

**ENVIRONMENTAL & SOCIAL MANAGEMENT FRAMEWORK
(ESMF)**

For the

**OECS Regional Health Project (P168539)
Saint Vincent and the Grenadines**

EXECUTIVE SUMMARY

The Government of Saint Vincent and the Grenadines is collaborating with the World Bank Group (WBG) to develop a health project with the objectives to improve the resilience of the health system and to improve the responsiveness of health service delivery during public health emergencies. Hence three components of this proposed project, this include, the establishment of a National Public Health Laboratory, improved capacity building in public health surveillance and project management; In addition to building Institutional capacity in health emergencies preparation and response.

The project which is estimated to cost US\$ 6,000,000, will be implemented by the Ministry of Health Wellness and the Environment with support from Central Planning. It will focus on five key aspects of the health sector of Saint Vincent and the Grenadines; these include, Health Facilities, Laboratory Infrastructure, Laboratory training, Surveillance, and Health Disaster Preparedness & Response. Each component has subcomponents; in regards to Health Facilities, there will be the upgrading of priority health facilities and strengthening referral networks. Laboratory Infrastructure is inclusive of Constructing a Public Health Laboratory. Training in Modern Laboratory Technology, Food Safety, Entomology are all included in Laboratory Training. Developing procedures on disease surveillance and information sharing is included under Surveillance. Health Disaster Preparedness and Response involves the renovation of the Health Emergency Disaster Management Unit according to SMART standards. Details of the components for each aspect is provided in section 1.1 Project Description.

All legal, regulatory and institutional framework relevant to the proposed activities have been stated and have been aligned with World Bank's standards. The legal, regulatory and institutional framework covers the areas of Environmental Impact Assessments (EIA's), public health, cultural heritage protection and procedures during construction, vector control pesticide procedure, medical waste management and disposal, solid and liquid waste management, occupational health and safety, land acquisition, building codes and standards, zoning regulations, grievance redress, disclosure of documents, public consultation for social and environmental impact assessments and pesticide management. There are two world bank policies that are applicable to the project; OP/BP 4.01 and OP/BP 4.09.

The precise location of some activities is not yet known in detail, so an Environmental and Social Management Framework (ESMF) is being created. This framework will present details of agreed policies and procedures, implementation roles and responsibilities for managing the Government's safeguard responsibilities, the framework will also describe the general approach that will be followed to avoid or mitigate any negative harms arising from project activities.

The activities are not expected to lead to significant negative environmental impacts; nonetheless there are potential negative impacts associated with activities during typical small civil works during construction and refurbishment, those associated with medical waste management during

operation, vector control activities during any outbreak control activity, and land acquisition for new or expanded facilities. The project is divided into three phases which are the design phase, construction phase and the operational phase. The ESMF will assess possible sources of negative impacts; both social and environmental, throughout the three phases identified and will provide mitigation measures to effectively manage these impacts. A breakdown of all parties that will be involved in executing mitigation measures are also presented along with expected costs.

These are all addressed using the Banks Policy 4.01 and this document which provides of a generic list of potential harms with mitigation measures, alongside any Best Management Practices (BMPs) and standard contract clauses for small civil works (Appendix 3), and a pre-design screening tool (in Appendix 1) to identify any special conditions requiring additional mitigation measures.

Medical waste management is addressed by provision of Terms of Reference (TOR) to develop a Health Care Waste Management System (HWMS) during the early stages of implementation.

This document also provides details of two consultations held on May 7th 2019 and involved members of the Public Sector and Civil society. Stakeholders welcomed the consultations and expressed their interest in having more consultations as the project progresses. Majority of the stakeholders were in agreement with the project and acknowledged the need for such a project. However, their main concerns were with environmental issues such as the management of liquid, solid and biomedical wastes.

In regard to the environmental and social safeguards, there is a Grievance Redress Mechanism (GRM) to address grievances that communities and individuals may have with the project. This provides a formalized way to accept, assess and resolve community complaints concerning the performance or behaviour of the company, its contractors, or employees which includes adverse economic, environmental and social impacts. Complaints may be received by the Project Implementation Unit (PIU) project coordinator via email, letter, or in person and logged into the database. Then, it will be escalated to the head of the Planning Unit, after which it will be assigned to a social specialist or an environmental specialist based on the nature of the issue. The specialist will meet with the authorities to resolve the complaint and the resolution documented in the database.

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BMP	Best Management Practice
BMW	Biomedical Waste
CARPHA	Caribbean Public Health Agency
CITES	Convention on Trade in Endangered Species of Wild Flora and Fauna
CMO	Chief Medical Officer
CUBC	Caribbean Uniform Building Code
CWSA	Central Water and Sewerage Authority
DCA	Development Control Authority
EHD	Environmental Health Department
EIA	Environmental Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
EOC	Emergency Operations Centre
HIV	Human immunodeficiency virus
ILO	International Labor Organization
MAFFRIL	Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry & Labour
MCH	Maternal and Child Health
MCMH	Milton Cato Memorial Hospital
MOHPD	Ministry of Housing, Physical Planning and Informal settlement
MOHWE	Ministry of Health Wellness and the Environment
MTWUL	Ministry of Transport, Works, Urban Development and Local Government
NEAP	National Environmental Action Plan
NEMAC	National Emergency Management Advisory Committee
NEMO	National Emergency Management Organisation
NEOC	National Emergency Operations Centre
NEMS	National Emergency Medical Services
NGO	Non-governmental Organisation
NIC	National Insurance Services
OAS	Organisation of American States
OECS	Organisation of Eastern Caribbean States
OP	Operational Policy
PCU	Project Coordination Unit
PPU	Physical Planning Unit
PPDB	Physical Planning and Development Board

PAHO	Pan American Health Organisation
PIU	Project Implementation Unit
PPP	Public Private Partnership
SDU	Sustainable Development Unit
SVG	St.Vincent and the Grenadines
SWMU	Solid Waste Management Unit
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
WBG	World Bank Group

1.0 INTRODUCTION

1.1 Project Description

The Government of Saint Vincent and the Grenadines with the assistance of the WBG is developing the OECS Project to assist with the rehabilitation and resilience activities currently underway within the health sector through its Ministry of Health, Wellness and the Environment.

The development objective is to continued modernizing the Health Sector as it addresses the current and future needs of the populace whilst confronting a changing national and global environment.

The project will implement activities as described below:

Activities
Health Facilities
Upgrade priority health facilities based on PAHO Smart Hospital criteria including renovations, and retrofitting, furniture & equipment
Strengthen referral networks to ensure continuity of care following a disaster
Design & Supervision of Lab facility
Upgrade primary-level care health facilities for infection prevention and control (IPC) and clinical management of priority infectious diseases.
Laboratory Infrastructure
Construction/Creation a Public Health Laboratory
Strengthened laboratory data management systems - Lab Information System with Health Information System (HIS)
Laboratory Equipment
Improve the transportation system for laboratory specimens - Cold train and laboratory specimen vehicle
Laboratory Training
Training in Modern Laboratory Technology, Food Safety, Entomology etc.

Surveillance

Update/develop protocols (including development of an active case-finding protocol for vector-borne diseases and clinical protocols)

Strengthen health information systems for collection of incidence and prevalence data

Roll-out Field Epidemiology and Laboratory Training Program (FELTP) among field-level epidemiologists

Develop procedures on disease surveillance and information sharing with regard to infectious disease protocols - microcephaly testing and confirmation in pregnant women suspected to be Zika infected

Develop regional information and communications technology platform for surveillance and management, including Geographic Information Systems (GIS)

Health Disaster Preparedness & Response

Renovate Health Emergency Disaster Management Unit according to SMART standards. Including improved water storage, solar energy use and alternative or back up power supply for operations continuity before during and after an event. The Unit will also act as the health Command centre during an event and provide accommodation for staff on standby before during and after an event. Additionally, the unit will store medical supplies and small equipment for surges and or shortages in the system and during and after an event.

Established an Emergency Operation Centre (EOC) including outfitting a briefing room with furniture and equipment to enhance hospital incident command.

Create external monitoring and assessment of core public health capacities of national structures to meet International Health Regulations

Develop and update health emergency preparedness and response plans to include the feedback and participation of community members through citizen engagement.

Develop regional preparedness and response action plans - logistics plans and other institutional frameworks for priority infectious diseases, local preparedness and response plans

Emergency Equipment - to enhance health emergency and disaster response efforts - such as mobile mass casualty response vehicle retrofitted to act as part of the Advanced Medical Post, mobile decontamination chambers, stretchers, small equipment and supplies, equipment to improve teaching and institutionalisation of the programs such as resuscitation equipment and models. Additionally, equipment to retrofit event standby staff accommodation such as beds, fridge, stoves, washer, dryer, microwave. Special vaccine fridges to act as back up for the national system and health response gear, equipment and supplies.

Conduct simulation exercises and training on outbreak investigations early warning and response system

Use of GIS and other ICT tools to identify potential high risk areas for disease outbreaks in the region to overlay with local or national disaster risk maps to ensure all risks are considered during mitigation and preparedness phases including building or improving local capacity in hazard mapping and health emergency and disaster management

Develop/upgrade curriculum for training of country level health workforce in surveillance and response for priority infectious diseases

The institutional arrangements for managing the social and environmental safeguards associated with these activities are described in section [6.0 Institutional Arrangements](#).

1.2 Purpose and Scope of ESMF

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. Hence activities with the potential for significant negative environment and social impacts are not expected, however, if any are identified subproject-specific environmental and/or social assessment will be prepared and subjected to review and approval by the WB.

The ESMF provides overall guidance on environmental screening and management for various sub-projects. The ESMF contains useful information on the procedures for environmental and social screening for sub-projects, potential environmental and social impacts; measures for addressing the negative impacts, recommended environmental and social rules for contractors. In addition to this umbrella ESMF, the construction contractors will be required to develop detail and site-specific ESMPs to manage the potential impacts of their works. The aim of the ESMF is to

establish procedures for initial screening of the negative impacts which would require attention, prior to site-specific project implementation. Key specific objectives for the assessment are:

- i. To assess the main potential environmental and social impacts of the planned and future project activities.
- ii. To recommend environmental and social screening process for project sites and sub- project activities.
- iii. To review environmental policies of Government for project implementation and relevant the World Bank Operational Policies to be triggered by the project.
- iv. To develop an environmental management plan for addressing negative impacts during sub-project implementation.
- v. To recommend appropriate further environmental work, including preparation of the site- specific ESIA/ESMPs for sub-projects, as the case might be.
- vi. To recommend appropriate capacity building for environmental planning and monitoring in the project activities.

Environmental and Social Screening will be undertaken for each of the proposed sub-projects in order to ascertain specific environmental and social impacts. Environmental and social management plans have to be drawn and recommendations integrated in construction contracts before bidding process.

As a public document, this ESMF has been prepared in consultation with stakeholder groups, in relevant government agencies, NGOs and the local communities to account for their needs, wants, concerns as well as seeking their ownership of project.

A comprehensive national medical waste management plan will be prepared by each of the four countries during implementation, most likely before works begin, which addresses the requirements for handling and disposal of medical wastes. This ESMF therefore focuses on the other aspects of the project which have environmental impacts, namely the construction and civil works component.

2.0 LEGAL, REGULATORY AND INSTUTUTIONAL FRAMEWORK

2.1 National Regulatory Framework

Current legislation of most relevance to the present project and how they are aligned to the WB's standards are summarised in Table 1 below.

Table 1: Legislations Relevant to Present Project

Area	Sections of County laws and policies relevant to this project	Corresponding WB policy and standard
EIA Scope	Town and Country Planning Act No 45 of 1992 Environmental Impact Assessment Regulation (Draft) 2009	OP. 4.01 and annexes
Public Health	Public Health Act No 9 of 1977	
Cultural heritage protection and procedures during construction	National Park Act No 33 of 2002	OP. 4.11 Cultural Heritage
Vector control pesticide procedure	Public Health Act of No 9 of 1977	Op 4.09. Pest Management, BP 4.01 annex B
Medical waste management and disposal	Waste Management Act No 31 of 2000 Environmental Services Act No14 of 1991 Litter Act No 15 of 1991	
Solid and liquid waste management	Waste Management Act No 31 of 2000 Environmental Services Act No14 of 1991 Litter Act No 15 of 1991	
Occupational health and safety	Public Health Act No 9 of 1991	
Land acquisition	Land Acquisition Act Cap 241 of 1947	OP 4.12 Involuntary Resettlement
Building code and standards	Town and Country Planning Act No 45 of 1992	

Zoning regulation	Town and Country Planning Act No 45 of 1992	
Grievance redress Mechanism/complaint handling	Public Health Act, No 9 of 1991 Environmental Services Act, No14 of 1991 Litter Act No 15 of 1991	
Disclosure of documents	Town and Country Planning Act, No 45 of 1992	BP 4.01
Public consultation for social and Environmental Impact Assessments	Town and Country Planning Act, No 45 of 1992	BP 4.01
Pesticide Management	Pesticides Control Act, Cap 64 of 1991	OP 4.01 Annex B and OP 4.09

2.2 Environmental and Social Management Capacities

There are a number of Ministries, organisations and other entities which provide Environmental and social capacities regarding this project. They are as follow:

Ministry of Health, Wellness and the Environment

The roles of this Ministry are: i) to provide equitable, quality, sustainable, comprehensive, primary, secondary and tertiary health care, health promotion, nutrition and health education services to the population and, ii) to promote the protection and preservation of the environment and its natural resources, through a process of health services delivery, environmental/research and dynamic management within the context of available resources, thus contributing to a healthier nation living in environmentally safe and friendly communities.

Ministry of Housing, Informal Human Settlements, Land and Surveys, and Physical Planning

This Ministry is responsible for an integrated approach to Physical Planning, Land Surveying, Land Management, Housing Development and the improvement of Informal Communities and carried out the following activities:

- Land Surveying,
- Building Inspections,
- Housing Schemes,
- Development of Building & Physical Planning Standards.

Ministry of Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour

This ministry is the institutional body of the state responsible for the formulation, articulation and implementation of all policies and plans relating to Agriculture, Forestry, Fisheries, Rural Transformation, Industry and Labour.

The Administrative arm of this ministry is responsible for:

- The Co-ordination of all programmes of the various Departments, Divisions and Units.
- The maintenance of communication with local, regional and international bodies affecting the functions of the Ministry.
- The administration of revenue and expenditure transactions approved by Parliament.

National Trust

This Trust was established in 1969 and it is charged with the preservation of the natural, historic, cultural and built heritage of Saint Vincent and the Grenadines.

The National Trust owns several historic site and cares for many more. It has a membership of several hundred and aims to be active in the cultural life of the nation.

Solid Waste Management Unit

This unit is within the CWSA and has as its mission to improve the quality of life for all Vincentians, through the provision of efficient and effective Solid Waste Management Unit (SWMU)

The SWMU is governed by the St. Vincent and the Grenadines Waste Management Act and Regulations, Act No.31 of 2000 and Solid Waste regulations No. 11 of 2005. The SWMU was

established in November, 1999 to execute the activities under the Organization of Eastern Caribbean States (OECS) Solid and Ship-generated Waste Management Project and is also currently responsible for the collection and disposal of Solid waste on St. Vincent and the Grenadines. In addition, the unit has responsibility for the development of waste management facilities on the Grenadine islands of Bequia, Union Island and Canouan.

Ministry of Finance, Economic Planning, Sustainable Development and Information Technology - Economic Planning and Sustainable Development.

This unit mission is to lead the process of re-engineer economic growth, promoting sustainable development and improving the quality of life of all Vincentians, through the following activities:

- To formulate goals, objectives and development strategies for the national economy
- To analyse the economy of SVG
- To coordinate the preparation of a development plans, socio-economic strategy paper and review
- To coordinate the social policies into developmental planning.

National Emergency Management Office

NEMO was established in January of 2002 to coordinate the use of all available resources (local, regional, and international) to ensure that all the people of St.Vincent and the Grenadines are better able to mitigate against disasters, prepare for disasters, respond to disasters and recover from the impact of disasters in the shortest possible time.

Its vision is to have a tested, comprehensive but practical Disaster Management Plan for every household, building, institution, and or organization in St.Vincent and the Grenadines.

Department of Labour Department - Occupational Health and Safety

The Department has as its mission to improve the quality of life of workers by fostering a greater degree of collaboration between Government and the Social Partners (Trade Union and Employers) thus engendering a peaceful industrial climate.

By providing the following services:

- Dispute Settlement (Individual complaints/Trade Union initiated complaints settlement by way of conciliation)
- Advice on Employment and Labour Matters
- Workplace Inspections

- Overseas Migrant Workers Programme
- Employment Services (Registration of Job Seekers, Job Placement, Job Search Training)
- Labour Market Information

2.3 World Bank Safeguard Policies

The World Bank projects and activities are governed by Operational Policies (OP) which are designed to ensure that the projects are economically, financially, socially and environmentally sound.¹ The World Bank's policy on Environmental Assessment (OP4.01) is used to identify, avoid, and mitigate the potential negative environmental impacts associated with Bank lending operations. This policy is considered to be the umbrella policy for the Bank's "environmental safeguard policies" which among others include: Natural Habitats (OP 4.04), Forests (OP 4.36), Pest Management (OP 4.09), Physical Cultural Resources (OP 4.11), and Safety of Dams (OP 4.37). The Bank's "social safeguard policies" include Involuntary Resettlement (OP4.12) and Indigenous Peoples (OP4.10).

Under OP4.01 the Bank will undertake environmental screening of each proposed project to determine the appropriate extent and type of environmental assessment required. Proposed projects are classified into one of four categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. The categories of potential environmental impacts are classified as A, B, C and FI, this project is classified as Category B, summarized in the box below, meaning that environmental impacts for the type of work anticipated under the project are expected to be moderate to minimal in nature and can be readily managed through the application of appropriate and well established engineering and management measures.

