consist of members of their respective Project Steering Committees (Regional project Steering Committee, in the case of ECCB), civic leaders and relevant representatives. The GRC will be called into place when a first-tier resolution is not found, but it could also meet on a quarterly basis to evaluate the performance of the project level GRM. From this perspective it is a standing body.

This committee will be chaired by the representative of the implementing line ministry/agency in the corresponding Project Steering Committee. The permanent secretaries of the participant ministries will assign their respective representative to the GRC. The way in which the representative of the civil society will be defined is still TBD, but line ministry or the PIU can invite active NGOs to nominate a representative.

Terms of Reference for GRC:
The functions of the GRC are as follows are to:

1. Provide relief and support to the affected persons in a timely manner;
2. Prioritize grievances and resolve them at the earliest reasonable time;
3. Provide information to PIUs on serious cases at the earliest plausible time;
4. Coordinate the process of the Affected Persons getting proper and timely information on the solution worked out for his/her grievance;
5. Study the normally occurring grievances and advise the PM as to their scale and scope.

The PM will coordinate the convening of the meetings of the GRC. He / She is also responsible for briefing the GRC on the deliberations of the first level of Redressal and on the views of both parties. (Complainant and the Project).

The GRC will hold the necessary meetings with the affected party / complainant and the concerned officers and attempt to find a solution acceptable at all levels. GRC will record the minutes of the meeting in the format using the same format detailed in Annex 8. The decisions of the GRC will be

communicated to the complainant formally and if she/he accepts the resolutions, the complainant's acceptance will be obtained on the disclosure format as in Annex 9.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level / or the complainant can activate the next level. It is expected that the complaint will be resolved at this level within 35 working days of receipt of the original complaint. However, if both parties agree that meaningful progress is being made to resolve the matter may be retained at this level for a maximum of 60 working days.

10.2.3 Third Level of Redress

If the affected party / complainant does not agree with the resolution at the 2nd level, or there is a time delay of more than 60 working days in resolving the issue, the complainant can opt to consider taking it to the third level. This level involves the complainant taking legal recourse withing the local courts.

10.3 World Bank Grievance Redressal Service (GRS)

The complainant has the option of approaching the World Bank, if they find the established GRM cannot resolve the issue. **It must be noted that this GRS should ideally only be accessed once the project's grievance mechanism has first been utilized without an acceptable resolution.** World Bank Procedures requires the complainant to express their grievances in writing to World Bank office in Washington DC by completing the bank's GRS complaint form which can be found at the following URL link: http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service#5 . Completed forms will be accepted by email, fax, letter, and by hand delivery to the GRS at the World Bank Headquarters in Washington or World Bank Country Offices.

Email: grievances@worldbank.org
Fax: **+1-202-614-7313**
By letter: **The World Bank**
Grievance Redress Service (GRS)
MSN MC 10-1018 NW,
Washington, DC 20433, USA

10.4 Addressing Gender-Based Violence

The GRM will specify an individual who will be responsible for dealing with any gender-based violence (GBV) issues, should they arise. A list of GBV service providers will be kept available by the project. The GRM should assist GBV survivors by referring them to GBV Services Provider(s) for support immediately after receiving a complaint directly from a survivor.

If a GBV related incident occurs, it will be reported through the GRM, as appropriate and keeping the survivor information confidential. Specifically, the GRM will only record the following information related to the GBV complaint:

- The nature of the complaint (what the complainant says in her/his own words without direct questioning);
- If, to the best of their knowledge, the perpetrator was associated with the project; and,

- If possible, the age and sex of the survivor.

Any cases of GBV brought through the GRM will be documented, but remain closed/sealed to maintain the confidentiality of the survivor. Here, the GRM will primarily serve to:

- Refer complainants to the GBV Services Provider; and
- Record the resolution of the complaint

The GRM will also immediately notify both the Implementing Agency and the World Bank of any GBV complaints **WITH THE CONSENT OF THE SURVIVOR**.

10.5 Grievance Redress Mechanism Budget

Item	Cost (US$)
Meetings of GRC (100 meetings @ USD1000)	100,000.00
Information Production and Dissemination (500 collateral materials @ USD100)	50,000.00

10.6 Building Grievance Redress Mechanism Awareness

The ESS will initially brief all staff of the project office, the Project Steering Committee (PSC), the sub-projects including consultants and contractors, and the staff of the individual country Ministries on the Grievance Redressal Mechanism of the Project and explain to them the procedures and formats to be used including the reporting procedures.

The ESS will brief the all project stakeholders on the Grievance Redressal Mechanism of the Project and explain the procedures and formats to be used including the reporting procedures.

Awareness campaigns would be conducted targeting project stakeholders to inform them on the availability of the mechanism; various mediums will be used- as detailed in the Stakeholder Engagement Plan (SEP). The GRM will also be published on the ECCB website, responsible Ministries in each participating country's website and the project website or Facebook page if there is one. A project site board will be erected on the sites of sub-projects indicating the existence of the mechanism and a phone number, email and address for further information. The GRM will be translated into local and colloquial expressions if determined to be needed.

10.7 Monitoring and Reporting

The Environmental Safeguards Specialist and/or Social Specialist/s at each PIU will prepare Quarterly Reports on the Grievance Redress issues of the project.

10.8 Periodic Review by Grievance Redress Committee

The Grievance Redressal Committee may review the nature of grievances that have been represented and if grievances are repeated, recommend suitable changes in implementation procedures and forward these to the PSC for implementation.

11. DISCLOSURE AND PUBLIC CONSULTATION

This draft ESMF document is being shared with the relevant stakeholders in order to inform them of project activities, identify any additional relevant concerns or issues, and thereby improve the quality and usefulness of the Final ESMF document.

The ESMF contains measures to mitigate the potential risks and impacts that are included in the Environmental and Social Management Plans (ESMPs) which form part of the ESMF. The ESMP also includes an E-Waste Management Plan (EWMP) to mitigate any risks and impacts associated with the disposal of electronic waste. These documents are also being published to solicit stakeholder input.

Finally, a Stakeholder Engagement Plan (SEP), Labor Management Procedures (LMP), Resettlement Policy Framework (RPF), Indigenous Peoples Planning Framework (IPPF) and Grievance Redress Mechanism (GRM) have also been prepared to address potential project related concerns and claims from workers and the general public. All these documents are being disclosed on the Government's website in draft form as part of the consultation process.

11.1 Disclosure

Above all there must be community consultation before and during project implementation. This will allow for the development of open communication or rapport between the community and the ECCB and governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines. It will allow for concerns to be addressed upfront and the affected community would have greater tolerance to the inconveniences experience. They are also the ones on the ground and their concerns and recommendations should have merit. Public Consultation is critical for this type of project - specially to gain community support and 'buy in'.