Category	Description
Category B	Category B project has potential adverse environmental impacts on human populations or environmentally important areas, including wetlands, forests, grasslands, and other natural habitats - which are less adverse than those of Category A projects. These impacts are site specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

¹Source: <http://www.worldbank.org/opmanual>

The World Bank Safeguard Policy OP4.01 requires that an Environmental and Social Management Framework (ESMF) be prepared along with an Environmental and Social Management Plan (ESMP) to guide the project's screening of project risks and its implementation of recommendations to reduce those risks. This program-level ESMF includes guidance during project execution for screening possible sub-projects (i.e., individual civil works or other project-related activities) and identify complex projects which would require additional studies to comply with safeguards policies. All future subprojects which are as yet not identified in detail are included within this single ESMF document, and will be incorporated into the Project Operations Manual to serve as a guide for environmental management of future subprojects or activities once they are defined in sufficient detail for execution. The ESMF as a public document, serves to inform stakeholders and guide environmental management of activities to be implemented.

In the case of SVG, besides OP/BP 4.01, none of the remaining nine World Bank safeguard policies is applicable to planned health sector activities. The other World Bank Safeguard Policies dealing with natural habitats, physical cultural resources, pest management, and forests will not be applicable to the SVG Health System Strengthening Project. The remaining nine safeguard policies are briefly described below for familiarity and guidance of to guide MOHWE in the assessment of sites during pre-design screening.

Natural Habitats (OP/BP 4.04) strictly limits the circumstances under which any Bank-supported project can affect or alter natural habitats (land and water areas where most of the native plant and animal species are still present) as well as parks, natural areas, or other declared protected areas. Projects must avoid, minimize, restore, or offset any activities that cause degradation of natural habitat. Projects that would cause significant conversion or degradation of critical natural habitat (legally protected areas, or those with high conservation value) are not eligible for funding.

Physical Cultural Resources (OP/BP 4.11) seeks to avoid, or mitigate, adverse impacts on cultural resources (movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance) from development projects that the World Bank finances. In addition, as a standard practice, a chance-find procedure is required for all projects with earth-moving activities (excavation, trenching, grading, or ploughing) to stop work and notify authorities to prevent damage or destruction of these resources if encountered.

Pest Management (OP 4.09) Vector Management in Public health projects is governed by The World Bank Operational Policy 4.09 *Pest Management* and Bank Procedures 4.01 Annex B *Application of EA to Projects Involving Pest Management*. These policies apply to all projects involving vector management, regardless of if the project finances pesticides. The Guidebook on Pest Management provides further guidance, background, tools and references. The policy also

requiring training, equipment, and facilities to handle, store, and apply these products properly. The use of pesticides, such as termite treatment for building foundations, and vector spraying or planning for vector control will trigger the policy.

In assisting borrowers to manage pests that affect public health, the Bank supports a strategy that promotes the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides -- in other words, integrated pest management. The Bank may finance procurement of pesticides for public health when environmental control measures alone are not effective. However, the Bank does not finance procurement of any pesticides in WHO classes IA or IB, and it does not finance procurement of pesticides in class II unless the country has adequate controls on their distribution, storage, handling and application. Pest control product screening is required in projects that finance such products. When a project involves procurement of pesticides or may result in increased pesticide use even when not procured under the project, pest management issues must be addressed as part of the environmental assessment process. Depending on the issues, the environmental management plan may need to include relevant provisions of the PMP that will be developed by each of the countries, as part of the requirements of World policies and procedures applicable to this project.

Indigenous Peoples (OP 4.10) The Bank provides project financing only where free, prior, and informed consultation results in broad community support for the project by Indigenous Peoples who are affected by the project. Such Bank-financed projects include measures to (a) avoid potentially adverse effects on the Indigenous Peoples' communities; or (b) when avoidance is not feasible, minimize, mitigate, or compensate for such effects. Furthermore, Bank-financed projects must be designed to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate and gender and intergenerationally inclusive.

Involuntary Resettlement (OP 4.12) For the purposes of this policy, "involuntary" means actions that may be taken without the displaced person's informed consent or power of choice. The Bank's policy requires that projects avoid, minimize, or otherwise mitigate land acquisition and associated adverse impacts. Where resettlement is deemed unavoidable, the project must assist all affected people to improve, or at least restore, incomes and living standards

Forests (OP/BP 4.36)

Operational Policy (OP) 4.36 applies to all World Bank investment operations that potentially have an impact on forests, regardless of whether they are specific forest sector investments. It also addresses cross-sector impacts on forests. The policy provides for conservation of critical natural habitats and prohibits World Bank financing of any commercial harvesting or plantation development in critical natural habitats. It also allows for proactive investment support to improve forest management outside critical forest areas, with explicit safeguards to ensure that such World Bank-financed operations comply with independent certification standards acceptable to the World

Bank, or operations with an agreed upon, time-bound action plan to establish compliance with these standards.

The objective of OP 4.36 is to assist clients to harness the potential of forests to reduce poverty in a sustainable manner, to effectively integrate forests into sustainable economic development, and to protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the World Bank assists clients with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality.

Safety of Dams (OP/BP 4.37)

1. For the life of any dam, the owner is responsible for ensuring that appropriate measures are taken, and enough resources provided for the safety of the dam, irrespective of its funding sources or construction status. Because there are serious consequences if a dam does not function properly or fails, the Bank is concerned about the safety of new dams it finances and existing dams on which a Bank-financed project is directly dependent.
2. When the Bank finances a project that includes the construction of a new dam, it requires that the dam be designed, and its construction supervised by experienced and competent professionals. It also requires that the borrower adopt and implement certain dam safety measures for the design, bid tendering, construction, operation, and maintenance of the dam and associated works.
3. The Bank distinguishes between small and large dams.
 - (a) Small dams are normally less than 15 meters in height. This category includes, for example, farm ponds, local silt retention dams, and low embankment tanks.
 - (b) Large dams are 15 meters or more in height. Dams that are between 10 and 15 meters in height are treated as large dams if they present special design complexities--for example, an unusually large flood-handling requirement, location in a zone of high seismicity, foundations that are complex and difficult to prepare, or retention of toxic materials.⁵ Dams under 10 meters in height are treated as large dams if they are expected to become large dams during the operation of the facility.
4. For small dams, generic dam safety measures designed by qualified engineers are usually adequate. For large dams, the Bank requires
 - a) reviews by an independent panel of experts (the Panel) of the investigation, design, and construction of the dam and the start of operations;
 - b) preparation and implementation of detailed plans: a plan for construction supervision and quality assurance, an instrumentation plan, an operation and maintenance plan, and an emergency preparedness plan;
 - (c) prequalification of bidders during procurement and bid tendering, and
 - d) periodic safety inspections of the dam after completion.
5. The Panel consists of three or more experts, appointed by the borrower and acceptable to the Bank, with expertise in the various technical fields relevant to the safety aspects of the particular

Projects on International Waterways (OP/BP 7.50)

1. This policy applies to the following types of international waterways:

- (a) Any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states, whether Bank 1 members or not;
- (b) Any tributary or other body of surface water that is a component of any waterway described in (a) above; and
- (c) Any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states-- and any river flowing into such waters.

2. This policy applies to the following types of projects:

- (a) Hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar projects that involve the use or potential pollution of international waterways as described in para. 1 above; and
- (b) Detailed design and engineering studies of projects under para. 2(a) above, including those to be carried out by the Bank as executing agency or in any other capacity.

3. Projects on international waterways may affect relations between the Bank and its borrowers and between states (whether members of the Bank or not). The Bank recognizes that the cooperation and goodwill of riparians is essential for the efficient use and protection of the waterway. Therefore, it attaches great importance to riparians' making appropriate agreements or arrangements for these purposes for the entire waterway or any part thereof. The Bank stands ready to assist riparians in achieving this end. In cases where differences remain unresolved between the state proposing the project (beneficiary state) and the other riparians, prior to financing the project the Bank normally urges the beneficiary state to offer to negotiate in good faith with the other riparians to reach appropriate agreements or arrangements. The Bank requires the beneficiary state, if it has not already done so, formally to notify the other riparians of the proposed project and its Project/Program details.

Projects in Disputed Areas (OP/BP 7.60)

1. Projects¹ in disputed areas may raise several delicate problems affecting relations not only between the Bank and its member countries, but also between the country in which the project is carried out and one or more neighbouring countries. In order not to prejudice the position of either the Bank or the countries concerned, any dispute over an area in which a proposed project is located is dealt with at the earliest possible stage.

2. The Bank may support a project in a disputed area if the governments concerned agree that, pending the settlement of the dispute, the project proposed for country A should go forward without prejudice to the claims of country B.

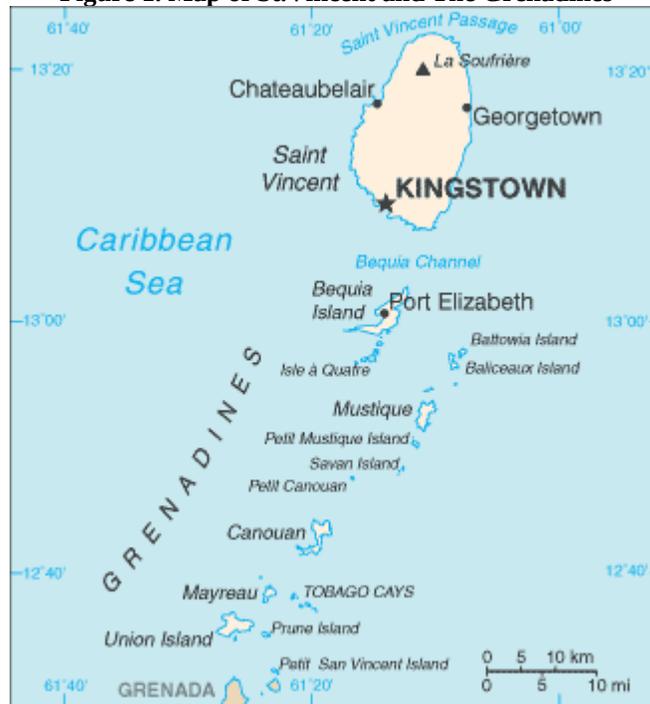
The PIU must screen all potential facility sites, for potential risks using the screening forms (Appendix 1) in this document. Because this project is a category B project activities that could be categorized as level A will be screened out.

3.0 DESCRIPTION OF EXISTING ENVIRONMENT

3.1 General Context

St.Vincent and the Grenadines is a Small Island Developing State (SIDS) in the Windward Islands group of the Lesser Antilles. It is an archipelago state which comprises of approximately 32 islands, islets and cays and is found 13° N and 61° W of the equator. It is West of Barbados, South West of St.Lucia and North East of Grenada. Total land area is 150.3 square miles with mainland St.Vincent accounting for 133.8 square miles. The state is pre-dominantly mountainous and is affected by the Northeast Trade Winds. Mainland St.Vincent is found to the extreme North of the archipelago and is the most populated and also houses the highest point above mean sea level; La Soufriere (4,084 ft).

Figure 1. Map of St.Vincent and The Grenadines



3.2 Climate and Geography

The country has a tropical marine climate with two distinct seasons- a dry season extending from January to May, and a wet season from June to December. Mean temperatures vary by 2 °C throughout the year and peak between May and October. During these months maximum temperatures can reach a high of 31°C and minimum temperatures a low of around 23°C in February. Average rainfall totals for the wet season is 67 inches while for the dry season the average is 32 inches. Precipitation totals also vary spatially as on mainland St.Vincent average

annual rainfall is 60 inches on the southern coast and over 150 inches in the mountainous interior. Additionally, intensity decreases from North to South and from the windward to the leeward side of the island.

The Grenadines experiences significantly lower rainfall totals. The average annual rainfall for those islands, based on the data collected from those with meteorological stations, is approximately 49 inches. June to November are the wettest months when the monthly average is 6 inches. February to April is the driest period where the average monthly rainfall is slightly more than one inch.

Evapo- transportation is 50 inches annually along the coast and decreases progressively with altitude. Relative humidity across the country tends to be generally high year round (above 70%) and predictably highest during the main rainfall period. Winds are generally E to ESE, and wind speed is strongest (>9 metres per second) through the dry period to the beginning of the rainy period (December-June).

The rock type of the mainland is mainly volcanic in origin while the Grenadines have more varied rock types of both volcanic and sedimentary origin. On mainland St.Vincent the geological structure consists of a chain of extinct volcanoes whose craters coincide with the central ridge of mountains. The most common rock type found is principally andesitic and basaltic in composition. Pyroclastics are the most abundant volcanic products on the island with varying particles sizes from clay to small boulders.

3.3 Socio-economic and Human Settlement

Socio economic data

The 2017 population and housing census indicated that St. Vincent and the Grenadines has a population of 109,894 persons. Approximately 90% of the population is of African descent, while the other 10% is a combination of East Indian, European and indigenous people. St. Vincent and the Grenadines is internationally classified as a lower-middle-income country. The Gross Domestic Product (GDP) per capita (2008) is US\$5,515; the literacy rate is 96% and the life expectancy at birth is 74 years. In 2009, the overall Human Development Index (HDI) Value was 0.772 and the country is ranked 91st in terms of HDI.

The economy is largely dependent on agriculture, tourism and overseas remittances. In recent decades the economy is increasingly dominated by tourism. Due to the contraction of the agricultural sector, the tourism sector is now making a greater contribution to national development with direct investment and ancillary development in support service sectors.

The industrial sector in SVG employs around 8% of the workforce and in 2008 contributed about 29.2% to GDP. Industrial activity is focused primarily on agricultural processing of food stuffs such as flour, rice, animal feeds, beans and other dried grain.

Ethnic and cultural groups

Arawak Amerindians who migrated from South America are the earliest known inhabitants of the islands, followed by the Caribs who were present for the colonization period. Black Caribs who were bred from the intermarriage of runaway or shipwreck slaves with Caribs, can still be found in the Northern most points on the Windward side of the island in the Fancy and Sandy Bay Villages.

Most Vincentians are descendents of African people brought to the island to work on plantations in colonial times. A number of other ethnic groups exist in the society as there are East Indians, Mixed race, descendents of the Caribs/Kalinagos and White (inclusive of Portuguese). Syrians also live on the island and are increasing in number along with a growing Chinese population.

Christianity is the dominant religion with the largest denomination being Anglican. Other Christian denominations in existence are Catholic, Methodist and Seventh Day Adventist (SDA) all of which have a relatively large following. The Pentecostal Assembly of the West Indies has about 20 congregations in the country and other Pentecostal denominations are present. There are small communities of Baha'is, Hindus and Muslim. A group of Rastafarians are also present.

Human settlement patterns and colonial history

Historical settlement patterns have followed along flat coastal areas near major rivers or fishing banks. The population of Saint Vincent and the Grenadines is concentrated in the south of the island, particularly in Kingstown and Calliaqua and their suburbs. As the population has increased, the settlement pattern has slowly crept up from the low lying urban areas into the surrounding hillsides creating expanding suburban settlements.

SVG was colonized by both the French and the British respectively. The country was administered as a crown colony from 1833 until 1960 then it was linked with the federation of the West Indies. After long discussion, SVG became a self governing state in association with the United Kingdom 7 years later. On October 27, 1979, SVG achieved full independence.

3.4 Biological Resources

St. Vincent and the Grenadines is host to many highly bio-diverse ecosystems. More than 1,150 species of flowering plants, 163 species of ferns, 4 species of amphibians, 16 species of reptiles, 111 species of birds, and 15 species of mammals which have been identified. In terms of marine biodiversity, over 500 species have been identified. Among these are at least 450 species of finfish, 12 species of whales and dolphins, 4 species of turtles, 9 of gastropods, 11 seaweeds and 30 different coral species. Some organisms are endemic to the country. A number of these animals have been deemed rare or endangered; namely the Amazona Guildingi (the national bird), the St.Vincent Wren and the St.Vincent Solitaire, Hawksbill, Green sea and Leatherback turtles, Union Island gecko and the St.Vincent black snake. The marine waters are also home to a number of whales and dolphins that have been recognized as endangered.

For purposes of this ESMF, four main ecosystems types can be considered: Forest and Terrestrial Wildlands, Coastal and Marine, Inland Fresh Waters and Agro-Ecosystems.

Forests and Terrestrial Wildlands

Large areas of St.Vincent and the Grenadines are under forest cover; most of which are critical forest reserves. There are a total of 7 forest reserves with the King's Hill Forest Reserve being one of the oldest in the Western Hemisphere. This reserve was established in 1791. A national forest inventory conducted in 1993 described 38% of St. Vincent land area covered by forest, about 5% of which was mature, mostly undisturbed primary forest (4,308 hectares). Forests in St. Vincent covered an estimated 14,038 hectares in 1949 and an estimated 12,690 hectares in 1993.

However, forested areas are under threat from encroaching farming activities and illegal crop cultivation. Deforestation has also been the product of fuel wood extraction, charcoal production and residential squatting.

Coastal Resources

The coastal resources of the islands, inclusive of beaches, coral reefs, mangroves, fisheries and wildlife, are deemed as the most important assets in relation to the Tourism Industry and the fisheries sub-sector. Coral reefs are habitat for a wide variety of fish and other marine organism which is vital to the fishing industry here. The coral reef systems are important for the regeneration of white sand beaches, which are the primary tourist attractions in the Grenadines. Additionally, the coral reefs provide protection to mangroves, sea grass beds and from the destructive erosive of waves during heavy storms and hurricanes. Commercially valuable fish species and invertebrates like the conch and lobster are found in the coral reef systems.

Destruction and pollution of coastal habitats is becoming a problem because of overfishing, increased construction along coastal areas, agricultural run-off and improper disposal of industrial effluent. Currently, there are 7 conservation marine areas and the Tobago Cays was declared by the government as a National Marine Park.

Inland Fresh Waters

Attributed to the rainfall quantity, topography and geology, mainland St.Vincent has significant water resources in comparison to the Grenadines. Four major watersheds are currently used as the main water resources for the supply of the population of St. Vincent: Richland, Cumberland, Colonaire, and Montreal. In the rainy season, the potable water supply is estimated to be 6.2 million gallons per day and 3.5 million gallons per day in the dry season. However, in The Grenadines where there are no rivers or public water supply systems, rainwater is harvested from roofs for household use. On the mainland, surface water is abundant as it presents itself in the many rivers and streams. The occurrence of groundwater is evidenced by the large number of Springs and perennial streams found throughout the island. Potable groundwater can be found at three locations - Rabacca area, Dumbarton and the Buccament area.

Agro-Ecosystems

Agriculture is widely practiced and hence a variety of crops are grown. There is a wide variety of fruits, root crops and vegetables being cultivated on the island. Banana was once the most widely produced crop on the island and was heavily exported. Over the years banana production has been reduced because of the removal of preferential treatment on the European market, natural disasters and the presence of diseases but production has not been halted. Agricultural stations like the Orange Hill Agricultural Co operation Farm, focuses on plant technologies and practices which can

help improve the productivity and sustainable of crop production. The farm also produces seedlings, agro-processing products, fruit products and plant tissue culture products.

3.5 Geo-hazards

The country is vulnerable to a number of natural hazards such as hurricanes, earthquakes, volcanic activity, drought, tsunamis, flooding, and landslides. The effects of these phenomena can be exacerbated by the activities of the population such as deforestation, indiscriminate garbage disposal, poor building practices, and unplanned settlements in environmentally sensitive areas.

With the increased frequency of more intense weather events as a result of climate change, the possibility for disasters to occur increases placing increased strain on the limited national technical and financial resources and the country's ability to respond.

As an example of the vulnerability of St. Vincent and the Grenadines to natural disasters, Hurricane Tomas which impacted St. Vincent and the Grenadines in October 2010 was a major disaster affecting areas around the country resulting in landslides, infrastructural damage and loss of property. Several the major landslides and debris flows occurred along major roadways and settlements on the north-eastern side of the island. Some landslides occurred in forested areas affecting critical water supply infrastructure. The volcanic hazard of St. Vincent has been studied by many researchers. Zones near the active La Soufriere volcano in the north part of the island have the highest risk level of a new eruption.

Costal zones are vulnerable to storm surge during hurricanes, and erosion from wave energy. Storm surge from hurricanes is pronounced on the southwest coast, where up to 5 meters of sea level rise during hurricanes could occur Elsewhere, up to 2 meters would be expected during hurricanes. The eastern side of St. Vincent is exposed to long-fetch waves across thousands of miles of open Atlantic Ocean, and consequently has a number of erosion hot spots vulnerable to wave energy.

3.6 Physical Cultural Resources

The rich culture and history of St. Vincent 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 artefacts, objects, sites, structures, groups of structures, and natural features and landscapes, and may be located in urban or rural settings, above or below ground, or underwater. Cultural resources are important as sources of valuable historical and scientific information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. Recognition of physical cultural resources may be at the local, national level, or within the international community.

Examples may include St. Vincent's natural treasures such the Botanic Gardens, the petroglyphs in Mesopotamia, Layou, and Barrouallie, the Catholic Church in Kingstown and the old cemetery at Dorsetshire Hill; as marine preserves like the Tobago Cays or forest trails, excellent masonry works, historical buildings, or other features of community importance or international renown.

4.0 ENVIRONMENTAL AND SOCIAL ASPECTS

The regional project has been rated category B of Operational Policy (OP/BP) 4:01 (Environmental Assessment). Two safeguard policies are applicable: OP/BP 4.01 and OP/BP 4.09 (Pest Management). The fact that Saint Vincent is set out to engage in the use of pesticides for vector control warrants the preparation of a Pest Management Plan.

The appraisal under category B of Operational Policy 4:01 (Environmental Assessment) entails that potential environmental and social impacts would have moderate significance in the environs, and there is need for environmental and social management plans (ESMPs) to address the impacts/risks during the implementation phase. The project activities for which some negative impacts may arise are those of components 1 and 2. The impacts can be broadly categorized into two main groups: (1) impacts arising during construction/civil works and ancillary activities and (2) impacts arising during the operational phase. The main sources of impacts during the construction phase would be from proposed expansion, minor civil works, rehabilitation works of the facilities and new construction activities. During the construction phase, construction workers could be exposed to occupational health and safety risks including fall from height, exposure to hazardous chemicals, accidents, hearing loss, sexually transmitted diseases (STDs) and other risks normally associated with construction activities. For the operational phase, the main source of impacts would be from the generation of healthcare wastes.

4.1 Potential Positive Impacts

There are many benefits expected to accrue to the countries involved and their populations, as follows: The project design is expected to foster improved regional coordination efforts, harness cost efficiency gains, and reinforce ongoing regional and national health sector dialogue. Harmonization of policies and procedures for preparedness across the OECS region such as streamlined handling of laboratory specimen transport capacity and a coordination mechanism for emergency health services will help strengthen response mechanisms to public health emergencies.

The project design also builds on the commitments reflected in the Caribbean Region Global Health Security Agenda Five Year Roadmap (2017-2021). The project will support efforts to strengthen capacity of the health workforce in the OECS region to better manage disease outbreaks and develop harmonized policy regulation to facilitate smoother coordination and timely action. As a global convener, the Bank will contribute to strengthening existing knowledge-sharing and coordination platforms across the region for continued capacity building to effectively respond to public health emergencies.

The proposed project also leverages the Bank's substantial experience in responding to the Ebola outbreak and its aftermath in West Africa, where the Bank is using its expertise to support countries in their efforts to strengthen preparedness and response to public health threats in those countries. The proposed project design also builds on lessons from the Bank's experience with regional approaches to strengthening health systems: ranging from the Ebola outbreaks in West Africa, strengthening public health laboratory networks across east Africa, and improving the capacity to manage the burden of tuberculosis in southern Africa.

Furthermore, the global public good nature of key investments is clear, such as a robust disease surveillance system, as it is both non-rival and non-exclusive. Within the context of pandemics, a 2016 IEG assessment of World Bank support to pandemic preparedness outlines that priority should be placed on the control and prevention of cross border spread of communicable disease and sharing of resources to enhance efficiency such as pooled procurement of key commodities and health workforce development which could result in financial savings due to economies of scale. In addition, costly high-level resources such as reference laboratories are expected to efficiently serve the needs of more than one country. Delays between the onset of the epidemic and the implementation of control measures are costly. Too often, detection, diagnosis, and control of disease outbreaks are attempted only with delay and when contagion grows exponentially, the cost of controlling the epidemic outbreaks rise in tandem.

4.2 Potential Negative Impacts

Notwithstanding the numerous positive benefits expected to accrue to the many communities across the region, there is also a risk of negative impacts in the social and environmental areas if certain activities are not appropriately managed. The below mentioned activities would generate negative impacts particularly, under component (1) one which is the establishing of a public health laboratory.

Refurbishments at selected health facilities presents occupational health and safety risks typical associated with small civil works such as those arising from not using safety equipment, or workers not properly managing heavy equipment.

Upgrading of facilities should also include adequate treatment of wastewater. Diesel generators may also be used for emergency power back-up, requiring adequate ventilation, fuel storage, and safety measures. During operations, these systems must be maintained adequately to minimize potential releases to the environment.

Refurbishments can also impact the neighbouring areas through increased traffic, dust and noise, storm water runoff from disturbed areas or concrete mixing areas, inadequate debris disposal, and poor sanitary facilities on the work site.

Unexpected risks from small civil works include destruction of historical artefacts during earth-moving activities, damage to historical buildings or facades, or other impacts to physical cultural resources.

Refurbishments at selected health facilities could create sources of medical waste, equipment or supplies needing proper management and disposal.

Construction waste will need to be disposed of properly as will any hazardous material such as asbestos, mercury, chemicals which may also be discovered during demolition, repairs, or refurbishment.

During operation of the health care facilities, there may be increased use and scope of services, resulting in additional sources of medical waste needing proper treatment and disposal.

The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bio-infectious, radiologic or genotoxic waste.

If new lands must be acquired, informal settlers removed from government (Crown) lands; then social impacts could include loss of crops or livelihood, or involuntary physical displacement of persons.

The potential negative impacts can be grouped into two categories: Construction Phase - those are associated with typical small civil works; and Operation Phase - those are associated with medical waste. Each is discussed in more detail in the following two sections.

4.2.1 Negative Impacts associated with Small Civil Works

There is the possibility of the occurrence of typical works-related negative impacts associated with the small civil works (refurbishment of selected health facilities) for the Project. Each of the impacts is described in more detail below.

Increased traffic can generate conflict. There is always the possibility of increased traffic for civil works of certain sizes especially when the works are occurring adjacent to a main highway or any busy road. The potential for vehicular/vehicular and pedestrian/vehicular conflict increases as the scale of works increases if proper traffic management procedures are not implemented. This can lead to negative response from the nearby residents or the community affected. The matter of safety also becomes a great concern in relation to the speed of the vehicles as well as the alertness of the drivers as they traverse the highways and through communities especially if there are children within the vicinity who may be accustomed to playing on the roads or sidewalk areas. The breakdown of a large project vehicle causing the blockage of a well travelled route can escalate tensions within a community especially if it contributes to loss of travel time to work, school, or returning home. This may be the case at many of the health facilities selected for refurbishment.

Increased noise levels from activities adjacent to or within communities and residential areas can be deemed as an unnecessary and unwanted nuisance affecting local business and day to day activities. Care must be taken in the judicious usage of any form of heavy noise and vibration equipment. Associated vibrations from the use of heavy equipment such as rollers can negatively impact surrounding communities, causing nuisances by shaking household items and possibly affecting the stability of nearby structures.

Poor Solid and Liquid Waste Management can be detrimental to both the terrestrial and to the nearby marine environment. The mishandling of chemicals, detergents, greases, oils, building materials, can lead to the poisoning of the terrestrial and marine environment. The management of human wastes on site is very critical to ensuring a healthy working environment and reduce the risk of faecal contamination. Managing excavated soil is also important especially when there is potential for storm water runoff into drains, rivers, and coastlines. In addition, care is needed when soil is being transported to another site for use or storage. Care must be taken to ensure the appropriateness of the transport and the protocols for transporting and storing the soil, using BMPs for erosion control and safe transport.

Hazardous Materials. At times hazardous materials may be discovered, especially when older buildings are being refurbished. Such materials may include asbestos in ceiling tiles or roof panels, medical waste in storage areas or debris piles, paints or solvents in maintenance areas, or fuels such as diesel tanks or contaminated soils. Improper handling or disposal of these materials can lead to impacts to health of workers or the community, or pollution of watercourses and nearby lands.

Air Pollution can come from a number of sources. Vehicles and machinery can produce noxious fumes such as carbon monoxide, diesel fumes, as well as burnt oil fumes which can be a nuisance to nearby facilities or communities. The mishandling of particularly noxious chemicals such as solvents or chemical washes, greases, as well as the burning of solid wastes on the work site, especially chemical containers, can lead to air pollution resulting in negative health impacts.

Terrestrial and Marine Pollution. The potential for terrestrial and marine pollution can occur with indiscriminate disposal of both solid and liquid wastes. The mishandling of chemicals and especially waste oils can poison the landscape. Improper disposal of human wastes can lead to similar effects. This also applies to pesticides used in termite treatment of new or existing buildings. With the occurrence of civil works projects along or adjacent, or within the coastal waters, there is the possibility of impact on the marine ecosystem which must be evaluated as project details become clear.

Soil Erosion and Land Slippage can occur if land clearing and excavation practices, as well as poor site drainage can lead to exposed soil. Opening of roadways, trenching for installation of water lines, grading or clearing, may all destabilize the soil surface and eventually be the cause for landslides at a later time. Accordingly, if any of these activities become related to the project, careful planning is required to ensure that soil erosion is minimized and that landslide potential is not exacerbated. Best Management Practices (BMPs) for slope stabilization should be used.

Occupational Health and Safety Issues. Worker safety is critical to any operation, the mishandling of equipment, the improper storage and usage of various chemicals and materials on site, high levels of continuous noise and fumes, as well as inadequate or improperly used safety equipment can cause serious injury and down time to the workers and project and should therefore be avoided. If outside labour is required, proper facilities for housing will be provided for workers.

Loss of or Damage to Physical Cultural Resource may occur during any type of earth works associated with refurbishment or expansion activities, there is the possibility of coming across or “chance finding” what may appear to be an historical or cultural artifact which may need to be studied and preserved by the relevant authorities. In cases like this, the resource could be lost due to careless activities prior to the relevant authorities determining whether or not it is worthy of preservation. It is therefore recommended to consult with local stakeholders as to the final design of facility, and the disposition of any potential physical and cultural resources, because the valuation of such items is ultimately subjective and they are of most value to local stakeholders.

Loss of Land, Access, or Livelihood - In some cases it is necessary to acquire land, remove crops when clearing government lands, or relocate businesses so a project activity can proceed. Although this scenario is not anticipated if it is deemed necessary through any project changes this will be done according to prevailing law and World Bank Policy OP4.12.

4.2.2 Negative Impacts associated with Medical Waste

According to the WHO², waste and by-products from the health sector cover a diverse range of materials, as the following list illustrates:

- i) Infectious waste: waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices);
- ii) Pathological waste: human tissues, organs or fluids, body parts and contaminated animal carcasses;
- iii) Sharps waste: syringes, needles, disposable scalpels and blades, etc.;
- iv) Chemical waste: for example, solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- v) Pharmaceutical waste: expired, unused and contaminated drugs and vaccines;
- vi) Cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- vii) Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials; and
- viii) Non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard.

Health-care waste contains potentially harmful microorganisms that can infect hospital patients, health workers and the general public. Other potential hazards may include drug-resistant microorganisms which spread from health facilities into the environment. Adverse health outcomes associated with health care waste and by-products also include:

- sharps-inflicted injuries;
- toxic exposure to pharmaceutical products, in particular, antibiotics and cytotoxic drugs released into the surrounding environment, and to substances such as mercury or dioxins, during the handling or incineration of health care wastes;

²<http://www.who.int/mediacentre/factsheets/fs253/en/>

- chemical burns arising in the context of disinfection, sterilization or waste treatment activities;
- air pollution arising as a result of the release of particulate matter during medical waste incineration;
- thermal injuries occurring in conjunction with open burning and the operation of medical waste incinerators; and
- radiation burns.

The Project may increase the use and scope of services at facilities, resulting in additional sources of medical waste needing proper treatment and disposal. This is also the case for work during emergency response or epidemics. The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bio infectious, radiologic or genotoxic waste. Such risks, if not mitigated, may also affect nearby communities.

5.0 MITIGATION MEASURES

Mitigation measures address the potential impacts of project activities to avoid or reduce any negative impact on the environment or on people. As indicated in the section on impacts, there is the potential for negative impacts associated with small civil works and rehabilitation, and there are potential impacts associated with the generation and management of medical waste.

The careful implementation of mitigation measures will allow for the reduction or avoidance of any adverse impacts. These efforts start in the pre-design phase with the screening of possible sub-projects for consideration, and include efforts during the design, implementation, and operation phases.

The table below outlines the likely impacts of the project along with the mitigation measures that would be required and identifies who would be ensuring that the mitigations efforts are effective.