Evidence of stakeholder input includes public attendance record sheets, links to published documents, screen image of publication of ESMF requesting public comment, notification in newspapers, and/or e-mails to key organizations or individuals.

The ECCB and governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines should make provisions for the relevant Ministries to organize public consultation forums with the affected communities, interested organizations and individuals as often as is necessary. A Public Consultation Plan should be prepared by the relevant government ministries, which among other things, identifies the target groups, schedule, information to be disseminated (safeguard instruments etc.) how and where it would be disseminated.

11.2 Public meetings

As part of the stakeholder engagement process, described in the SEP , public meetings and consultation will continue during the life of the project, in the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines.

Considering current COVID-19 situation, the following methods will also be considered for future consultations: i) Make a short video (that can be transmitted by WhatsApp) the video should present the objectives of the project and the main risks and benefits; ii) Share the link from where the documents are

available on the Client website; iii) Distribute a feedback form on participants' opinions on the main risks and benefits - from the perspective of the stakeholders. [Copy of the Transcript of the short video can be shared]; iv) Conduct feedback collection directly over the phone - especially for people who do not have Internet access; and v) Prepare the summary of the comments received and actions taken to address the comments

Evidence of meetings includes public attendance record sheets, meeting minutes, photographs, presentations, publication of ESMF requesting public comment, notification in newspapers, and/or e-mails to key organizations or individuals.

11.3 Revision/Disclosure of Final ESMF

The draft ESMF will be revised to incorporate relevant stakeholder comments generated from consultation meetings

The draft final versions of the ESMF will be published on the ECCB and Governments of the Commonwealth of Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines websites as well as on the World Bank website, as listed below.

ECCB: www.eccb-centralbank.org
Dominica: www.gov.dm
Grenada: www.gov.gd
St. Lucia: www.govt.lc
St. Vincent and the Grenadines: www.gov.vc

12. ANNEXES

Annex 1: Evaluation of Environmental and Social Impacts Methods
Annex 2: Screening Process
Annex 3: Electrical and Telecommunications Waste Management Plan (EWMP)
Annex 4: Occupational, Health and Safety Guidelines
Annex 5: Sample Code of Conduct
Annex 6: Grievance Information Form (GIF)
Annex 7: Grievance Acknowledgement Form (GAF)
Annex 8: Grievance Redressal Registration Monitoring Sheet
Annex 9: Grievance Meeting Record Form
Annex 10: Grievance Disclosure/Release Form

Annex 1: Evaluation of Environmental and Social Impacts Methods

This methodology is based on the analysis of relevant criteria's, using the following formula:

Impact Value (IV) = 0.4 I + 0.2 E + 0.1 D + 0.1 T + 0.2 R; were:

I: **Intensity**, analysis on the values of changes observed on the environmental and social environs;
E: **Extension**, spatial dimension of the occurrence
T: **Development**, time lap required for the complete manifestation of the impact;
D: **Duration;** time gap of lasting effect of the impact
R: **Reversibility,** system capacity to return back to a similar or ordinal condition, after the cease effects of the impact.

IV: Impact Value, is the result value of the sums of above-mentioned indicators

Intensity (I)
Perturbance level: it's the strength, weight and rigor of the change manifestation. For is validation is needed a transformation function, that allows to express the loss or level of the impact induced change or affectation. Usually this can be measure (i.e., changes in pH)

Social environ values: indicates de importance of the territorial unit or surroundings. This index is measured in accordance of popular, legal, political considerations. (i.e. same impact but its occurrence in different places; protected and non-protected areas)

These values are used in combination in the evaluation process. See example and levels in the following table.

Intensity values in accordance with the Perturbance and Social environ levels

Perturbance Level	Social Environ Impact Value			
	Very High	High	Medium	Low
High	10	7	5	2
Medium	7	7	5	2
Low	5	5	2	2

Extension (E)
This refers to the area were the impact has affection upon, could be punctual, small, local, municipal, regional, national levels. It could be total or partial, can be expressed in percentages

Extension values in accordance with the affected area

Extension	Affected area	Impact value
General/Large	> 75%	10
Extensive	35 - 75%	7
Local	10 - 35%	5
Punctual	< 10%	2

Duration (D)
It's the measured time of the impact influences. It can be measure in time scale (months and years)

Duration values in accordance with time elapsed

Duration	Time/years	Impact value
Long	>20	10
Medium long	5 -20	7
Medium short	2 - 5	5
Instants	< 2	2

Development (T)
Time that takes from the initial moment of occurrence for a full manifestation of the impact.
This is most practical in order to foresee if the impact evaluated is of slow occurrence, thus actions and mitigations can be implemented before it develops into a strong impact event

Development values in accordance with time elapsed

Development	Time/years	Impact Value
Instant	< 2	10
Medium term	2 – 5	7
Long term	5 – 10	5
Very long term	> 10	2

Reversibility (R)
After the impact affectation ceases, the conditions could get back to the original or near original stage before the impact occurrences. In order to measure this effect time scale prediction is used

Reversibility values in accordance with time elapsed

Classification	Time/years	Value
Irreversible	>20	10
Reversible on a long term	5 a 20	7
Reversible on a short term	2 - 5	5
Totally Reversible	< 2	2

In a general context an impact evaluation con be done using the following criteria:

General Categories and Criteria for Impact Valuation

Development	Intensity	Extension	Reversibility	Duration	Impact Value
Instant	Strong	General	Irreversible	long	10
Medium term	Medium strong	Extensive	Long term reversibility	Medium long	7
Long term	Medium	Local	Short term reversibility	Medium short	5
Very long term	Low	Punctual	Totally reversible	instant	2

Interpretation of Impact Evaluation Results

In this methodology application results classifies the impacts in 6 different categories, and is ranked by its severity and strength of occurrence, these are:

Category I: impacts with very high probability of occurrence, and with IV ranks higher than 6 (high or very High). The actions recommended once these impacts have been identified, it is avoidance and prevention to ensure these don't occur.