Table 2. Potential Environmental and Social Impacts and Proposed Mitigation Measures				
Project Activity	Aspect	Potential Environmental and Social Impacts	Proposed Mitigation / Controls Measures	Responsible Party
Design Phase: Site selection for laboratory/incinerator or an existing facility		<ul style="list-style-type: none"> There may be anxiety and complaints from those living in or using nearby areas about potential impacts. Current staff using the building and others who share the external space may express their concerns 	<ul style="list-style-type: none"> Use Site screening tool for the selection of sites. Select sites that do not cause displacement to homes, businesses, or livelihoods. Conduct community outreach once site has been finalized Liaison with the Physical Planning Board for expert opinion on the subject. 	PMU Env and Safe Spec
Construction activities	Flora and Fauna	<ul style="list-style-type: none"> The rehabilitation, refurbishment and upgrading of existing healthcare facilities could result in some clearing of vegetation that could result in loss of tree/plant cover. This is expected to be minor as the proposed construction sites are mostly in- 	<ul style="list-style-type: none"> Avoid environmentally sensitive sites and unnecessary exposure or access to sensitive habitat; Ensure that vegetation clearance does not go beyond what is required for activities; 	Con Con Proj Impl Unit

		built environment and areas that are already disturbed.	<ul style="list-style-type: none"> Ensure that construction workers are not engaged in hunting and activities that could pose threat to biodiversity 	
Construction phase: Hazardous materials handling, storage, use and transportation	Soil and water resources (both ground water and surface water resources)	<ul style="list-style-type: none"> The risk of accidental discharge of hazardous products, leakage of hydrocarbons, oils or grease from construction machinery also constitute potential sources of soils and water pollution. 	<ul style="list-style-type: none"> Avoid the storage of hazardous substances around water bodies; Ensure that storage containers of hazardous substances are always in good condition and tightly close; Ensure that storage facilities are provided impervious surfaces and bunds to control spill in case of accidental spillage Construction should develop spill response plan as part of the construction ESMP Secondary containment for fuels to avoid spill contamination and inspection during operation Some training in fuel and waste handling should be part of the orientation for workers Maintain the MSDS Sheets for hazardous materials on site Prepare a H&S Plan 	Con Con Proj Imp n Ur (incl relev entit invo impl Miti Mea
Construction activities: Construction Wastes Generation and Disposal issues	Environmental degradation- soil, water resources, public health, air	<ul style="list-style-type: none"> Improper disposal of construction wastes can lead to environmental degradation due to dispersion of materials in the nearby canals, streets and adjacent properties -Poor or improper management of the stored materials and wastes can result in dispersion of materials in the nearby canals, streets and adjacent properties; -The construction activities will necessitate temporary on-site 	<ul style="list-style-type: none"> The contractor shall handle construction materials and waste in accordance with approved procedures. The community should be made aware of constraints imposed on the contractor for waste collection, storage and disposal Where possible the contract should coordinate with the Municipality, and administrations, to deposit construction waste in 	Imp n: C Sup Proj Imp n Ur (incl relev entit invo impl Miti Mea

		<p>storage of construction materials and excavated materials, poor management of the stored materials and</p> <ul style="list-style-type: none"> wastes can result in dispersion of materials in the nearby canals, streets and adjacent properties 	<p>areas that are to be filled or reclaimed</p> <ul style="list-style-type: none"> The contractor shall contain excavated materials in the vicinity of the worksite within berms to prevent dispersion and sedimentation of drains, creeks, streets and adjacent properties In case of accidental waste dispersion, EPA shall be informed and restoration measures shall be applied. Waste materials are to be disposed in line with EPA regulations 	
Construction phases	<p>-Air Emissions and Air Quality</p> <p>-Dust generated from earthworks</p> <p>-Dust generated from materials handling</p> <p>-Wind generated dust from exposed areas of soil and mounds of stored soil</p> <p>- Dust generated from vehicle movements emissions from construction traffic and on- site machinery</p>	<ul style="list-style-type: none"> Impaired Air quality due to emissions form vehicles and dust generated Respiratory impacts on site workers, nearby residents and pedestrian 	<ul style="list-style-type: none"> Dust suppression methods such as wetting materials or slowing work should be employed as needed to avoid visible dust Gas masks / respirators when working in closed areas such as access manholes, etc. (according to approved procedures) Document requirements and standards in the Contractors 	<p>Imp</p> <p>n: C</p> <p>Sup</p> <p>Proj</p> <p>Imp</p> <p>n Ur</p>
Construction Activities	Noise generation (from the use of excavation machines and construction equipment)	<ul style="list-style-type: none"> Noise generation from the use of excavation machines and construction equipment with its impact on workers and neighborhood 	<ul style="list-style-type: none"> Hearing protection for working around machinery where the noise exceeds 60 dB (according to approved procedures) Limiting working hours according to 	<p>Main</p> <p>resp</p> <p>Con</p> <p>Sup</p> <p>Proj</p> <p>Imp</p> <p>n Ur</p>

			<p>the EPA requirements</p> <ul style="list-style-type: none"> • Maintain vehicles and machinery according maintenance requirements • Consider noise suppression capability in the procurement of vehicle and equipment. • The location of noisy machinery (including generators) can also be considered such that they are positioned away from sensitive sites such as schools' hospitals, residential areas etc. 	(incl relevant entities involved in implementation Mitigation Measures)
Construction Activities	Worker and Public Health and Safety	<ul style="list-style-type: none"> • The safety of the local population may be at risk during construction activities. The movement of trucks to and from the site, the operation of various equipment and machinery and the actual construction activities will expose the workers to work-related accidents and injuries. • Pollutants such as dust and noise could also have negative implications on the health of workers and near-by communities. 	<ul style="list-style-type: none"> • ensure that traffic management plan is place where this might be an issue • Ensure that construction equipment are good condition and service regularly; • Ensure that operators are trained; • Ensure that sites are properly barricaded during construction and temporary pedestrian walkways are provided when required; • Ensure workers are provided with personal protective equipment suitable for their work; • Ensure that workers trained and understand the risks associated with their works • Contractor must develop Health and Safety Plan (HSP) as part of the sub project ESMP 	<p>Main responsible Contractor</p> <p>Supervising Project implementation in Urban</p> <p>(incl relevant entities involved in implementation Mitigation Measures)</p>
	Volatile	<ul style="list-style-type: none"> • (\$) Provide suitable Personal Protective Equipment (PPE) for 	<ul style="list-style-type: none"> • Monthly review of paint purchase 	Main responsible

Occupational Health and Safety		Organic Compounds VOCs	<p>workers assigned to prolonged paint or road asphaltting jobs</p> <ul style="list-style-type: none"> • Coordinate with facility management to avoid paint jobs during sensitive times of facility operation • Coordinate with facility management to ventilate paint jobs in confined spaces in the facility • Seek to schedule paint jobs in institutional vacation periods • Inform facility managers and users of periods of unavoidable paint jobs • Use water-based paints from recognized manufacturers. 	<p>receipts</p> <ul style="list-style-type: none"> • Monthly review of paint MSDS • Review of PPE availability & usage during prolonged paint works 	<p>Con</p> <p>Sup</p> <p>Proj</p> <p>impl</p> <p>n Ur</p> <p>(incl</p> <p>relev</p> <p>entit</p> <p>invo</p> <p>impl</p> <p>Miti</p> <p>Mea</p>	
	Oc		Asbestos	<ul style="list-style-type: none"> • Avoid inhalation near asbestos-containing areas or components • Spray water on asbestos components and seal them safely in impervious bags or wrapping Same measures as for hazardous waste and materials management 	<ul style="list-style-type: none"> • Daily review of asbestos containment • Daily review of PPE availability & usage during Asbestos exposure • Proof of Asbestos disposal at designated hazardous waste facilities 	<p><u>Ma</u></p> <p><u>resp</u></p> <p>Con</p> <p>Sup</p> <p>Proj</p> <p>impl</p> <p>Unit</p> <p>MA</p> <p>(Dep</p> <p>of L</p> <p>MO</p> <p>(Env</p> <p>l He</p> <p>Divi</p>
			Physical hazards from demolition waste	<ul style="list-style-type: none"> • Inform facility users to stay vigilant in areas of demolition waste generation and storage • Same measures as for demolition waste management 	<ul style="list-style-type: none"> • Worker and facility user monitoring • Log of relevant injuries & complaints 	<p><u>Ma</u></p> <p><u>resp</u></p> <p>Con</p> <p>Sup</p> <p>Proj</p> <p>impl</p> <p>Unit</p>
			Physical hazards from equipment and vehicles	<ul style="list-style-type: none"> • Create exclusion zones to limit access to equipment and vehicle maneuver lines • Avoid vehicle speeds higher than 20km/hr in project sites • Same measures as 	<ul style="list-style-type: none"> • Monthly review of Driver & operator testing reports • Monthly review of Driver & operator training certificates • Review of exclusion zones • Log of relevant injuries & complaints 	<p><u>Ma</u></p> <p><u>resp</u></p> <p>Con</p> <p>Sup</p> <p>Proj</p> <p>impl</p> <p>Unit</p>

			for demolition waste management		
		Fire Hazards	<ul style="list-style-type: none"> • (\$) Train workers on identifying and avoiding fire hazards • (\$) Provide fire extinguisher instruments and sand buckets in good working condition • Create strictly No-Smoking zones in fire risk areas such as fuel storage areas, excavations, near decomposing organic matter in waste piles and around water bodies • Avoid storing flammable materials in direct sunlight or near heat sources • Ensure suitable grounding and circuit breakers are available for electrical works • Strictly avoid excavations in areas with residential natural gas connections or works near natural gas piping • Identify and provide contacts of closest authorities and emergency services to contact in case of incidents involving Fires 	<ul style="list-style-type: none"> • Weekly review of fire extinguishing instruments • Weekly review of flammable material containers & storage • Log of relevant injuries & incidents 	<p><u>Mai</u> <u>resp</u> <u>Con</u></p> <p>Roy Poli Fire</p>
Occupational H & sand Safety		Slippage and Falling & Working at heights	<ul style="list-style-type: none"> • (\$) Provision of suitable footwear to avoid slippage • Avoiding tasks on unstable slopes or soils without proper fall prevention precautions • (\$) Installation of guardrails at the edge of any fall hazard area • Proper use of ladders and scaffolds by trained employees • (\$) Use of fall prevention devices 	<ul style="list-style-type: none"> • Ongoing review of PPE availability & usage • On-going review of relevant fall prevention measures and awareness 	
		Manual handling and lifting	<ul style="list-style-type: none"> • -Incorporating rest and stretch breaks into work processes and conducting job rotation • Taking into consideration additional special conditions such as left-handed persons and persons 	<ul style="list-style-type: none"> • Ongoing observation of workers • Weekly review of break periods and rotations 	

			with existing medical conditions		
Operational Phase	Electrocution	<ul style="list-style-type: none"> • Checking all electrical cords, cables, and hand power tools for frayed or exposed cords • Following manufacturer recommendations for maximum permitted operating voltage of the portable hand tool • Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas • Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work 	<ul style="list-style-type: none"> • Ongoing equipment and connection checks and reporting 		
	Worker influx	<ul style="list-style-type: none"> • Inform local communities in case of anticipation of high worker influx into project area • Inform workers of local customs, traditions, and facilities • Perform medical checks on workers assigned prolonged work periods in confined spaces • Ensure work area is reasonably equipped to provide basic needs for workers during their work periods 	<ul style="list-style-type: none"> • Daily review of log of relevant incidents & complaints 		
	Traffic and accessibility	<ul style="list-style-type: none"> • Inform local communities in case of anticipation of prolonged closure of roads or access routes • Assign trained workers to manage traffic in cases of works during peak traffic/ rush hours • Coordinate with local authorities and traffic authorities in case of major disruption to traffic 	<ul style="list-style-type: none"> • Daily review of log of relevant incidents & complaints 		
	Exposure to biological hazards	<ul style="list-style-type: none"> • (\$) Provide suitable PPE to limit the risk of exposure to biological hazards 	<ul style="list-style-type: none"> • Ongoing review of PPE availability & usage 		
Operational Phase: Operation of Health Care facilities	Health care waste management	Medical facilities are a potential source of infectious waste in gaseous, liquid or solid forms. These could pose unsafe conditions for	Detailed mitigation measures are provided in the Updated Health Care Wastes Management Plan which is one of the	Ma	res

		<p>healthcare staff. Of particular concern are janitors handling infectious waste (including sharps) without adequate protective gear, storage of sharps in containers that are not puncture-proof and management of radioactive waste at healthcare where x- ray equipment will be installed. While some OHS risks will be borne by new equipment or services introduced after renovation or upgraded facilities.</p>	<p>safeguards instruments that have been developed for this project</p>	<p>Sup n: I imp atic</p>
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5.1 Environmental and Social Screening Process

Environmental and Social Screening of all sub-projects will be undertaken during planning and design stage, before commencement of civil works on the site. Environmental and social management plans will be prepared to identify, assess and mitigate, as appropriate all potential negative impacts.

Step 1: Application of the Screening processes

The PIU with the assistance of a consultant team (where required), will determine appropriate instruments for mitigating environmental and social impacts. This will allow the PIU to:

- a) Determine the level of environmental work required (i.e. whether an ESMP is required; whether the application of simple mitigation measures will suffice; or whether no additional environmental work is required);
- b) Determine and incorporate appropriate mitigation measures for addressing adverse impacts

The PIU will prepare a Safeguard Screening Summary which includes:

- a list of micro-projects and sub-projects that are expected to have environmental and social safeguards impacts;
- the extent of the expected impacts;
- the instruments used to address the expected impacts; and
- time line to prepare any required instruments.

The Safeguard Screening Summary, when completed, will provide information on the assignment of the appropriate environmental and social category to a particular activity for construction of new facilities or rehabilitation of existing structures.

The PIU, with the assistance of a consultant team (where required), will determine and prepare appropriate instruments for mitigating environmental and social safeguards impacts identified in the screening process. During the preparation of sub-projects, the PIU will ensure that technical design can avoid or minimize environmental and social impacts, avoiding land acquisition.

The PIU will carry out the initial screening in the field, through the use of the Environmental and Social Screening Form – Part 1 of the Environment Management Plan – Checklist (Appendix 1). The PIU will retain a copy of the Safeguards Screening Summary for possible review by the Implementing Agency and the World Bank. The review, which may be conducted on sample basis,

will verify the proper application of the screening process, including the scoping of potential impacts and the choice and application of instruments.

Step 2: Preparation of site-specific safeguards instruments

The environmental and social impact assessment process will identify and assess the potential environmental and social impacts of the proposed construction activities, evaluate alternatives, as well as design and implement appropriate mitigation, management and monitoring measures. These measures will be captured in the Environmental and Social Management Plan (ESMP).

This ESMF includes an ESMP-checklist which can be used as the Environmental and Social Management Plan (ESMP) for individual sub-activities once identified during the scoping identification phase (Appendix 1). For each sub-activity in which the specific buildings/sites for rehabilitation, and/or demolition and complete reconstruction is known, the EMP-checklist is completed. The checklist has three parts:

1. Part 1 includes the descriptive part that describes the project specifics in terms of the physical location, institutional arrangements, and applicable legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process. This section could be up to two pages long. Attachments for additional information can be included. (This is the ESSF, Part 1 as detailed in appendix 1)
2. Part 2 includes the environmental and social screening of potential issues and impacts, in a simple Yes/No format followed by mitigation measures for any given activity. Currently, the list provides examples of potential issues and impacts. This list can be expanded to specific site issues and /or impacts; and good practices and mitigation measures. (Appendix 1)
3. Part 3 will include the monitoring plan for activities during project construction and implementation. It retains the same format required for current ESMPs. **It is the intent of this checklist that Part 2 and Part 3 be included as bidding documents for contractors.** (Appendix 3)

The ESMP-checklist which to be filled out for each sub-project, will be used to determine the type and scope of the environmental and social safeguards impacts. The practical application of the EMP-checklist would include filling in of Part 1 to obtain and document all relevant site characteristics. In Part 2 the type of foreseen works, would be checked, and the completed tabular EMP is additionally attached as integral part to the works contract and, analogous to all technical and commercial terms, that is signed by the contract parties. Part 3 of the ESMP- checklist, the monitoring plan, is designated for the Contractor responsibility, to be supervised by the PIU.

The PIU will prepare the EMPs in consultation with affected peoples and with relevant NGOs, as necessary. The EMP will be submitted to the Implementing Agency, for review, prior to the

submission to the World Bank for approval. Documentation and clear records of such site-specific consultations must be maintained at the PIU.

In case of any change in scale of scope of construction or in case the Government decides to construct new buildings, the due-diligence measures will be enhanced, in consultation with the World Bank, and no such physical investments will be undertaken without Bank approval and clearance.

Step 3: Monitoring of safeguards instruments

The PIU will supervise and monitor the overall safeguards implementation process and prepare a progress report on the application of safeguards policies during the planning, design, and construction phases of the Project. The PIU will also develop the reporting requirements and procedures to ensure compliance of the contractors; conduct public consultation and public awareness programs; and carry out periodic training for field engineers and contractors as appropriate. Environmental consultants will be hired by the PIU to support them in this activity.

Appropriate mitigation measures will be included in the bidding documents and contract documents to be prepared by the PIU. Compliance by the contractors will be monitored in the field by the project field observers, working under close supervision. The performance of the contractors will be documented and recorded for possible later review. Sample Environmental Safeguards procedures for inclusion in the technical specifications of construction contracts are provided in Appendix 3.

Figure 2. Outline of the Environmental and Social Screening and Approval Methodology

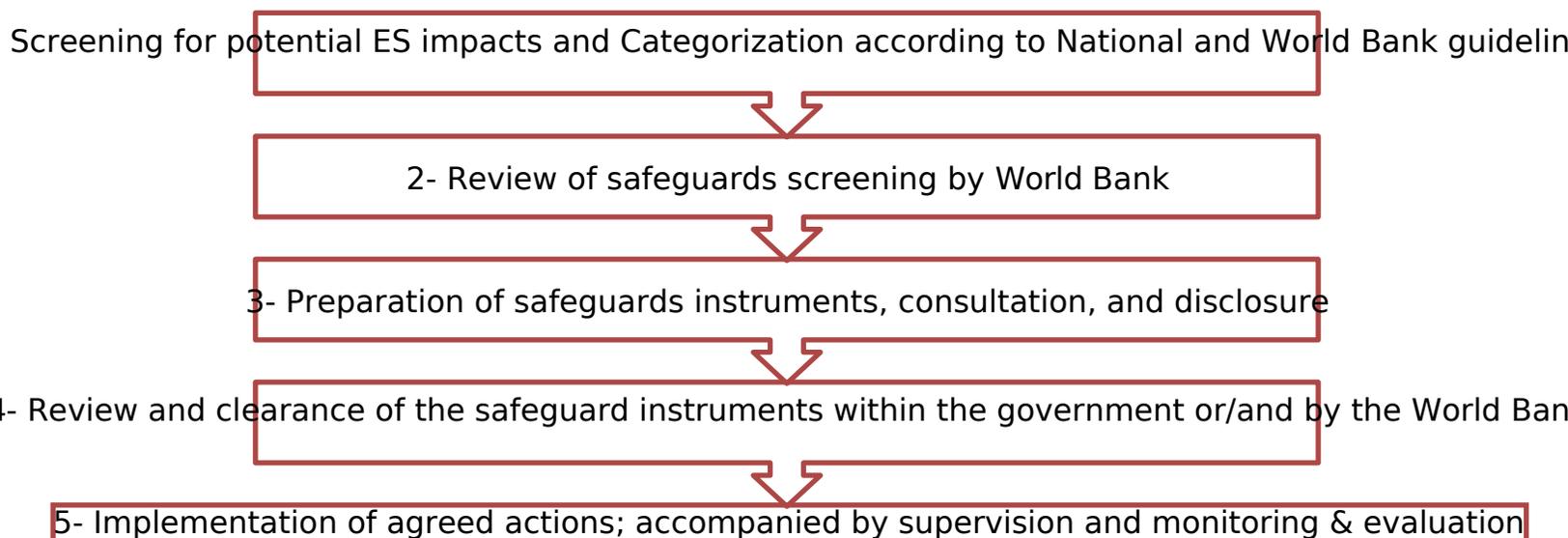


Table 3, below, provides a summary of the various steps involved in safeguard work under a framework approach, from sub-project screening process, review of screening results, categorization, scope of safeguard work needed, preparation, review and approval of safeguard instruments, including consultation with relevant stakeholder groups, and disclosure of the safeguard instrument. The information in the table also guides on under what circumstances to use simple measures following the checklist, in place of an ESMP and vice versa. Also, it indicates the entities and responsible parties involved at each step and the expected outcomes.