Category II: impacts with high ranking values higher that 6, but with a low probability level for occurrence. These impacts allow to react, by implementing control, mitigation and monitoring measurers, in order to control and prevent the full impacts effects development. This is important in cases of a very fast development impacts

Category III: Impacts with a high probability of occurrence and IV values higher than 4 and less than 6, Those impacts managements recommended are mostly preventive, in cases that these are costly, mitigation, corrective and compensation methods can be used

Category IV: impacts with a low probability of occurrence with IV values higher that 4 and less than 6. Due to its medium level relevance, might not require monitoring or follow-up. Its recommended to use corrective, mitigation and compensation, if these type of impacts its manifested

Category V: Impact with IV values of 4 or less, with a high probability of occurrence. In general terms, these impacts do not require specific managerial actions. These impacts are of concern when their occurrence is in critical, fragile areas of the sum of other activities could accumulate and creates new and different impacts

Category VI: Impacts with IV values of 4 or less with low or medium probability for occurrence. In which cases no managerial corrective measures are applied

Impact classes in accordance with its IV Ranking values and occurrences

Probability	**Impact Values (IV)**			
	8-10	**6-7.9**	**4 - 5.9**	**< 4**
Very high	**I**	**I**	**III**	**V**
High	**I**	**I**	**III**	**V**
Medium	**II**	**II**	**IV**	**VI**
Low	**II**	**II**	**IV**	**VI**

Recommended Measures for Impact Management

Probability	Impact Values (IV)			
	8-10	6 - 7.9	4 - 5.9	< 4
Very High	**I** Preventive or compensation	**I** Preventive or compensation	**III** Any - Preventive is preferred	**V** Any, only if is cost effective.
High	**I** Preventive or compensation	**I** Preventive or compensation	**III** Any - Preventive is preferred	**V** Any, only if is cost effective
Medium	**II** Monitoring and then corrective or mitigation measures if needed.	**II** Monitoring and then corrective or mitigation measures if needed.	**IV** Corrective, mitigation or compensation. Preventive if economically feasible.	**VI** No management measures
Low	**II** Monitoring and then corrective or mitigation measures if needed.	**II** Monitoring and then corrective or mitigation measures if needed.	**IV** Corrective, mitigation or compensation. Preventive if economically feasible	**VI** No management measures

Impact Management and Budgeting criteria

For impact management and corrective actions as recommended in the above table, it has financial/costs implications. The following cost ranking applies:

Higher costs	Medium costs	Lower costs
Prevention	Monitoring and correction	Mitigation and compensation

In practical impact managerial terms, it is preferred to follow this order criteria, to Prevent, Correct, Mitigate and Compensate.

Annex 2: Screening Process

Form A. Sub Projects Screening Procedures

Section A: General Criteria

1. Name of subproject:

_____

2. Parrish:

_____

3. Country:

_____

4. Contractor information:

_____

5. Name:

_____

6. Address and email:

_____

7. Information of the responsible for the screening process and filling the form

_____

8. Name:

_____

9. Academic degree/Profession:

_____

10. Phone number

_____

11. Email:

_____

12. Date:

_____

13. Signature:

_____

Section B. Environmental and Social Description and preliminary assessment of situation and those potential environmental and social impacts

Description of Project site location: include coordinates and maps

_____
_____
_____

Description of the natural surroundings and settings (i.e. topographical features, habitats, flora and vegetation, fauna)

_____
_____
_____

Description of the social surroundings and settings, (i.e. urban/rural, violence, approx. population density, approx. Income level

_____
_____
_____

1. Pollution and Contamination Risks

Description	Yes	No	Not known
Is there a possibility of pollution or contamination risks by discharges from latrines, industrial and dump sites, etc.?			

2. Geology

Description	Yes	No	Not Known
Is there a possibility of soil instability and erosion?			
Is there a possibility of saltwater intrusion?			
Is there a possibility of flooding or interrupting natural drainages and or surface runoff?			

3. Soil Erosion

Description	Yes	No	Not Known
Could the Project activities affect soil erosion processes			
Could the Project activities create indirect activities that could promote soil erosion processes?			
Will the Project modify slopes?			
Could the Project activities create processes that could modify slopes?			
In the event the project activities promote or creates activities that could lead to install infrastructures or activities in areas with slopes. In those instable slopes is there a probability for danger?			
Would it there be a need for consultation of a geology expert?			

4. Water: Quality and Quantity

Description	Yes	No	Not Known
Is there any Surface waters or runoff evidence nearby the project implementation site?			
Will the Project increase the use and demand of freshwater resources?			
Will the Project generate or discharge waste liquid substances into natural surface waters, swamps or palustrine habitats			
Would the project produce negative impacts on the nearby surface waters?			
Would it there be a need for consultation of a water expert?			

5. Groundwaters: Quality and Quantity

Description	Yes	No	Not known
Is there an exploitable groundwater resource by the project?			
Will the Project increase the groundwater uses?			
Will the Project discharge waste waters or any other liquid wastes unto the ground waters and aquifer?			
Could the Project deteriorate or alter the groundwaters?			
Would it there be a need for consultation of a hydrological expert?			

6. Energy Source

Description	Yes	No	Not Known
Will the project increase the demand for energy consumption?			
Will the project create a demand for a different source of energy?			
Will the Project create a demand for different type of energy sources? if yes define type:			

7. Uses of Natural Resources

Description	Yes	No	Not Known
Would the Project require and use considerable quantities of natural resources? (i.e. construction materials, water, soils, sand, gravels)			

8. Maintenance and Upgrades

Description	Yes	No	Not known
Will the Project need frequent maintenance and upgrades during its operation?			

9. Labor

Description	Yes	No	Not known
Will the Project increase employment in the zone?			
Will the Project eliminate job opportunities in the zone?			
Will the project increase income and means of sustenance? ----------			
Will the project diminish income and means of sustenance?			

10. Population: Risks and Impacts

Description	Yes	No	Not known
Would the adverse and negative risks and impacts will be evenly distributed amongst the area of influence of the project			

11. Indigenous Peoples/Local Traditional Communities and Sub-Saharan

Description	Yes	No	Not known
Is the Project located or any of its activities are in land, or spaces where is a presence of communities as described in the ESS-7 of the WBG?			

12. Cultural Heritage

Description	Yes	No	Not known
Will the Project activities could affect or be constructed in or within a patrimonial heritage site?			