Table 3: Sub-project Safeguarding, Approval and Disclosure Process

Step	Scope	Responsibility	Criteria
Screening for Potential Environmental and Social Safeguard Impacts and Determination of Safeguards Category for Each Sub- project	<ul style="list-style-type: none"> - Screen proposed sub-project according to safeguards checklist (Appendix 1) - Determine applicable national and World Bank requirements - Determine instruments needed to meet requirements 	Project proponent (PIU)	<ul style="list-style-type: none"> - Category B <ul style="list-style-type: none"> o Less adverse than WB OP 4.01 Category A o May result in limited negative impacts o Site-specific Impacts o All impacts are reversible o Mitigation measures can be readily designed o WB Instruments needed: ESMP o ES requirements included in tender documents & contracts - Category C <ul style="list-style-type: none"> o Most likely results in minimal or no negative impacts o Refer to check-list in the appendix section: Comply with National regulatory requirements o WB Instruments needed: None
2- Review of Safeguards Screening by the World Bank	<ul style="list-style-type: none"> - Prepare subproject-specific Safeguards Screening Summary 	A. Project proponent	A. Safeguards Screening Summary (SSS) <ul style="list-style-type: none"> i. Categorization Rationale ii. Safeguard instruments iii. Submitted as part of sub-project identification package
			B. Selective review of SSS
	<ul style="list-style-type: none"> - Assess Safeguards Screening 	B. WB	
3- Preparation of Safeguards Instruments,	<ul style="list-style-type: none"> - Draft Category B ES instruments 	Sub-project proponent	<ul style="list-style-type: none"> - Draft ES instruments according to national and WB requirements

<p>Consultation and Disclosure</p>	<ul style="list-style-type: none"> - Consult on draft ES instruments - Incorporate feedback in Final ES instruments 		<ul style="list-style-type: none"> - Liaise with WB in case clarifications or changes arise - Include project stakeholders, project- affected groups, local NGOs in consultations - Initiate consultations as early as possible - Provide relevant material in comprehensible, accessible formats - Ensure enough time is provided to examine documents ahead of consultation events - Document stakeholder feedback and ensure disclosure & meaningful consultation - Show how stakeholder feedback was addressed in final ES instrument
<p>4- Review and Clearance of Safeguard Instruments</p>	<ul style="list-style-type: none"> - Review and clearance of ES instruments according to national requirements - Review and clearance of ES instruments according to WB requirements 	<p>Project proponent</p> <p>WB for Category B</p>	<ul style="list-style-type: none"> - Category C sub-projects are not reviewed by WB - Project proponent ensures compliance of Category C projects with national legal requirements
<p>5- Implementation of Agreed Actions and Supervision, Monitoring and Evaluation</p>	<p>A. ES safeguards implementation</p> <p>B. Safeguard implementation supervision</p> <p>C. Monitoring & Evaluation</p>	<p>A. Project proponent</p> <p>B. WB</p> <p>C. Independent Consultants</p>	<p>A. Project proponent contractually obliged to implements ES safeguards</p> <p>B. WB team may conduct regular visits to supervise implementation of safeguards instruments and compliance with the Bank policy requirements.</p> <p>C. Independent consultants carry out monitoring</p>

5.2 Pre-Design Phase

It is understood that all the health care facilities to be refurbished will be located on lands already owned by the Government, and in areas that are unoccupied. However, it is possible that conditions have changed, that new parcels or locations might be better suited for improvements, or that needs may evolve over the course of the project. In addition, the specific details of the health care facilities where improvements and refurbishments will be done are not yet known and will not be known until a survey is performed during the early stages of project implementation. Therefore, it will be necessary to conduct a screening process and verify that the expected works are in line with those envisioned in the ESMF, and that there are no new, unexpected, or significantly adverse environmental and social impacts/risks requiring the preparation of a full-fledge environmental assessment of Category A types of project.

During the pre-design phase, the PIU officer uses his/her training and experience to make a determination bases on the degree of impact likely to be caused by the project due to its size, proximity to a coastal area, marine or terrestrial reserve and the existing topography that may be disturbed. Other environmental and social risks or potential impacts should be kept in mind during the pre-design screening process, such as infringement on lands (whether legally occupied or not), presence of vulnerable persons, existence of hazardous materials or conditions, etc. In the pre-design phase the questions in the screening tools (see Appendix 1) should be reviewed, addressed, and recorded.

As previously stated, it is expected that the sites to be refurbished and small civil works will pass the screening criteria with no problem and will be found suitable for improvements. In such cases the standard mitigation measures would be all that is needed to minimize any risk of negative environmental and social impact.

Alternatively, if works at any site are considered “complex or sensitive” and in need of additional assessment, such as an Environmental Impact Assessment (EIA), in such cases the WBG would be notified and requested to provide a no-objection to the particular works in question, based on a review of the safeguards applicable. The additional mitigation measures resulting from the EIA studies would then be added to the ESMP to create a more comprehensive, customized ESMP for that particular works.

5.3 Design Phase

It is expected that the projects would receive adequate technical review by qualified technical professionals to ensure their technical and environmental soundness. Engineering review for all plan details and designs would be integral in this process.

The design should include adequate wastewater treatment and disposal systems, such as package treatment plants and chlorination, where appropriate for the size, capacity, and services offered at the particular health facilities. The design should also include adequate facilities for

management of solid waste and medical waste, where appropriate for the size, capacity, and services offered at the particular health facilities.

If local permits are required from the Physical Planning Department or other agencies, then these should be processed according to regulations. Any conditions or stipulations resulting from local permits must also be added to the ESMP for the works and becomes an additional compliance requirement.

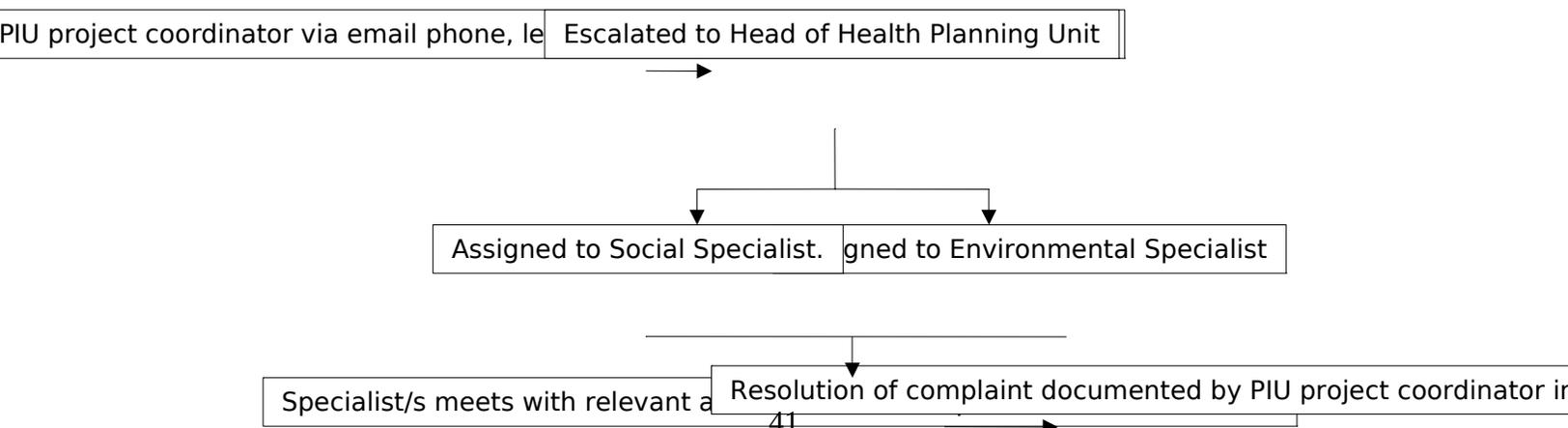
Land acquisition is not anticipated because the health care facility refurbishments will typically occupy the same physical footprint; in addition, the facilities are already located on government (Crown) property. However, adjustments to plans, titling issues, temporary access during rehabilitation or renovation, or other needs may occur that require parcels to be occupied temporarily, purchased, or accessed. In such cases it is necessary to avoid triggering the Involuntary Resettlement Policy (OP/BP 4.12) by the removal of persons or their assets such as crops or structures, or by requiring access or occupation without recourse or recompense. Therefore, any works or activities to be financed as part of this project or at a later stage will be on government lands which are unoccupied and unencumbered by informal settlers or their assets. Demonstration of this ownership will be required as part of the screening and site selection process and is included in the mitigation plan.

Privately owned land or land purchased through willing-seller and willing-buyer is acceptable, provided that the land acquisition must occur by mutual agreement in exchange for a notarized purchase contract based on the market price at the date of acquisition. Any temporary access agreements should be equitable, voluntary, and documented in writing.

5.3.1 Grievance Redress

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to the project-level grievance redress mechanisms (GRM). This is separate from any grievance mechanism or complaints handling of the contractor. A flow chart of the process outlining the process is shown below.

Figure 3: Flowchart Illustrating the Grievance Redress Mechanism



During the pre-design phase of the project the Ministry of Health, Wellness and the Environment (MOHWE) will develop the GRM to register, track, address and resolve any complaints raised by individuals or groups. There are GRM templates in Appendix 3 which can be adapted for this purpose. All complaints or related issues can be sent to the designated email account or given in person or over the telephone, as posted at all work sites, to the attention of the PIU project coordinator. Reported issues should include a name, date and contact information with a detail description of the case, but anonymous complaints can also be received. All reported cases will be logged by the PIU project coordinator and directed to the head of the health planning unit's attention who will be responsible to assign the case to either or both of the environmental or social specialist for investigation.

There will be a normal response time of 7 days for each case, however high level cases may require up to 14 or more days for a response. The PIU Project Coordinator who is responsible for the GRM will direct high level cases to the attention of the Head of Program who will report and forward to the WBG representatives where necessary. The unit managing the GRM will maintain a spreadsheet or other record to log all complaints and to track each from date received to date resolved and highlight how each case was resolved, a template for this is in Appendix 3. These records will be available to WB staff during supervision missions.

The WB's Grievance Redress Service (GRS) is another mechanism whereby people aggrieved by a WB project can contact Bank Management directly. This avenue is available to individual and communities after they have used the project GRM. This mechanism extends to complaints about procurement. The GRS is based in Washington DC and ensures that complaints received are promptly reviewed and an action plan is established to address concerns.

5.4 Implementation Phase

General impacts typical of small civil works have been identified in the preceding section of this ESMF, and the mitigation actions that will be taken have been identified.

Appendix 3 provides the standard mitigation measures in the form of contract clauses so they can be incorporated into the requirements of the contractor who will undertake the civil works. Additional mitigation measures would be derived from any conditions imposed by any statutory agency who reviewed the sub-projects and provided conditions or recommendations. These should also be converted to contract clauses as necessary.

Community engagement during the implementation of works is required in order to minimize social risk and ensure orderly and transparent execution of project activities. Communities also serve an important monitoring function and provide valuable feedback on contractor performance, design, and operation. The MOHWE will be required to provide information to communities on a regular basis throughout the works.

5.5 Operations Phase

The chief environmental risk during the operation of the health facilities relates to the management of medical waste. During operation of the health care facilities, including times of emergency response or epidemics, medical waste will require proper treatment and disposal, as there may be potential negative effects on health care workers and to the public. To minimize these risks, the project will support the development of the national health care waste management plan (TOR in Appendix 4)

At the present time, there is no formalized plan for health care waste management in St. Vincent and the Grenadines, but practices are in place. The Ministry of Health, Wellness and the Environment through the EHD is primary responsible for the monitoring and regulate all aspects of Solid and liquid Waste Management while the SWMU provide the transportation and landfill services.

There is no separation of municipal waste however there are a few small businesses which buy plastic PET bottles and used cardboard.

Before the operation of this new facility (Public Health Laboratory) there shall be the development of a national medical waste plan and strategy. This document shall be the primary legal framework that guilds the management of biomedical waste and other similar waste.

The wastes are expected to be separated at the point of generation as they are placed in separate collection bins. Bins are secured and collected by a medical waste collection system which is taken to the incinerator for treatment and the residue disposed of at the landfill.

6.0 INSTITUTIONAL ARRANGEMENTS

This section of the report describes 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 are carried out.

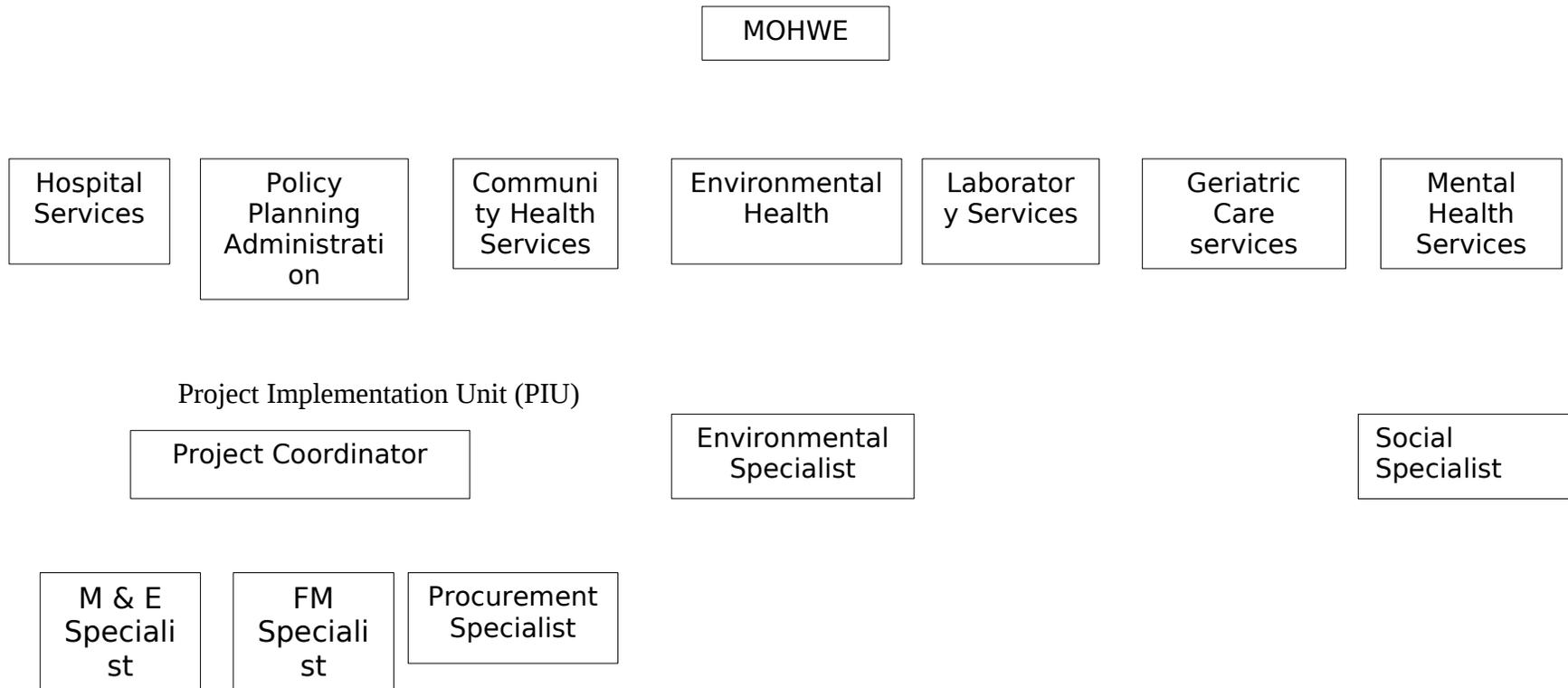
6.1 Project Implementation Unit (PIU)

The Ministry of Health, Wellness and the Environment will have the overall responsibility for implementation of the project with support and guidance from the Central Planning Department, National Authorising Office. The implementation will be conducted within the existing Health Planning Unit (PIU) which will now be referred to as the PIU. The positions of a financial and procurement specialist will be recruited for a period to be decided. There will be support to the PIU from the office of the Chief Environmental Health Officer in relation to Environmental safeguard and the mental health service will do the same for the Social safeguards. The focal points for the social and environmental safeguards are not physically located in the health administrative building with the PIU. . Additionally, there will also be support in the areas of monitoring and evaluation from other departments within the MOHWE. The coordination of all activities will be done via the project coordinator.

The supervision by the PIU and contractors doing any construction will be carried out by the Permanent Secretary, MOHWE.

The figure below provides an overview of the structure that will support and implement the project.

Figure 4: Implementation and Fiduciary Arrangements



6.2 Environmental Performance Clauses for Works Contracts

Standard environmental and social related clauses were developed and are to be appended to or incorporated into the contracts as necessary depending on the type of works to be conducted or the findings of the checklist by the appraising project officer. These form part of the environmental management plan and the mitigation measure presented there. These clauses are general and may be modified to conform to applicable laws and contract procedures and shall remain in force throughout the contract period.