13. Land acquisition

Description	Yes	No	Not known
Is there a need of an involuntary land acquisition, home resettlement, loss of income or access that could be related to a reduce quality of life to peoples nearby or in the project influenced areas?	Not eligible		

Part C: Conclusion/ Next actions

Summary	More Requirements/Next action
If all answers were NO	No actions needed
If there at least one YES	Proceed to a Simple Environmental and Social Revision (Form C); or a Limited Environmental and Social Revision (Form D) For Projects that include infrastructures activities, complete Form B: List of Environmental and Social Verification

Recommended Actions:

- ☐ No actions are recommended if there are no impacts identified. Only a Simple Environmental Review (SER), will be performed if there are easily mitigable impacts that could potentially create low level affectation
- ☐ Limited Environmental Revision (LER) would be required if the subproject could create minor and low-level impacts, that could be avoided by changing in the project design and engineering
- ☐ Any other recommendation (please explain)

This form has been completed by:	Approved by the project manager
name: _____ title: _____ date: _____ signed: _____	name: _____ title: _____ date: _____ signed: _____

Form B *[to be further completed]*
Verification List of actions for infrastructure projects

Phase	Negative Potential Environmental Impact	Relevant	Mitigation Measures recommended	Relevant	Responsible
Pre-construction	Steep erosional slopes, potential landslides and erosional processes		Build terraces		
			Excavation by levels in mountainous areas to avoid landslides and erosional processes		
			Water runoff and channelling water flows		
During construction	Noise		Use of noise reduction gears Limit works to scheduled hours		
	Particular matter (PM)		Dust control by application of water (moist into soil) Cleaning and storing at closing work schedule at sites		
Post construction	Tools and Wolking material		Removed daily from work areas		

This form has been completed by: name: _____ title: _____ date: _____ signed: _____	Approved by the project manager name: _____ title: _____ date: _____ signed: _____

Form C
Simple Environmental and Social Assessment (SEA)

Expected Impacts	Impact Description	Proposed Mitigation Measures (specific plans included)
Physical Media		
Increased soil erosion		
Increased sediment loads (discharged)		
Potential water pollution and/or contamination (surface waters, groundwaters, marine waters)		
Dust and noise generated during construction activities		
Biological/Environment		
Removal or affectation of vegetation and or fauna		
Project location inside, in buffer area or near a protected area or special management area		
Affectation or removal or habitats		
Social		
Affectation or removal or a heritage site or infrastructures		
Indigenous Peoples/Local Traditional Communities and Sub-Saharan		
Violent population and communities		
Aesthetical degradation of landscapes		
Risk to human's health and Environs by transport of dangerous or toxic materials and substances		

This form has been completed by: name: _____ title: _____ date: _____ signed: _____	Approved by the project manager name: _____ title: _____ date: _____ signed: _____

Form D
Limited Environmental and Social Assessment

Name of subproject:

_____

Location (town, neighborhood, parish):

_____

Subproject type:

_____

Numbers of persons the subproject benefits

_____

General description of the subproject
Subproject objectives

_____
_____
_____

Subproject components

_____
_____
_____

Base line description of the subproject affected areas and environs
Physical Settings description (physical and chemical characterization of the area where the subproject will be installed)

_____
_____
_____

Biological and natural settings description (habitats and biodiversity characterization of the area where the subproject will be installed)

_____
_____
_____

Social and economic description (land tenure, vulnerable groups, public health, demographics and infrastructures characterization of the area where the subproject will be installed)

_____
_____
_____

Identification of Negative Environmental Impacts

Impacts in the Physical and Chemical surroundings

_____
_____
_____

Impacts in the Biological and Natural surroundings

_____
_____
_____

Impacts in the Social and Economical setting

_____
_____
_____

Mitigation Measures

Impact description

_____
_____
_____

Mitigation Measures Description

_____
_____
_____

This form has been completed by: name: _____ title: _____ date: _____ signed: _____	Approved by the project manager name: _____ title: _____ date: _____ signed: _____

Annex 3: Electronic Waste (E-waste) Management Plan

Electronic Waste (E-waste) Management Plan (E-Waste Management Plan/EWMP)

1. Considerations on Waste Management

Based in the ESS1, that stablish responsibilities in relation with the risk and impact levels during the different project phases, the generation of all types of waste must be considered from the very beginning; during the predesign contracting, construction and operational phases. In all cases, previsions shall be taken, in order to minimize waste production and to reduce the impacts that the waste could create, specific (solid, liquid, toxic, sewers, etc.), and Electrical and Telecommunication (E-Waste) management plans would be adopted during projects implementations to avoid affectation to stakeholders and livelihood, biodiversity and habitats nearby and surroundings of the project site and activities.

1.1. E-waste definition and general considerations

E-waste is a term used to cover items of all types of electrical and electronic equipment (EEE) and its parts that have been discarded by the owner as waste without the intention of re-use. Although e-waste is a general term, it is considered to cover TV's, computers, mobile phones, white goods (fridges, washing machines, dryers etc.), home entertainment and stereo systems, toys, toasters, kettles – almost any household or home business item with circuitry or electrical components with power or battery supply. E-waste contains materials that, if mishandled, can be hazardous to human health and the environment, but, most importantly, also materials that are valuable and scarce. E-waste volumes are growing exponentially simply because the market demand. The proper treatment of e-waste avoids negative impacts and yields many benefits, if not properly treated, e-waste can have negative impacts, both on human health and on the environment. However, sustainable treatment of e-waste avoids these negative impacts. The appropriate handling of e-waste can both prevent serious health and environmental damage and also recover valuable materials, especially for common metals and precious metals. The recycling chain for e-waste is classified into three main subsequent steps: i) collection, ii) sorting/dismantling and pre-processing (including sorting, dismantling and mechanical treatment), and iii) end processing. All three steps should operate and interact in a holistic manner to achieve the overall recycling objectives. The main objectives of sustainable e-waste recycling are: i) Treat the hazardous fractions in an environmentally sound manner, ii) Maximize the recovery of valuable materials, III) Create eco-efficient and sustainable business, iv) Consider social impact and local context.

1.2 Benefits from Sustainable E-Waste Management Practices

Sustainable management practices, i.e. recycling operations also considerably contribute to reducing greenhouse gas emissions. Primary production of metals that are part of the E-waste usually are large contributors to greenhouse gas emissions, i.e. mining, concentrating, smelting and refining, especially of precious and special metals has a significant carbon dioxide (CO2) impact due to the low concentration of these metals in the ores and often difficult mining conditions. But, "mining" of old phones, servers or old computers to recover the contained metals – if done in an environmentally sound or correct manner – needs only a fraction of energy compared to mining ores in nature. Recycling of E-Waste equipment reduces the amount of land that has to be set aside specifically as landfill zones which in turn can be used for far more productive and socially beneficial

usages such as low-income housing, more farming, or renewable energy power supplies. Recycling means that less money and energy has to be expended for the mining of the various minerals which are consumed during the manufacturing process for the production of E-Waste equipment.