Generic contract clauses are provided in Appendix 3 for the following general conditions for small civil works, roads, buildings, and other works expected to have minor impacts:

- o Permits and Approvals
- o Site Security
- o Discovery of Antiquities
- o Worker Occupational Health and Safety
- o Noise Control
- o Use and Management of Hazardous Materials, fuels, solvents and petroleum products
- o Use and Management of Pesticides
- o Use of Preservatives and Paint Substances
- o Site Stabilization and Erosion Control
- o Traffic Management
- o Management of Standing Water
- o Management of Solid Wastes -trash and debris
- o Management of Liquid Wastes

Additional clauses for the following special conditions are also within Appendix 3:

- o Management of Medical Wastes
- o Management of Asbestos

It is expected that these generic clauses will be incorporated into all contracts, as applicable. In addition, specific project-related recommendations may also be forthcoming from statutory

bodies that are part of the permitting agencies such as and these can be added to contract clauses as well. Finally, if an EIA has been conducted for a particular sub-project due to its environmentally sensitive or complex nature (see section 5.1), then the specific recommendations for mitigation measures in that EIA should also be included as contract clauses.

For purposes of cost estimation and budgeting, the contractors should be aware of the existence of the environmental mitigation measures and associated ESMP requirements, and include cost items for such purposes in their proposals.

6.3 Supervision, Monitoring, and Reporting

6.3.1 Environmental and social monitoring mechanisms

❖ Environmental and social monitoring during construction

During the construction phase, environmental and social monitoring is carried out:

- Internally (internal monitoring) by the companies in charge of the works, through their Quality -Health-Safety -Environment (QHSE) Managers who the contractor will have to recruit;
- Externally (external monitoring) by the Supervising Engineer or Control Mission that the National Project Coordination will recruit, with the obligation to have an Environmental and Social Safeguard Specialist (SSES). Supervision of the work of the Supervising engineer will be carried out by the SSES of the PIU.

❖ Environmental and social follow-up

The follow-up will be carried out internally (internal follow-up) and externally (external follow-up, sovereign control or inspection).

- Internal monitoring will be provided by the SSES, to be appointed by the Project Coordination, to ensure that all environmental and social requirements are considered in the project's implementation and monitoring.
- External monitoring will be carried out by National Environmental Agency (NEA) or its equivalent. The NEA, as third-party monitoring entity, will ensure compliance with not only with the national environmental regulations, but also WBG safeguard measures. A Memorandum of Understanding (MoU) should be established between the PIU and the NEA that sets out the terms, of the mode of intervention, frequency of intervention, and timelines as well as the funding source for NEA involvement in project's follow-up activities.

❖ *Evaluation (audit) at mid-term and project implementation completion*

The evaluation aims to (i) verify whether objectives have been met / achieved and (ii) draw lessons from operations to modify future intervention strategies. The evaluation (or audit) will be done at mid-term and at the end of the project by independent consultants.

❖ *Environmental and social components to follow*

During the works, the monitoring will cover all the identified potential impacts and all related mitigation measures.

Follow-up during the preparation and works phase - During civil works, the regulations in force in the country, and those concerning the environment, must be respected. The implementation of the project will have to be done within the framework of a quality management plan including the respect of the environmental constraints corresponding to the measures presented in the ESMF. The contractors in charge of carrying out the project (or certain project activities) will have to provide and apply the regulation which will establish:

- Measures to preserve natural habitats;
- Forest preservation measures;
- Measures to protect physical cultural resources;
- Safety rules concerning workers;
- The management of solid and liquid waste;
- Awareness and prevention measures (health, hygiene, safety, STD, HIV / AIDS);
- Measures to prevent/address sexual violence based on gender;
- Measures to combat child labour;

❖ *Monitoring indicators*

Indicators are parameters whose use provides quantitative or qualitative information on the environmental and social impacts and benefits of the SRRP.

Strategic indicators to be monitored by the ESSS of the PIU. The following strategic indicators should be followed up, to ensure compliance with the provisions of the framework approach under which the project was processed:

- Number of sub-projects that have been the subject of environmental and social screening (Screening);
- Number of funded subprojects that have been tri-pre-tested and subsequent actions prior to their implementation
- Number of ESIA/ESMPs completed and published;
- Number of funded sub-projects that have been subject to environmental and social monitoring and reporting;
- Number of actors trained / sensitized on environmental and social management;
- Number of sensitization campaigns carried out;
- Number of people sensitized on the environmental and social issues of the project.

❖ **Reporting Requirements**

For a better follow-up of the implementation of the ESMF, the following reporting system is proposed:

- Periodic monthly reports or detailed implementation reports prepared by the environmentalists of the contractor's environmental specialist and submitted to the supervising engineer and the PIU;
- Periodic reports (monthly, quarterly, semi-annual or annual) of implementation monitoring to be produced by the monitoring missions and transmitted to the Project coordination;
- Quarterly and annual implementation monitoring reports to be produced by CEA and forwarded to Project Coordination;
- Quarterly or detailed progress reports on implementation monitoring and follow-ups monitoring, prepared by the PIU and submitted to the Bank

6.3.2 Supervision

World Bank supervision will take place two or three times a year. The project supervision mission will include the environmental and social safeguard specialists on the team. To ensure effective Bank supervision, the project environmental expert will prepare and update for review a detailed E&S compliance report on the implementation of the ESMF before the Bank supervision mission. That report will serve as the basis for safeguard supervision. An appropriate budget for safeguard supervision will be included in the project financial evaluation and reflected in project cost-tabs.

6.4 Health Care Waste Management System (HWMS)

The Environmental Health Division, Ministry of Health, Wellness and Environment will be responsible to ensure implementation of the HWMS through its monitoring and regulatory mandate. However, at the point of waste generation medical personals and other related staff will ensure onsite operation. The EHD at Ministry of Health, Wellness and the Environment may incorporate the HWMS into an ISO-consistent scheme and integrate the management of medical waste into DOHW administrative processes.

7.0 COST OF IMPLEMENTING THE ESMF

Table 4: Estimated costs of technical measures

Activity	Quantity	Unit cost (\$US)	Total cost (\$US)
EIA / RAP development	3 studies	10 000	30 000
Environmental and social guidelines development (ESMS / HSRP)	1 guide		
Development health and safety plan (construction companies)	FF	5000	5 000
Supervision and permanent monitoring (to add in HSRP M&E budget)	During 2 years	20 000	20 000
ESMP Evaluation (mi-term, final)	2	10 000	20 000
TOTAL			75 000

Table 5: Training and awareness measures costs

Actors involved	Topics	Quantity	Unit cost (\$US)	Total cost (\$US)
Training				
CH&SWT HSIU	<ul style="list-style-type: none"> - Training on Environmental and Social Assessment (screening and classification of activities, identification of impacts, mitigation options and indicators) - Drafting ToR for EIA - Selection of mitigation measures in the checklists - Legislation and national environmental procedures - World Bank Safeguard Policies 	5-day workshop	10000	10 000
Control office, companies, operating agents	<ul style="list-style-type: none"> - Impact of sub-projects and mitigation measures - Environmental measures monitoring - health and safety standards monitoring - Safety and hygiene at work and operation 	1 atelier	10000	10 000
Sub TOTAL 20 000				
Awareness				
<ul style="list-style-type: none"> - Population riparian health facilities - Local associations and NGOs - Maker of construction companies - Accompanying patients 	<ul style="list-style-type: none"> - Public awareness and advocacy on projects environmental and social issues, good environmental practices, good conduct in the yards, respect for hygiene and safety, compliance with development standards - Awareness Campaign HIV / AIDS 	withdrawal		50 000
Sub TOTAL 50 000				
TOTAL				70 000

Table 6: Estimates for Environmental and social Aspects

Measures	Actions	Responsible	Costs USD
Institutional	ESMS recruitment	HSRP Secretariat	PM

measures	HSIU Installation	Health facilities	PM
Technical measures	Perform ESMP monitoring and evaluation (continuous monitoring, mid-term and annual assessment). EIAs / RAP development Environmental and social guidelines development Health and safety Plans development Supervision and Monitoring ESMP evaluation(midterm and final)	HSRP Secretariat	75 000
SUB-TOTAL INSTITUTIONAL AND TECHNICAL MEASURES			75 000
Training	Training in projects environmental and social management and monitoring and enforcement of environmental measures	HSRP Secretariat	20 000
Awareness	- Information and awareness campaigns on the nature of work, environmental and social issues - Awareness on HIV / AIDS	HSRP Secretariat	50 000
SUB-TOTAL TRAINING AND AWARENESS			70 000
GENERAL TOTAL			145 000

8.0 PUBLIC CONSULTATION AND DISCLOSURE

8.1 Consultation

During the drafting of this document two (2) consultations were conducted in the form of mass meetings; one with members of the public service and one with the general public. Both meetings were held on May 7th 2019 and the names of all participants along with their questions and concerns were documented (Appendix 5). An email was sent to relevant departments within the ministries of St. Vincent and the Grenadines requesting that a given number of representatives be selected to attend the consultation. For the general public, fliers were printed and distributed around location selected to host the consultation inviting persons to a consultation in relation to the World Bank OECS Regional Health Project.

The turnouts at both consultations were not large but nonetheless, persons were very vocal and freely expressed their opinions and thoughts and even gave recommendations. The public service

consultation had an attendance of fifteen (15) persons while the general public consultation had an attendance of seventeen (17) persons. The public service consultation comprised of a representative from CWSA and SWMU, Physical Planning Unit and persons within the MOHWE such as community nurses, nutrition unit representatives, I.T representatives and pathology lab representative. Attendees of the general public consultation were persons living in the community where the meeting was being held which also is one of the proposed sites to establish the National Public Health Laboratory.

At the consultations a brief presentation was done to give an overview of what the project entailed and the purpose for preparing an ESMF. Persons who are well versed on the project such as Chief Medical Officer (CMO) Dr. Simone Keizer Beache and Head of the Pathology Lab at MCMH, Dr. Elliot Samuel also gave additional insight on the project. Below are two tables illustrating the questions, issues and concerns raised at the public service consultation and general public consultation respectively and the responses given.

8.2. Public Disclosure

This ESMF and all sub-projects specific ESMFs will be disclosed on the MOHWE website for public viewing and on the World Bank Group's website, once prepared, reviewed and approved.

Appendix 1 Environmental & Social Screening Criteria/Checklists

Objectives

1. Determine the WB environmental category for each sub-project and the WB instruments needed (ESIA/ESMP)
2. Identify the category of the sub-project according to national classification and type of National Instruments needed (EIA or scoped EIA).

In order to achieve the above, the screening process follows three stages:

- **Stage 1:** Identify the environmental category of the sub-project according to national classification. This determines the type of National Instruments needed (EIA or scoped EIA) and provides an early indication of the potential ES impacts of the project.
- **Stage 2:** Screen the sub-project against **Criteria/Checklist 1 – High Impact Checklist**. The objective of this Checklist is to identify projects which would have highly significant and sensitive ES impacts (WB OP 4.01 Category A).
- **Stage 3:** Screen the sub-project against **Criteria/Checklist 2– Detailed Impact Assessment Checklist**, to assess the level of significance of potential ES impacts, determine the WB environmental category (B or C), and determine the WB instruments needed (ESMP).

Stage 2: High Impact Checklist (to identify projects with Category A impacts)

If any of the answers to the questions below is **Yes**, then the sub-project would be classified as WB Category A and would require a full-fledged ESIA. **Therefore, they will not be eligible for investment, since the project has been rated Category B.**

Sub-project title:	
Sub-project brief description:	
Question	Answer (Yes/No)
Will the project:	
1. Cause sensitive (direct and or cumulative) impacts? Examples of Sensitive impacts are those, which may be irreversible, or those which raise issues related to natural habitats and or physical and cultural resources.	
2. Cause diverse (direct and or cumulative) impacts? Diverse impacts are those impacting different media (air quality, water quality, noise level, risk to the community) at the same time.	
3. Cause unprecedented impacts? Unprecedented impacts are those, which have not been experienced before in the project's area of influence (i.e. those which occur for the first time in the area)	
4. Have an area of influence that significantly exceeds its footprint?	

Stage 3: Detailed Impact Assessment Checklist

For Eligible projects, apply the checklist below:

- If the answer is YES to any of the questions, then the project should be classified as Category B according to WB OP 4.01.
- If the answer is "No" to all questions, then the project should be classified as Category C according to WB OP 4.01.

Question		Answer (Yes/No)	Other categories affected
Water (quality and resources)			
W1	Is the sub-project adjacent to waterways?		
W2	Will the sub-project generate solid waste?		
W3	Will the sub-project generate liquid waste?		
W4	Will the sub-project generate demolition waste?		
W5	Will the sub-project generate hazardous waste (grease, oil, empty paint containers, etc.)?		
W6	Will the sub-project consume an amount of potable water higher than 3m³/site/day		
Question		Answer (Yes/No)	Other categories affected

W7	Will the project cause interruption to water flows?		
Air (Quality and Noise level)			
A1	Will the sub-project use of chemicals, agrochemicals, corrosives, and solvents?		
A2	Will the sub-project use machinery?		
A3	Will the sub-project involve refurbishment works (marble, concrete, ceramics, wood, etc.)?		
A4	Will the sub-project activities generate volatile Organic Compounds VOCs (paints, asphalt heating, preparation and application, etc.)?		
A5	Will the sub-project involve major and/or minor demolition works?		
A6	Will the sub-project involve Asbestos management?		
A7	Will the sub-project involve the installation of air conditioning units/systems?		
A8	Will the sub-project involve waste burning?		
A9	Will the sub-project involve Generation of odors?		
Soil (quality and erosion)			
S1	Will the sub-project cause soil erosion?		
S2	Will the sub-project cause topsoil loss?		
S3	Will the sub-project involve soil compaction?		
S4	Will the sub-project involve concrete foundations/impervious layers?		
S5	Will the sub-project involve equipment on-site fueling? and storage?		
Social impacts and community health & safety			
CH S1	Will the sub-project involve temporary labor influx (more than 20 workers)?		
CH S2	Will the sub-project cause traffic impacts and accessibility issues?		
CH S3	Could the sub-project cause utility damage?		
CH S4	Will the sub-project affect physical integrity of weak structures/houses adjacent to construction sites?		

	Occupational Health & Safety		

Question		Answer (Yes/No)	Other categories affected
OHS1	Will the sub-project involve potential physical hazards?		
OHS2	Will the sub-project involve fire hazards?		
OHS3	Will the sub-project involve slippage, falling & working at heights?		
OHS4	Will the sub-project involve manual handling and lifting?		
OHS5	Will the sub-project involve electrocution?		
OHS6	Will the sub-project involve excavation works?		
Biodiversity			
BIO 1	Will the sub-project involve works in rivers, canals, or drains?		
BIO 2	Will the sub-project involve land disturbance or site clearance?		
Physical Cultural Resources			
CR1	Is the sub-project located near a recognized PCR conservation area or heritage site?		
CR2	Does the sub-project involve significant excavations and/or movement of earth?		

Appendix 2 Sample Monitoring Checklist

Sample Monitoring Checklist to be used by the Contractor and the Supervising Engineering Consultant (SEC) during construction phase is included below.

Table 7: Sample Monitoring Checklist

		Checklist response - Week- Month/Year								
Activities	Monitoring requirements /Inspection items	Frequency* (Contractor/SEC)	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Evidence required
1	Screening, safeguarding, Approval and disclosure process	<ul style="list-style-type: none"> Number of sub-projects that have been screened and categorized Number of sub-projects requiring and ESMPs Number of sub-projects needing simple measures Number of ESMPs prepared Number of ESMPs implemented Number of sub-projects implemented needing correctives actions/mitigation measures 	During implementation							Review, approval, as needed, disclosure documents. Reporting
2	Demolition and/or excavation waste	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>Upon collection/weekly</p> <p>Upon disposal/weekly</p>	Full	Full	Full	Full	Full	Full	Full	<p>Three weekly Photos of different dates</p> <p>Three weekly Photos of different dates</p> <p>Record of collection receipt Record of disposal</p>
	<p>Please indicate the status of the waste container(s), whether they are full, half full, or empty. Please provide photo evidence of the site.</p> <p>Please rate the cleanness of the site from 1 to 3 (1 indicates no accumulation and 3 indicates " random accumulation across many areas of the site". Please provide photo evidence of the site.</p> <p>Did you obtain a proof for the waste collection? Please keep receipt as record</p>		1	1	1	1	1	1	1	X

		Is waste disposal proof checked and copy archived? Please keep receipt as record									receipt
3	Hazardous waste and materials management	<p>Please indicate the status of the waste container(s), whether r they are full, half full, or empty. Please provide photo evidence of the site. Are there any uncontained or improperly disposed hazardous wastes? Please provide photo evidence of the site.</p> <p>Please rate the cleanness and organization of hazardous us chemicals' storage and containers of the site from 1 to 3 (1 indicates "Clean, organized and no accumulation" and 3 indicates "random accumulation across many areas of the site". Please provide photo evidence.</p> <p>Did you obtain a proof for the waste collection? Please keep receipt as record</p> <p>Is waste disposal proof checked and copy archived? Please keep receipt as record</p>	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Upon collection/weekly</p> <p>Upon disposal/weekly</p>	Full	<p>Three weekly Photos of different dates</p> <p>Three weekly Photos of different dates</p> <p>Three weekly Photos of different dates</p> <p>Record of collection receipt</p> <p>Record of disposal receipt</p>						
4	Noise	<p>Does the work schedule comprise of machinery/equipment associated with high noise emissions (more than 70 dBA at source)? Please indicate number of noise complaints received - Please update the Complaints Register/ Record with the new complaints received Is PPE made available?</p> <p>Is PPE used? Please provide photo.</p>	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p>	-	-	-	-	-	-	-	<p>Record of complaints</p> <p>Three weekly Photos of different dates</p>
5	Dust	<p>Does the work schedule comprise of machinery/equipment associated with high dust emissions?</p> <p>Please indicate number of dust complaints received- Please update the Complaints Register/ Record with the new complaints received Are dust wetting procedures are being applied? Please provide de photo evidence of the site.</p> <p>Is PPE made available?</p> <p>Is PPE used during dusty conditions? Please provide photo evidence of the site.</p>	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p>	X	X	X	X	X	X	X	<p>Record of complaints</p> <p>Three weekly Photos of different dates</p> <p>Three weekly Photos of different dates</p>
		Is the type of paint purchased from a	monthly/monthly	-	-	-	-	-	-	-	Record of

6	Paints	<p>reputable/known brand? Please keep receipt as record What is the amount of Paint purchased? Please keep receipt as record</p> <p>Do the types of paint purchased contain harmful chemicals (such as)? Please keep MSDS as a record</p> <p>Is PPE made available?</p> <p>Is PPE used during paint works? Please provide photo evidence of the site.</p>	<p>monthly/monthly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p>	-	-	-	-	-	-	-	-	<p>purchase receipt</p> <p>Record of purchase receipt</p> <p>Record of MSDS</p> <p>Three weekly Photos of different dates</p>
7	Asbestos	<p>is Asbestos waste being contained according to the Asbestos management plan? Please provide photo evidence of the site. Is PPE made available?</p> <p>Is PPE used during Asbestos exposure? Please provide photo evidence of the site.</p> <p>Did you obtain a proof of for the waste collection? Please keep receipt as record</p> <p>Is waste disposal proof checked and copy archived? Please keep receipt as record</p>	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>Daily/weekly</p> <p>Upon collection/weekly</p> <p>Upon disposal/weekly</p>	X	X	X	X	X	X	X	X	<p>Three weekly Photos of different dates</p> <p>Three weekly Photos of different dates</p> <p>Record of collection receipt</p> <p>Record of disposal receipt</p>
8	Physical hazards from demolition waste, equipment and vehicles	<p>Please indicate the number of injuries/incidents - Please update the Incident Log</p> <p>Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received Driver and operator testing report checked? Please keep a copy of the testing reports</p> <p>Driver and operator training report checked? Please keep a copy of the training reports</p> <p>Have you reviewed and confirmed exclusion zones? Copy of the site layout indicating all exclusion zones</p>	<p>Daily/weekly</p> <p>Daily/weekly</p> <p>monthly/monthly</p> <p>monthly/monthly</p> <p>Daily/weekly</p>									<p>Incident Log</p> <p>Complaints Register</p> <p>Copy of the testing report</p> <p>Copy of the training reports</p> <p>Site layout with all exclusion zones</p>
9	Fire hazards	<p>Are the fire extinguishing instruments checked? Please complete relevant log</p> <p>Have you checked flammable material containers & storage? Please provide photo evidence Please indicate number of injuries & incidents - Please update the Incident Log</p>	<p>weekly/ weekly</p> <p>weekly/weekly</p> <p>Daily/weekly</p>									
	Other occupational	<p>Is the approved occupational health and safety plan being applied?</p> <p>Please indicate number of accidents and near-misses. Please keep an updated log</p>	<p>Daily/weekly</p> <p>Daily/weekly</p>	X	X	X	X	X	X	X	X	<p>EHS approved plan and monitoring checklist</p> <p>Accident Log</p>

10	health & safety (Slippage and Falling - Working at heights - manual handling & lifting - electrocution - Exposure to biological hazards)													
11	Worker influx	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly										Complaints register	
12	Traffic & accessibility	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly										Complaints register	
13	waste burning	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	weekly Daily/weekly	X					X		X		Photo evidence Complaints register	
14	Equipment on-site fueling	Have you checked the integrity of the impervious layer for the onsite fueling activities? Please provide photo evidence of the site	weekly Daily/weekly										Photo evidence	
15	Utility damage	Please indicate the number of complaints received/ incidents - Please update the Complaints Register with the new complaints received	Daily/weekly										Complaints register	
16	Chance finds ESMF – Transfer	Have you prohibited the use of equipment associated with high vibration close to the chance-find site? Please provide a copy of the procedure	Daily/weekly										Copy of the procedure	
		Have you reviewed permitting procedures? Please provide a copy of the permits	Daily/weekly											Copy of the permits
		Has a guard been assigned to secure the chance find area? Please provide a photo evidence of the site	Daily/weekly											Photo evidence

Appendix 3 Contract Clauses for Small Civil Works

The following are standard environmental and social related clauses that should be appended to or incorporated into the contracts for the small civil works. These mitigation measures are the core of a generic, standardized ESMP (Environmental and Social Management Plan) for these types of small works and the typical associated minor impacts which can be routinely addressed with Best Management Practice (BMPs). These clauses are general and may be modified to conform to applicable country specific laws, regulations and contract procedures for such works. These are the mitigation measures which are expected of all professional contractors who are performing civil works, and represent the minimum standard of execution for environmental protection during the execution of such works. (Additional, specific requirements or recommendations may also be forthcoming from statutory permitting agencies or the Ministry of Health, and these can be included as contract clauses as well; and, if an EIA has been conducted for a particular activity due to its environmentally sensitive or complex nature, then the specific recommendations for mitigation measures in that EIA should also be included as contractual requirements).

1. Permits and Approvals

The contractor shall be responsible for ensuring that he or she has all relevant legal approvals and permits required to commence works.

2. Site Security

The contractor shall be responsible for maintaining security over the work site including the protection of stored materials and equipment. In the event of severe weather, the contractor shall secure the work site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of stored materials, sanitary wastes, additional strengthening of erosion control and soil stabilization systems and other conditions resulting from contractor activities which may increase the potential for damage.

3. Discovery of Antiquities

If, during the execution of the activities contained in this contract, any material is discovered onsite which may be considered of historical or cultural interest, such as evidence of prior settlements, native or historical activities, evidence of any existence on a site which may be of cultural significance, all work shall stop and the supervising contracting officer shall be notified immediately. The area in which the material was discovered shall be secured, cordoned off, marked, and the evidence preserved for examination by the local archaeological or cultural

authority (National Trust). No item believed to be an artifact must be removed or disturbed by any of the workers. Work may resume, without penalty of prejudice to the contractor upon permission from the contracting officer with any restrictions offered to protect the site. All staff shall be informed of this procedure.

4. Worker Occupational Health and Safety

The contractor shall ensure that all workers operate within a safe environment. Sanitation facilities shall be provided for all site workers. All sanitary wastes generated as a result of project activities shall be managed in a manner approved by the contracting officer and the local authority responsible for public health. The contractor shall ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. Workers must be provided with the necessary protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. The contractor shall provide the contracting officer with an occupational health and safety plan for approval by the local health authority prior to the commencement of site activities.

The contractor must ensure that all workers operate within a safe environment. All relevant Labour and Occupational Health and Safety regulations must be adhered to ensure worker safety. Sanitary facilities must be provided for all workers on site. Appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.

5. Noise Control

The contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair. Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 8 am and 5 pm). Where noise is likely to pose a risk to the surrounding community either by normal works or working outside of normal working hours or on weekends, the contractor shall inform the contracting officer and shall develop a public notification and noise management plan for approval by the contracting officer.

Specific elements of the noise control activities by the contractor shall include: work activities will occur within specified daylight hours e.g. 8:00 am to 4:00pm; community / public to be informed in advance of any work activities to occur outside of normal working hours or on weekends; 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; there will be no excessive idling of vehicles at sites; noise suppression equipment or systems supplied by manufacture will be utilized; ensure all vehicles and equipment are properly serviced; the contractor must develop and implement a public notification and noise management plan.

6. Use and Management of Hazardous Materials, fuels, solvents and petroleum products

The use of any hazardous materials including pesticides, oils, fuels and petroleum products shall conform to the proper use recommendations of the product. Waste hazardous materials and their containers shall be disposed of in a manner approved by the contracting officer. A site management plan will be developed by the contractor if the operation involves the use of these materials to include estimated quantities to be consumed in the process, storage plans, spill control plans, and waste disposal practices to be followed. This plan and the manner of management are subject to the approval of local authority responsible for safety, and waste management, and the contracting officer.

Elements of the hazardous materials management shall include: contractor must provide temporary storage on site of 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 an leak-proof container to prevent spillage and leaching; the wastes shall be transported by specially licensed carriers and disposed in a licensed facility; paints with toxic ingredients or solvents or lead-based paints will not be used; banned chemicals will not be used on any project.

7. Use and Management of Chemicals/Pesticides

The project will be using chemicals/pesticides to control weeds, termites and any other pests where and when necessary. Thus, varying types and proportions of chemicals/pesticides will be used dependent on the pest that is to be controlled or treated. The importation, storage and use of pesticides shall comply with the regulations and standards set out by the Pesticides Control Act Cap 64 of 1991.

The application of pesticides shall be approved by the contracting officer and shall conform to the manufacturers' recommendations for use and application. Any person using pesticides shall demonstrate that they have read and understood these requirements and are capable of complying with the usage recommendations to the satisfaction of the contracting officer. All pesticides to be used shall conform to the list of acceptable pesticides that are not banned by the relevant local authority. The contractor will be asked to provide an adequate pesticide management plan.

Where termite treatment is performed it will be done only by licensed and registered pest control professionals with training and knowledge of proper application methods and techniques. All containers or residue resulting from the application of chemicals/pesticides shall be disposed of according to the standards of the Environmental Services Act.

8. Use of Preservatives and Paint Substances

All paints and preservatives shall only be used with the approval of the contracting officer. Information shall be provided to the contracting officer who describes the essential components of the materials to be used so that an informed determination can be made as to the potential for environmental effects and suitability can be made. Storage, use, and disposal of excess paints and preservatives shall be managed in conformance with the manufacturers' recommendations and as approved by the contracting officer. The contractor shall provide the contracting officer with a list of materials and estimated quantities to be used, storage, spill control and waste disposal plans to be observed during the execution of the contract. This plan is subject to the approval of the contracting officer.

9. Site Stabilization and Erosion Control

If the site work plans to do excavations the contractor shall implement measures at the site of operations to manage soil erosion through minimization of excavated area and time of exposure of excavated areas, preservation of existing ground cover to the extent possible, provision of approved ground cover. Where excavations are made, contractor shall implement appropriate stabilizing techniques to prevent cave-in or landslide. Measures shall be approved by the contracting officer and the appropriate permitting agency where required.

The contractor must ensure that appropriate erosion control measures such as silt fences are installed. Proper site drainage must be implemented. Any drain clogged by material or sediment must be unclogged as soon as possible to prevent overflow and flooding. The use of retaining structures and planting with deep rooted grasses to retain soil during and after works must be considered. The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. Keep angle of slopes within limits of soil type. Balance cut and fills to limit steepness of slopes. All slopes and excavated areas must be monitored for movement.

All 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.

If works are along coastal marine areas or near major streams and river, water quality monitoring must be done before works begin, and at regular intervals to determine turbidity levels and other quality parameters. Vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.

10. Air Quality

The following conditions apply to work sites for the control of air quality including dust control:

Materials such as sand, cement, or other fines should be kept properly covered.

Cement should be kept stored within a shed or container.

The sand and fines can be moistened with sprays of water.

Unpaved, dusty roads should be compacted and then wet periodically.

During interior demolition debris-chutes shall be used above the first floor.

Demolition debris shall be kept in a 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.

The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust.

There will be no open burning of debris / waste material at the site.

There will be no excessive idling of vehicles at work sites.

The bins of all haulage vehicles transporting aggregate or building materials must be covered on all public roads.

11. Traffic Management

In the event that refurbishment activities should result in the disruption of area transportation services, including temporary loss of roadways, blockages due to deliveries and site related activities, the contractor shall provide the contracting officer with a traffic management plan including a description of the anticipated service disruptions, community information plan, and traffic control strategy to be implemented so as to minimize the impact to the surrounding community. This plan shall consider time of day for planned disruptions, and shall include consideration for alternative access routes, access to essential services such as medical, disaster evacuation, and other critical services. The plan shall be approved by relevant local authority and the contracting officer.

Elements of the traffic management plan to be developed and implemented by contractor shall include: alternative routes to be identified in the instance of extended road works or road blockages; the public to be notified of all disturbance to their normal routes; signposting, warning signs, barriers and traffic diversions must be clearly visible and the public warned of all potential hazards; provision must be made for the safe passages and crossings for all pedestrians where work-related traffic interferes with their normal route; there must be active traffic management by trained and visible staff at the site or along roadways as required to ensure safe

and convenient passage for the vehicular and pedestrian public; Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.

12. Management of Standing Water

Under no circumstances shall the contractor permit the collection of standing water as a consequence of contractor activities without the approval of the contracting officer and consultation with the relevant local environmental health authority. Recommendations from that local authority on how to manage and treat the standing water must be implemented. The condition of the standing water must be monitored by the contractor to ensure that it does not present itself as a breeding ground for any pests such as mosquitoes.

13. Management of Solid Wastes -trash and debris

The contractor shall provide the contracting officer with a solid waste management plan as part of a site waste management plan that conforms to the solid waste management policies and regulations of the relevant SVG authority. Under no circumstances shall the contractor allow wastes to accumulate so as to cause a nuisance or health risk due to the propagation of pests and disease vectors. The site waste management plan shall include a description of how wastes will be stored, collected and disposed of in accordance with current law. Additionally, the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal.

14. Management of Liquid Wastes

The contractor shall provide the contracting officer with a liquid waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant authority of SVG. Under no circumstances shall the contractor allow liquid wastes to accumulate 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 content. The site waste management plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. Additionally the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal.

Specific elements of the contractor's liquid waste management plan shall include: contractor to abide by all pertinent waste management and public health laws; waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and refurbishment activities; debris and demolition wastes will be stored in appropriate bins; liquid and chemical wastes will be stored in appropriate containers separated from the general refuse; 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; whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos); liquid wastes must not be allowed to accumulate 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.

15. Special Condition - Management of Medical Wastes during refurbishment works

In the event that the contractor discovers medical wastes, the contractor shall provide the contracting officer with a medical waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant authorities. The plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. The contractor must ensure that all persons handling medical wastes are provided with proper protective clothing. All medical wastes must be secured in specially labelled and sealed containers, and disposed of according to relevant local legislation at specified disposal sites. Medical wastes must be kept separate from the other waste streams on site.

The waste management plan provided by the contractor must ensure that all persons handling medical wastes are provided with proper protective clothing. All medical wastes must be treated as hazardous. All medical wastes must be secured in specially labelled and sealed containers separate from other wastes streams. All medical wastes must be disposed of according to relevant local legislation at specified disposal sites.

16. Special Condition - Management of Asbestos during refurbishment works

In the event that during the course of work activities the contractor discovers asbestos as part of the existing site that requires stabilization and removal, the contractor shall contact the relevant local authorities and the contracting officer immediately. 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 and the contracting officer describing how this material will be stored, collected and disposed of in accordance with current law, and identifying the approved experienced professional who will undertake this work. The plan must include:

Description of the issue and extent of contamination

Site safety measures

Stabilization techniques to be employed

Storage and transport plan

Approved disposal procedure

Worker awareness and training

In preparing the plan, the contractor should liaise with the relevant local health and waste management agencies to ensure that the adequacy of the measurements being proposed.

Site management shall consist of enclosing relevant sections of the site with appropriate material by the contractor. Where possible the asbestos and its location must be appropriately contained and sealed to minimize exposure, and any asbestos shall be marked clearly as a hazardous material. Stabilizing friable asbestos will be done prior to removal (if removal is necessary) and it will be treated with a wetting agent to minimize asbestos dust. Asbestos will be handled and disposed by skilled & experienced professionals using appropriate PPE (personal protective equipment) such as respirators and tyvec suits which will be provisioned to workers to protect them and prevent contamination with asbestos fibres. Respiratory protection together with measures to prevent the contamination of clothing and inadvertent transport of asbestos fiber off-site shall be provided to all exposed workers. If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures must be implemented against unauthorized removal of asbestos from the site. No removed asbestos will be reused.

17. Workers' Code of Conduct

The objective of the Worker's Code of Conduct (hereinafter, the Code) is to avoid or minimize as much as possible, any negative impact that could be produced because of interrelations between the workers inside the local areas of influence and the outskirts of the Project Area. The Contractor shall implement a Workers' Code of Conduct consistent with the guidelines included herein to assist all employees to:

- Understand expected standards of conduct and behaviour;
- Comply with relevant laws and policies;
- Demonstrate and promote good ethical work practice;
- Respect colleagues, supervisors and community members.

Contractors shall ensure that each worker receives a written copy of the Code as part of the induction process and as part of the Contract. As a requirement to be hired, all workers must sign a copy of the Code, where they acknowledge it and certify they have read it and accepted its terms, promising to comply with its terms thoroughly and at all times. Additionally, copies of the Code shall be made available at a visible location at the project site.

Under the Workers' Code of Conduct all workers shall:

- o Consider people equally without prejudice or favor;
- o Act professionally with honesty, consistency and impartiality;
- o Take responsibility for situations, showing leadership and courage; and

- o Place the public interest over personal interest.
- o Observe standards for safety.
- o Be fiscally responsible and focus on efficient, effective and prudent use of resources.

The workers are obliged to comply with the rules and procedures indicated in the Code, so as to maintain good relations with the local community in the direct area of influence of the Project. Any worker may be subject to disciplinary actions and/or may be fired if their behaviour while he/she is employed on the project goes against the rules stated in the Code. However, workers shall have access to the Grievance Redress Mechanism (GRM) for the Project (see section 19).