The environmental footprint of a phone, a computer and other electronic devices could be significantly reduced if treated in environmentally sound managed recycling operations, which prevent hazardous emissions and ensure that a large part of the contained metals are finally recovered for a new life. This E-Waste Management plan does not include or mandates for the establishment of an E-Waste recycling infrastructure, but points in the direction that; building a sustainable recycling infrastructure creates jobs and contributes to capability building. The sustainable collection, sorting, manual dismantling and pre-processing of e-waste could create a significant number of jobs in the countries that would develop this activity

2. E-Waste Management Plan (EWMP)

2.1 E- Wastes management during construction, operational and closure phase

This Electrical Waste Management Plan (E-Waste MP), will be implemented during construction, operation and closure phases, to follow and comply with the ESS1-WBG, and it extend will have to be adopted for all project activities and at each project site. It will include the integral management of electrical and telecommunication wastes, that could occur during demolition, construction, upgrade or renewal of installations and infrastructures; as well during operations, replacement of electrical equipment (computers, servers, cables, etc.). This plan must comply with the existing country legislation and regulations

2.2 Objectives of the EWMP

Is the achievement and subsequent maintenance of a sustainable and integrated E-Waste management, that is effective and efficient to serve the Caribbean Countries, in general terms will consist of:

- Integrated E-waste management: its purpose is to reduce E-waste generation, and promote the reuse, recycling and initiatives to extract values from E-wastes
- Effective E-Waste Management: The delivery of waste management services that provide for reliable collection and management of E-wastes consistent with sound environmental principles and standards
- Efficient waste management: the delivery of effective waste managing services in ways to minimax cost with results

2.3 Definitions

Management, operations and monitoring includes those activities associated with everyday provisions of waste management services, including collection and operation of the disposal or recycling facilities

2.4 Specific Objectives

- Establish a Standard Procedure to support the managerial needs of the E-Waste

- Implement a cost recovery mechanism to ensure system sustainability based on users-pay concept
- Provide training in methods and equipment to process and reuse E-Waste
- Establish a public education and awareness program on E-Waste generation and reuses
- Implement a monitoring mechanism
- Produce and Environmental Screening and Mitigation Plan for all E-Waste processing infrastructures and activities
- Conduct a Stakeholders consultation and Grievance Reediness Mechanism

2.5 Legal frame

This will legally support the bases of the EWMP in each of the project implementation locations, this are based in the local legislature, regulations, resolutions, norms, international treaties, and other legally binding instruments that applies to the project nature.

For the specifics of this Plan and in view of its applicability will entitle Nations of the Caribbean Sea, the following chapter will only include those most important International Treaties and Conventions applicable. It will be for each nation to adjust the EWMP to the local legal/applicable mandates and regulations. Those International Treaties that are binging with the EWMP are: The Protocol Concerning Pollution from Land Based Sources and Activities to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (under the Cartagena Convention), and the Programme of Action for the Sustainable Development for Small Island Development States.

Also, as part of the international bindings and responsibilities for achieving a sustainable development are the following International Agencies: United Nations Environmental Program (UNEP), Organization of Eastern Caribbean States (OECS), Caribbean Environmental Health Unit (CEHU), Caribbean Alliance for Sustainable Tourism (CAST), all can be approach for support in establishing sound practices towards an EWMP.

2.6 Institutional frame

This includes the institutions involved in the project administration, management and operations. These will be identified and defined their roles and responsibility during the project phases (pre-construction, construction and operations)

2.7 Diagnostics and Characteristics

A feasibility analyses must be performed in order to determine the level of involvement and processes needed to implement the EWMP and to what extent. I.e. If the E-wastes identified are very small, maybe the only option is to accumulate it until there is a volume enough to procure processing e-waste equipment. If the amounts are large, then it will be feasible to process an proceed with the later phases of the business of recycling. In all cases this analysis will include an environmental screening assessment to understand the potential negative impacts of the EWMP implementation, in this process the following must be evaluated: i) Possible environmental and social impacts, ii) Evaluation of the environmental and social impacts, iii) Measurements for E-waste management during construction and operational phase of the project, iv) Arrangements for permits for final disposal of the different types of wastes that the plan entitles and v) Implementation time table or chronogram

2.8 Budget and Costs

In each phase of the project a budget with the costs of the EWMP must be prepared, specifically for each managerial action proposed. These budgets must be prepared in charts showing costs estimations categorized for each managerial activity presented, including those contingency expenditures and expending charted chronogram. The budget will be itemized, following the project administrative/financial organization protocols

2.9 Public Consultation Mechanism

The information provided to the project participants and workers, as well as the communities and stakeholders must be early and appropriate. Procedures must be established for solicitation, convened and training to workers and affected communities. Amongst the potential topics to cover are: labor ethics, responsibilities and rights, sustainable daily issues and behavior, care for nature and biodiversity, environmental management. For information mechanisms to communities and workers the following could be included: written information (press), radio, internet, social medias, workshops, etc. For public consultation of project activities must be preform before the project implementation, at the design level in the pre-construction phase. This activity is a mandate of ESS10 and demands the local stakeholder's active participation and will be continuous throughout the all the project phases and live. The resultant consultations will be included in the EWMP for all project activities

2.10 Grievance Redress Mechanism (GRM)

The procedures for the GRM is based on the ESS10 of the WB, this process will follow a format, in general terms will include actions such as registry and chart log of visits, complains, observations, and comments of all interest parties

2.11 Follow-up and evaluation

The mechanisms for follow-up and evaluation must be design and implemented throughout the project phases, for to have controls of all actions, by measuring its efficiency and effectiveness and compliance. This will assist in preparing the evaluation to address improvement actions if so needed. This mechanism will include project supervision and reporting (daily logs, verification and technical, environmental and engineering reports (weekly, monthly, quarterly) as agreed

2.12 Adaptive management arrangements

These are defined as alternative managerial actions, different from what was originally planned. These managerial arrangements are to be adopted due to changes that occurs during project implementation, caused by unforeseen event that generates a need for an adaptive management decision in view of the new and unexpected situation

3. E-Waste Environmental Health and Safety Guidelines

3.1 Recommended Procedures for E-wastes Management Plan (EWMP)

3.1.1 General E-Waste Management

The following guidance applies to the management of non-hazardous and hazardous e-waste. Additional guidance specifically applicable to hazardous e-wastes is presented below. E-waste management should be addressed through an e-waste management system that addresses issues linked to e-waste minimization, generation, transport, disposal, and monitoring. An E-waste Management Plan should characterize their e-waste according to composition, source, types of e-wastes produced, generation rates, or according to local regulatory requirements. Effective planning and implementation of e-waste management strategies should include: i) Review of new e-waste sources during planning, siting, and design activities, including during equipment modifications and process alterations, to identify expected e-waste generation, pollution prevention opportunities, and necessary treatment, storage, and disposal infrastructure, ii) Collection of data and information about the process and e-waste streams in existing facilities, including characterization of e-waste streams by type, quantities, and potential use/disposition, iii) Establishment of priorities based on a risk analysis that takes into account the potential Environmental Health and Safety (EHS) risks during the e-waste cycle and the availability of infrastructure to manage the e-waste in an environmentally sound manner iii) Definition of opportunities for source reduction, as well as reuse and recycling, iv) Definition of procedures and operational controls for onsite storage, v) Definition of options / procedures / operational controls for treatment and final disposal

3.1.2 E-Waste Prevention Processes

This should be designed and operated to prevent, or minimize, the quantities of e-wastes generated and hazards associated with the e-wastes generated in accordance with the following strategy: i) Substituting raw materials or inputs with less hazardous or toxic materials, or with those where processing generates lower e-waste volumes, ii) Instituting good housekeeping and operating practices, including inventory control to reduce the amount of e-waste resulting from materials that are out-of-date, off specification, contaminated, damaged, or excess to operational needs, iii) Minimizing hazardous e-waste generation by implementing stringent e-waste segregation to prevent the commingling of non-hazardous and hazardous e-waste to be managed

3.1.3 Recycling and Reuse

In addition to the implementation of e-waste prevention strategies, the total amount of e-waste may be significantly reduced through the implementation of recycling plans, which should consider the following elements: i) Identification and recycling of products that can be reintroduced into the operational processes ii) Investigation of external markets for recycling by other industrial processing operations located in the neighborhood or region of the facility (e.g., e-waste exchange) iii) Establishing recycling objectives and formal tracking of e-waste generation and recycling rates iv) Providing training and incentives to employees in order to meet objectives

3.1.4 Treatment and Disposal

If e-waste materials are still generated after the implementation of feasible e-waste prevention, reduction, reuse, recovery and recycling measures, e-waste materials should be treated and disposed of, and all measures should be taken to avoid potential impacts to human health and the environment. Selected management approaches should be consistent with the characteristics of

the e-waste and local regulations, and may include one or more of the following: i) On-site or off-site chemical, or physical treatment of the e-waste material to render it non-hazardous prior to final disposal ii) Treatment or disposal at permitted facilities specially designed to receive the e-waste, iii) E-Wastes; properly designed, permitted and operated landfills or incinerators designed for the respective type of e-waste; or other methods known to be effective in the safe, final disposal of e-waste materials.

3.1.5 Hazardous E-Waste Management

Hazardous e-wastes should always be segregated from non-hazardous e-wastes. If generation of hazardous e-waste cannot be prevented through the implementation of the above general e-waste management practices, its management should focus on the prevention of harm to health, safety, and the environment, according to the following additional principles: i) Understanding potential impacts and risks associated with the management of any generated hazardous e-waste during its complete life cycle, ii) Ensuring that contractors handling, treating, and disposing of hazardous e-waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the e-waste being handled, iii) Ensuring compliance with applicable local and international regulations,.

3.1.6 Hazardous E-Waste Storage

Hazardous e-waste should be stored so as to prevent or control accidental releases to air, soil, and water resources in area location where: i) E-waste is stored in a manner that prevents the commingling or contact between incompatible e-wastes, and allows for inspection between containers to monitor leaks or spills. Examples include sufficient space between incompatibles or physical separation such as walls or containment curbs, ii) Store in closed containers (some could be radioactive proof), away from direct sunlight, wind and rain, iii) Secondary containment systems should be constructed with materials appropriate for the e-wastes being contained and adequate to prevent loss to the environment iv) Provision of readily available information on compatibility to employees, including labelling each container to identify its contents v) Limiting access to hazardous e-waste storage areas to employees who have received proper training vi) Clearly identifying (label) and demarcating the area, including documentation of its location on a facility map or site plan vii) Conducting periodic inspections of e-waste storage areas and documenting the findings

3.1.7 Transportation of E-Waste

All e-waste containers designated for off-site shipment should be secured and labelled with the contents and associated hazards, be properly loaded on the transport vehicles before leaving the site, and be accompanied by a shipping paper (i.e., manifest) that describes the load and its associated hazards, consistent with the Transport of Hazardous Materials good practices and guidance.

3.1.8 Treatment and Disposal

In addition to the recommendations for treatment and disposal applicable to general wastes, the following issues specific to hazardous e-wastes should be considered: i) Commercial or Government E-waste Contractors In the absence of qualified commercial or government-owned e-waste vendors (taking into consideration proximity and transportation requirements), facilities generating e-waste should consider using: · Have the technical capability to manage the e-waste in a manner that

reduces immediate and future impact to the environment, and have all required permits, certifications, and approvals, of applicable government authorities. Have been secured through the use of formal procurement agreements In the absence of qualified commercial or government-owned e-waste disposal operators (taking into consideration proximity and transportation requirements), project sponsors should consider using: i) Installing on-site e-waste treatment or recycling processes, ii) As a final option, constructing facilities that will provide for the environmental sound long-term storage of e-wastes on-site or at an alternative appropriate location up until external commercial options become available

3.1.9 Small Quantities of Hazardous E-waste

Hazardous e-waste materials are frequently generated in small quantities by many projects through a variety of activities such as equipment and building maintenance activities. Examples of these types of e-wastes include: used batteries (such as nickel-cadmium or lead acid); and lighting equipment, such as lamps or lamp ballasts, servers, computers, cables, etc. These e-wastes should be managed following the guidance provided in the above sections.

3.1.10 Monitoring

Monitoring activities associated with the management of hazardous and non-hazardous e-waste should include: i) Regular visual inspection of all e-waste storage collection and storage areas for evidence of accidental releases and to verify that e-wastes are properly labelled and stored. When significant quantities of hazardous e-wastes are generated and stored on site, monitoring activities should include: ii) Inspection of loss or identification of cracks, corrosion, or damage to protective equipment, or floors, iii) Verification of locks, and other safety devices for easy operation (lubricating if required and employing the practice of keeping locks and safety equipment in standby position when the area is not occupied), iv) Checking the operability of emergency systems o Documenting results of testing for integrity, emissions, or monitoring stations, v) Documenting any changes to the storage facility, and any significant changes in the quantity of materials in storage, vi) Regular audits of e-waste segregation and collection practices, vii) Tracking of e-waste generation trends by type and amount of e-waste generated, preferably by facility departments, viii) Characterizing e-waste at the beginning of generation of a new e-waste stream, and periodically documenting the characteristics and proper management of the e-waste, especially hazardous e-wastes, ix) Keeping manifests or other records that document the amount of e-waste generated and its destination, x) Periodic auditing of third party treatment, and disposal services including re-use and recycling facilities when significant quantities of hazardous e-wastes are managed by third parties. Whenever possible, audits should include site visits to the treatment storage and disposal location. In the event e-waste is in contact with the soil these additional monitoring procedures must be performed: xi) Regular monitoring of soils quality in cases of Hazardous E-waste on site storage and/or pre-treatment and disposal.

Monitoring records for hazardous e-waste collected, stored, or shipped should include: i) Name and identification number of the material(s) composing the hazardous e-waste o Physical state, ii) Quantity (i.e., kilograms, number of containers), ii) E-waste shipment tracking documentation to include, quantity and type, date dispatched, date transported and date received, record of the originator, the receiver and the transporter, iii) Method and date of storing, repacking, treating, or disposing at the facility, cross-referenced to specific manifest document numbers applicable to the hazardous e-waste o Location of each hazardous e-waste within the facility, and the quantity at each location

References:

Environmental Waste Management, Environmental, Health, and Safety (EHS) Guidelines General EHS Guidelines. International Finance Corporation, World Bank Group (IFC-WBG), 2007

National Waste Management Strategy for Grenada. Dillon Consulting, 2003

South Africa E-Waste Industry Management Plan V-1. Waste Policy and Information Management, Department of Environmental Affairs, 2014

Procedimiento para la Gestión de Residuos Eléctricos No Peligrosos y Peligrosos (PCB). Proyecto De Rehabilitación de Redes para Distribución de Electricidad. Corporación Dominicana de Empresas Eléctricas Estatales (CDEEE), 2014

Annex 4: Occupational, Health and Safety Guidelines

The following guideline aims to provide further guidance on the preparation of OHSP.

1. Principles

Employers must take all reasonably practicable steps to protect the health and safety of workers and provide and maintain a safe and healthy working environment. The following key principles are relevant to maintaining worker health and safety:

1.1 Identification and assessment of hazards

Each employer must establish and maintain effective methods for:

- Systematically identifying existing and potential hazards to employees;
- Systematically identifying, at the earliest practicable time, new hazards to employees;
- Regularly assessing the extent to which a hazard poses a risk to employees.

1.2 Management of identified hazards

Each employer must apply prevention and control measures to control hazards which are identified and assessed as posing a threat to the safety, health or welfare of employees, and where practicable, the hazard shall be eliminated. The following preventive and protective measures must be implemented order of priority:

- Eliminating the hazard by removing the activity from the work process;
- Controlling the hazard at its source through engineering controls;
- Minimizing the hazard through design of safe work systems;
- Providing appropriate personal protective equipment (PPE).

The application of prevention and control measures to occupational hazards should be based on comprehensive job safety analyses (JSA). The results of these analyses should be prioritized as part of an action plan based on the likelihood and severity of the consequence of exposure to the identified hazards.

1.3 Training and supervision

Each employer must take all reasonably practicable steps to provide to employees (in appropriate languages) the necessary information, instruction, training and supervision to protect each employee's health and to manage emergencies that might reasonably be expected to arise in the course of work. Training and supervision include the correct use of PPE and providing employees with appropriate incentives to use PPE.

1.4 General duty of employees

Each employee shall:

- Take all reasonable care to protect their own and fellow workers health and safety at the workplace and, as appropriate, other persons in the vicinity of the workplace;
- Use PPE and other safety equipment supplied as required; and,
- Not use PPE or other safety equipment for any purpose not directly related to the work for which it is provided.

1.5 Protective clothing and equipment

Each employer shall:

- Provide, maintain and make accessible to employees the PPE necessary to avoid injury and damage to their health;
- Take all reasonably practicable steps to ensure that employees use that PPE in the circumstances for which it is provided; and,
- Make provision at the workplace for PPE to be cleaned and securely stored without risk of damage when not required.

2. Design

Effective management of health and safety issues requires the inclusion of health and safety considerations during design processes in an organized, hierarchical manner that includes the following steps:

- Identifying project health and safety hazards and associated risks as early as possible in the project cycle including the incorporation of health and safety considerations into the worksite selection process and construction methodologies;
- Involving health and safety professionals who have the experience, competence, and training necessary to assess and manage health and safety risks;
- Understanding the likelihood and magnitude of health and safety risks, based on:
    - The nature of the project activities, such as whether the project will involve hazardous materials or processes;
    - The potential consequences to workers if hazards are not adequately managed;
- Designing and implementing risk management strategies with the objective of reducing the risk to human health;
- Prioritising strategies that eliminate the cause of the hazard at its source by selecting less hazardous materials or processes that avoid the need for health and safety control;
- When impact avoidance is not feasible, incorporating engineering and management controls to reduce or minimize the possibility and magnitude of undesired consequences;

- Preparing workers and nearby communities to respond to accidents, including providing technical resources to effectively and safely control such events, in particular relating to traffic;
- Improving health and safety performance through a combination of ongoing monitoring of facility performance and effective account ability.

3. Implementation

3.1 Documentation

An OHSP must be prepared and approved prior to any works commencing on site. The OHSP must demonstrate the Contractor's understanding of how to manage safety and a commitment to providing a workplace that enables all work activities to be carried out safely. The OHSP must detail reasonably practicable measures to eliminate or minimize risks to the health, safety and welfare of workers, contractors, visitors, and anyone else who may be affected by the operations. The OHSP must be prepared in accordance with the World Bank's EH&S Guidelines and the relevant country health and safety legislation.

3.2 Training and Awareness

Provisions should be made to provide health and safety orientation training to all new employees to ensure they are apprised of the basic site rules of work at/ on the site and of personal protection and preventing injury to fellow employees. Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Training should also include HIV/AIDS awareness training. Visitors are not permitted to access to areas where hazardous conditions or substances may be present, unless appropriately inducted.

3.3 Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems.
PPE is considered to be a last resort that is above and beyond the other facility controls and provides the worker with an extra level of personal protection. The table below presents general examples of occupational hazards and types of PPE available for different purposes. Recommended measures for use of PPE in the workplace include:

- Active use of PPE if alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce, a hazard or exposure;
- Identification and provision of appropriate PPE that offers adequate protection to the worker, co-workers, and occasional visitors, without incurring unnecessary inconvenience to the individual;
- Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for Employees; and,
- Selection of PPE should be based on the hazard and risk ranking described earlier in this section and selected according to criteria on performance and testing established.

4. Monitoring

Occupational health and safety monitoring programs should verify the effectiveness of prevention and control strategies. The selected indicators should be representative of the most significant occupational, health, and safety hazards, and the implementation of prevention and control strategies. The occupational health and safety monitoring program should include:

- Safety inspection, testing and calibration: This should include regular inspection and testing of all safety features and hazard control measures focusing on engineering and personal protective features, work procedures, places of work, installations, equipment, and tools used. The inspection should verify that issued PPE continues to provide adequate protection

and is being worn as required.

- Surveillance of the working environment: Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards.
- Surveillance of workers health: When extraordinary protective measures are required (for example, against hazardous compounds), workers should be provided appropriate and relevant health surveillance prior to first exposure, and at regular intervals thereafter.
- Training: Training activities for employees and visitors should be adequately monitored and documented (curriculum, duration, and participant s). Emergency exercises, including fire drills, should be documented adequately.
- Accidents and Diseases monitoring. The employer should establish procedures and systems for reporting and recording:
    - Occupational accidents and diseases
    - Dangerous occurrences and incidents

These systems should enable workers to report immediately to their immediate supervisor any situation they believe presents a danger to life or health. Each month, the contractor shall supply data on trainings delivered, safety incidents prevented and any accidents to the Client's Consulting Engineer for reporting to the MPWT. These data are to also include incidents related to any sub-contractors working directly, or indirectly, for the Contractor.

Annex 5: Sample Code of Conduct

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We are the Contractor, [enter name of Contractor]. We have signed a contract with [enter name of Employer], for [enter description of the Works]. These Works will be carried out at [enter the Site and other locations where the Works will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the Works, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the Works. It applies to all our staff, labourers and other employees at the Works Sites or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as **"Contractor's Personnel"** and are subject to this Code of Conduct.

This Code of Conduct identifies the behaviour that we require from all Contractor's Personnel.
Our workplace is an environment where unsafe, offensive, abusive or violent behaviour will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Contractor's Personnel shall:

1. Carry out his/her duties competently and diligently;
2. Comply with this code of conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other contractor's personnel and any other person;
3. Maintain a safe working environment including by:
    a) Ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
    b) Wearing required personal protective equipment (ppe);
    c) Using appropriate measures relating to chemical, physical and biological substances and agents; and
    d) Following applicable emergency operating procedures.
4. Report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
5. Treat other people with respect and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. Not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature with other contractor's or employer's personnel;
7. Not engage in sexual exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another. In bank

financed operations/projects, sexual exploitation occurs when access to or benefit from bank financed goods, works, consulting or non-consulting services is used to extract sexual gain;

8. Not engage in sexual abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal coercive conditions;
9. Not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. Complete relevant training courses that will be provided related to the environmental and social aspects of the contract, including health and safety matters, sexual exploitation and abuse (sea), and sexual harassment (sh);
11. Report violations of this code of conduct;
12. Not retaliate against any person who reports violations of this code of conduct, whether to us or the employer who makes use of the grievance mechanism for contractor's personnel or the project's grievance redress mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

1. Contact [*enter name of the Contractor's Social Expert with relevant experience in handling sexual exploitation, sexual abuse and sexual harassment cases, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [ ] or by telephone [ ] or in person at [ ]; or

2. Call [ ] to reach the Contractor's hotline (*if any)* and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the persons who experience the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor's contact person(s) with relevant experience (including for sexual exploitation, abuse and harassment cases) in handling those types of cases]* requesting an explanation.
Name of Contractor's Personnel: [*insert name*]

Signature: _____

Date (day/month/year/): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date (day/month/year/): _____

Annex 6: Grievance Information Form

Date/Time received:	**Date: (dd-mm-yyyy)** **Time:** □ **am** □ **pm**	
Name of Grievant:		□ You can use my name, but do not use it in public. □ You can use my name when talking about this concern in public. □ You cannot use my name at all.
Company (if applicable)		□ You can use my company name, but do not use it in public. □ You can use my company name when talking about this concern in public. □ You cannot use my company name at all
Contact Information:	**Phone:** **Email address:** **Address:** (Kindly indicate the preferred method of communication)	
Details of grievance: (Who, what, when, where)	□ One-time incident/complaint □ Happened more than once (indicate how many times): _____ □ Ongoing (a currently existing problem)	

How would you like to see issue resolved?	
Attachments to the grievance/complaint: (e.g. pictures, reports etc.)	List here:

_____ **_____**

Grievant/Complainant Signature (if applicable) **Date (dd-mm-yyyy)**

_____ **_____**

Signature- Project personnel (to confirm receipt only) **Date (dd-mm-yyyy)**

<u>For PIU use only:</u>

Grievance No: _____

Grievance Category:

□ Problems during material transport
□ Blocked road access
□ Dust
□ Noise
□ Smell
□ Problem with project staff
□ Other (specify): _____

Grievance Owner/ Department: _____

Annex 7: Grievance Acknowledgement Form (GAF)

The project acknowledges receipt of your complaint and will contact you within 10working days.

Date of grievance/complaint: (dd/mm/yyyy)	
Name of Grievant/Complainant:	
Complainant's Address and Contact Information:	
Summary of Grievance/Complaint: (Who, what, when, where)	
Name of Project Staff Acknowledging Grievance:	
Signature:	
Date: (dd/mm/yyyy)	

Annex 8: Grievance Redressal Registration Monitoring Sheet

No.	Name of Grievant/Complainant	Date Received	Grievance Description	Name of Grievant Owner	Requires Further Intervention	Action(s) to be taken by PIU	Resolution Accepted or Not Accepted and Date of Acceptance/Non-acceptance
1.							
2.							
3.							
4.							

Annex 9: Grievance Meeting Record Form

Date of the Meeting: ……. **Grievance No:** …….

Venue of meeting: …….

Details of Participants:

Complainant	Project/Government/ECCB

Summary of Grievance……….

……

……

……

Meeting Notes: …….

……

……

……

Decisions taken in the meeting / Recommendations of GRC…….

……

……

……

Issue Resolved / Unresolved: ……..

Signature of Chairperson of the meeting: ……

Name of Chairperson: …… Date (DD/MM/YYYY): …….

Annex 10: Grievance Disclosure/Release Form

Result of Grievance Redressal

Grievance No:	
Name of Grievant/Complainant:	
Date of Complaint:	
Summary of Complaint:	
Summary of Resolution:	
Resolved at:	□ First Level □ Second Level □ Third Level
Date of grievance resolution (DD/MM/YYYY):	

Signature of Complainant in acceptance of the suggested grievance resolution:

……

Name: ……

ID number: …… **Type of ID:** ……

Date (DD/MM/YYYY): ……

Signature of Social Development Specialist and Project Coordinator:
1…… 2……

1.Name………

Place………

Date:(dd –mm – yyyy): ……

2.Name………

Place………

Date:(dd –mm – yyyy): ……