Under the Workers' Code of Conduct, as a minimum, worker shall comply with the following rules:

Rules Regarding the Local Population

- The local population is defined as all people that live within the direct area of influence of the Project, or in the areas used for the transportation of equipment and materials required for the activities of the Project.
- All workers are expected to behave adequately at all times and must avoid improper relations with the local population. The Contractor will not tolerate any form of harassment or discrimination, including behaviour, comment, jokes, slurs, email messages or any other social media, pictures, photographs, or other conduct that contributes to an intimidating, disrespectful or offensive environment.
- All workers shall avoid any discriminatory conduct based on gender, age, disability, race, language, culture, political affiliations, philosophy, religion, or any other basis.
- All workers must comply, at all times, with all applicable environmental and health and safety rules and regulations.
- Should the worker fail to comply with the Code or behave in such a way that he/she creates a problem with the local population, the corresponding action must be communicated to the Contractor, detailing what happened, so that the Company can carry out an investigation.

Rules regarding the Construction

- All workers are required to show at all times a transparent and honest behaviour, and a high level of personal responsibility and professionalism, either in or out of the Project Area.
- All workers shall comply with all applicable laws, rules and regulations.

- Workers shall immediately inform management about any kind of sickness or symptom that may affect their ability to carry out their work-related obligations properly.
- Workers shall use adequate personal protection equipment during their activities within the Project Area, including Project Vehicles.
- Workers are not allowed to smoke or make an open fire within or in the surroundings of the Project Area or near any Project Property, including Project Vehicles.
- Workers are not allowed to engage in gambling while at work and using company assets for gambling are prohibited, including during breaks. For purposes of this standard, “gambling” is defined as playing a game for money or property or betting on an uncertain outcome. Prohibited gambling activities include, but are not limited to: Games (e.g., cards, dice, and dominoes) played for money or property, including electronic games (online poker, roulette, etc.); betting on sporting events, bingo, etc.
- Workers are forbidden to possess, use or carry any kind of illegal drugs, medical paraphernalia, narcotics or alcoholic beverages within the Project Area or any Project property, including Project Vehicles.
- Workers are not allowed to possess or carry weapons, such as firearms, explosives, ammunitions, knives, clubs, etc., within the Project Area or any Project Property, including Project Vehicles.
- All workers shall not receive or hand over money, goods or other objects of value in order to obtain benefits, receive favours or influence decisions, third parties, or themselves.
- Workers shall not use Project funds or equipment, or other articles provided for the Project for their personal benefit or any other unauthorized use.
- Pets are not allowed in the Project Area.
- Fishing, hunting and deforestation are also forbidden within the Project Area and its immediate surroundings.
- For security reasons, workers may not abandon the Project Area without permission.

18. Grievance Mechanism

The arrangements for a grievance redress mechanism (GRM) is included in this Generic ESMP with the objective to formalize the management of grievances at the Contractor’s level, to minimize the social risks to the Project and to resolve issues as they arise. The grievance process outlined here provides an avenue for individuals to voice their concerns and gives transparency on how grievances will be managed internally, which aims to reduce conflict and strengthen relationships between the contractor and external stakeholders.

The Contractor’s team shall meet and discuss, inter alia, grievance and resolutions. The Contractor shall designate a Responsible Person (usually the Environmental, Health and Safety Officer) to implement the GRM and ensure that all grievances are properly and timely recorded, evaluated, and responded to within a reasonable timeframe that is communicated to the complainant. Records of all complains shall be kept for future references and lessons learned.

The grievance redress mechanism procedure described herein shall apply to all employee and external stakeholders during the construction activities. However, at the Project level, a GRM will be available for the life of the Project, including the operational phase of the facilities.

Term	Definition
Grievance	An issue, concern, problem, or claim (perceived or actual) that an individual or community group wants addressed by the company in a formal manner.
Grievance Mechanism	A formalized way to accept, assess, and resolve community complaints concerning the performance or behaviour of the company, its contractors, or employees. This includes adverse economic, environmental and social impacts.
Internal Stakeholders	Groups or individuals who work directly within project, such as employees and sub-contractors.
External Stakeholders	Groups or individuals outside the project who are not directly employed or contracted but are affected in some way from the decisions of the project, such as customers, suppliers, community, NGOs and the government.

GRIEVANCE REPORTING CHANNELS

The Contractor shall communicate this procedure to its workers and external stakeholders to raise awareness and offer transparency of how stakeholders can voice their grievances. Various channels for external stakeholders to vocalize their grievances formally include:

By Phone

By telephone to Personnel	Telephone Number
On site health and safety officer	(Include #)
EHSS Personnel	(Include #)

Project Manager/Site Manager (Include #)

Face to face

Stakeholders can voice their grievance to the Onsite health and safety Officer, or any supervisory employee who will then escalate using the correct process.

By E-mail

By E-mail to Personnel	Telephone Number
On site health and safety officer	(Include email)

EHSS Personnel (Include email)

Project Manager/Site Manager (Include email)

Grievance shall also be accepted if provided in written, by mail, to the Project/Site Manager and if received during stakeholder consultation meetings or other community interactions.

The Grievance Mechanism Process

Receive Grievance

In Person/ over the phone/by email or in public meetings/stakeholder engagement events

If a grievance is received face to face or over the phone/e-mail and the stakeholder wishes to address the grievance formally, it is the responsibility of the employee who receives the grievance to complete a Grievance Lodgement Form (see example below). Once the form is completed the employee will then pass the form on to the EHSS Personnel for processing.

Evaluate and Investigate

All formal grievances will be logged in the External Grievance Register (see example below) and Grievance Lodgement Forms will be saved in Contractor's database for record of correspondence.

Screen³

Category	Description	Grievance Owner
Level 1	When an answer can be provided immediately and/or Contractor is already working on a resolution	Onsite health and Safety Officer
	One off event	

³ The onsite health and safety officer is responsible for liaising on with the external stakeholder/s and work on a resolution. Grievances will be screened depending the level of severity in order to determine how the grievance is approached and addressed. See table categorizing the different levels

Level 2	Complaint is repeated	Supervisor level or above
Level 3	Any complaint (one off or repeated) that indicates breach of law or applicable policy/regulation	Executive level Construction Manager/ EHSS Personnel/ EHSS Specialist
	High-profile grievances that if not resolved promptly may represent significant risks to the environment or community.	

Acknowledge

A grievance will be acknowledged, by the grievance owner, within two working days of a grievance being submitted. Communication will be made either verbally or in written form (stakeholders will outline their preferred method of contact on the Grievance Lodgement Form (see example below in Table 1). The acknowledgement of a grievance will include a summary of the grievance, method that will be taken to resolve the grievance and an estimated timeframe in which the grievance will be resolved. If required, the acknowledgment provides an opportunity to ask for any additional information or to clarify any issues.

Investigate

The grievance owner is responsible for investigating the grievance. The investigation may require the grievance owner to make site visits, consult employees, contact external stakeholders and complete other activities. Records of meetings, discussions and activities will all be recorded during the investigation. Information gathered during the investigation will be analyzed and will assist in determining how the grievance is handled and what steps need to be taken in order to resolve the grievance.

Act

Following the investigation, the grievance owner will use the findings to create an action plan outlining steps to be taken in order to resolve the grievance. The grievance owner is responsible for assigning actions, monitoring actions undertaken and making sure deadlines are adhered to. Once all actions have been completed and the grievance owner feels the grievance has been resolved, they will then formally advise the external stakeholder via their preferred method of contact.

Follow up and close out

The grievance owner will make contact with the external stakeholder/s three weeks after the grievance is resolved. When contacting the external stakeholder, the grievance owner will verify that the outcome was satisfied and also gather any feedback on the grievance process. Minutes of the meeting will be recorded and saved in database. Table 2 provides an example of a Grievance Register format. If required, the grievance owner may need to follow up with the external stakeholder on numerous occasions to confirm all parties are satisfied.

Appeal

If the external stakeholder is unhappy with the resolution and/or does not agree with the proposed actions, then the grievance owner needs to escalate the matter to the executive management team. The executive team will review the grievance and all documentation gathered throughout the investigation and determines whether further actions are required to resolve the grievance. The Contractor is fully committed to resolving an internal/external stakeholder’s grievance so if we are unable to resolve a complaint or a stakeholder is unhappy with the outcome, the Contractor may seek advice from other independent parties.

Reporting

Information outlining the number of grievances, time to resolution and outcomes of grievances will be communicated in Contractor’s monthly reports. The GRM may be evaluated and updated when required, to continually improve its stakeholder engagement.

Storing of grievances: All records, including grievance forms, investigation notes, interviews and minutes of meetings will be securely filed in the Contractor’s database to ensure privacy and confidentiality is maintained for all parties involved.

Table 3 below presents an example of a Grievance Redress Mechanism checklist to assist in the development of a Contractor-level GRM.

EXAMPLE OF GRIEVANCE LODGMENT FORM

Name: _____ Address: _____
 Company (if applicable): _____
 Date: _____ Time: _____
 Preferred Contact Method: Telephone Email

Please provide contact details: _____

Supporting documents attached? Yes No

How often have you experience this issue? Once 2-5 times all the time N/A

Please provide details of your grievance
 (Problem/Complaint)

What outcome are you seeking?

Additional Information

Claimant Signature: Date:

Contractor' Representative Signature: Date:

Office Use only Received By:
Stakeholder
Reference:
 Forwarded to Env. Officer On
 (Date): _____

TABLE 8: EXAMPLE OF GRIEVANCE

Nature of Incident/ Complaint/Corresp ondence	Stakeholder	Date Received	Grievance Owner/ Received by	Level (1, 2, 3)	Grievance Description and Cause	Outcome

TABLE 9: EXAMPLE OF A GRM CHECKLIST

Process	Description	Time frame	Responsibility & Remarks
Establish composition of Complaint Committee members & procedures	Set up Complaint Committee (CC); Publish article in newspaper and provide notice the on-work site before the start date of works and provide contact information for complainants receiving.	2 weeks before start of civil works	Complaint Committee comprises of Facilities Manager, Contractor's Project Manager, others (as applicable)
Reception of grievance	Complaints can be filed face to face, via phone, via letter, or via e-mail, or recorded during public/community interaction	Day of receipt	Email: add Phone: add Postal address: add
Grievance assessed and logged	Significance assessed, and grievance recorded or logged (i.e. in a log book)	4-7 days upon receipt	Significance criteria Level 1 - one off event; Level 2 - complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or applicable policy/regulation
Grievance is acknowledged	Acknowledgement of grievance to complainant	4 - 7 Days upon receipt complaint	CC Secretariat confirms receipt of the complaint to the complainant via e-mail or letter
Development of response	Grievance assigned to appropriate party for resolution Proposal response with input from management	4 - 7 Days upon receipt complaint 10 - 14 Days upon receipt complaint	CC
Response signed off	Redress action approved at appropriate levels	4-18 days upon receipt of complaint	CC; for level 2 and 3 complaints also, Contractor

			Management /PIU
Implementation and communication of response	Redress action implemented and update of progress on resolution communicated to complainant Redress action recorded in grievance log book	18-24 days upon receipt of complaint	Contractor/PIU
Complaints Response	Obtain confirmation complainant that grievance can be closed or determine what follow up is necessary	24-30 days upon receipt of complaint	CC
Close Grievance	Record final sign off grievance If grievance cannot be closed, obtain expert advice third party, refer to mediation or ultimately court of law (as applicable)	30 – 34 days upon receipt of complaint	Final sign off by CC and for level 2 and 3 complaints, Contractor Management/PIU

Appendix 4 TOR for Consulting Services to develop a Health Care Waste Management System (HWMS)

1. Program Background

The Government of St. Vincent and the Grenadines with the assistance of the WBG is developing the OECS Project to establish a Public Health Laboratory.

The project will include improvements and refurbishments of one facility, including equipment inventory, procedures provided, and infrastructure, based on a survey to be conducted during implementation. Under the project, the national health care waste management plans will be updated for activities that include the minor refurbishments and the proper disposal of medical equipment. The development of the HWMS will also include capacity-building for health care workers through occupational health and safety training, including exposure to diseases, medical waste and the use of certain equipment with radiation. Accordingly, the Project Implementation Unit (PIU) under the MOHWE is requesting the services of a qualified consultant (individual or firm) to research and develop a Health Care Waste Management System (HWMS).

2. Technical Background

According to the WHO⁴, waste and by-products from the health sector cover a diverse range of materials, as the following list illustrates:

Infectious waste: waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices);

Pathological waste: human tissues, organs or fluids, body parts and contaminated animal carcasses;

Sharps waste: syringes, needles, disposable scalpels and blades, etc.;

Chemical waste: for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;

Pharmaceutical waste: expired, unused and contaminated drugs and vaccines;

Cytotoxic waste: waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;

⁴<http://www.who.int/mediacentre/factsheets/fs253/en/>

Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials; and

Non-hazardous or general waste: waste that does not pose any particular biological, chemical, radioactive or physical hazard.

Health-care waste contains potentially harmful microorganisms that can infect hospital patients, health workers and the general public. Other potential hazards may include drug-resistant microorganisms which spread from health facilities into the environment. Adverse health outcomes associated with health care waste and by-products also include:

- sharps-inflicted injuries;
- toxic exposure to pharmaceutical products, in particular, antibiotics and cytotoxic drugs released into the surrounding environment, and to substances such as mercury or dioxins, during the handling or incineration of health care wastes;
- chemical burns arising in the context of disinfection, sterilization or waste treatment activities; air pollution arising as a result of the release of particulate matter during medical waste incineration; thermal injuries occurring in conjunction with open burning and the operation of medical waste incinerators; and radiation burns.

The project may create an increase in use and scope of services, resulting in additional sources of medical waste needing proper treatment and disposal. This is also the case for work during emergency response or epidemics. The health and safety of health care workers could be affected by waste management practices as well as by hygiene conditions, isolation and storage procedures for bioinfectious, radiologic or genotoxic waste. Such risks may also affect the nearby communities.

At the present time, there is no formalized plan for health care waste management in St. Vincent and the Grenadines, but practices are in place. Listed below are practices that act as a form of BMW management at the country's main hospital- the Milton Cato Memorial Hospital and in the Grenadines.

- Sharps are collected in designated containers as to separate the sharps from other types of biomedical waste.
- Red bags have been used for biomedical waste since 2001/2002. Hospital red-bag waste is aggregated in an area located at the back of the facility and then taken by the Solid Waste Management Unit Personnel of CWSA via skip, (which is manually loaded), to the Diamond Sanitary Landfill for deep burial.
- In the Grenadines- Bequia, Mustique, Canouan, and Union Island, biomedical waste generated in these islands is typically disposed of in on-site open pit ovens or incinerators.

3. Objective of the Consultancy

To improve the management of medical waste and minimize risk to health care workers and the public, during project implementation the national health care waste management plan will be further developed and formalized in the form of a Health Care Waste Management System (HWMS). These Terms of Reference lay out the scope, activities and deliverables for development of the HWMS, which will be consistent with WBG Environmental Health and Safety Guidelines for Health Care Facilities.⁵ The HWMS will be adequate to the scale and type of activities and identified hazards for the country and will be implemented and operated by the MOHWE.

4. Scope of Work

The scope of work includes conducting a preliminary evaluation and verification of current health care waste management, identifying infrastructure and capacity needs, developing written protocols and procedures for health care waste management, and providing training and outreach.

Task 1 –Evaluate current health care waste management

The first task is to establish baseline information on the current status of health care waste management. Data on the number and type of generators, volumes and types of wastes for various facilities, number and registration of transporters, status of landfill operations, functioning of bioclave, etc. will be generated by the consultant based on interviews and field visits. Any emissions to air, water or soil must be considered, as well as compliance with national law and best practice.

With regards to health care worker protection and community health and safety, the Consultant will assess current practice for occupational health and safety, including training, use of protective equipment, isolation and segregation of wastes, and other factors that could affect exposure to infections or diseases, exposure to wastes or hazardous materials, radiation, and fire safety.

Task 2 – Identify infrastructure and capacity needs

The Consultant will review the inventory to be prepared by the MOHWE of the capacity, condition, and needs of the primary health care facilities. Combining this with the Task 1 results, the Consultant will evaluate the adequacy of the existing physical infrastructure available in primary health care facilities and associated facilities in terms of location and size of areas where wastes are stored, temperature and condition of wastes, segregation and isolation of wastes. In

⁵http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

addition evaluate liquid waste disposal practices such as type of disposal system (septic tank, leach field, cesspool, sewer system, package treatment plant), types of wastes expected, whether chlorination is needed, and level of treatment. The consultant will also evaluate level of training and capacity of health care workers, landfill workers, and waste transporters. Based on the evaluation, the consultant will provide recommendations for physical and capacity improvements.

Task 3 – Develop Protocols and Procedures

The consultant will prepare a formal set of protocols and procedures that will constitute the HWMS to be implemented by the MOHWE. The HWMS will integrate the following:

- WBG EHS Guidelines for Health Care Facilities³
- Environmental Services Act No 14 of 1991 and the Solid Waste Management Act No 31 of 2000
- WHO guidelines for management of solid health care waste at Primary Health Care Facilities⁶

The HWMS procedures must address waste minimization, reuse and recycling; waste segregation; on-site handling, collection, transport and storage; transport to external facilities; and, treatment and disposal. The HWMS shall be prepared in collaboration with the MOHWE and subject to their review and approval.

The roles, responsibilities and duties of MOHWE and health care facility operators will be included, and an assessment made of capacity gaps to implement the program, with corresponding recommendations for training and capacity building.

Task 4 - Provide training and outreach

The Consultant will prepare a presentation on the results of Tasks 1-3 and deliver it to MOHWE as part of a one-day workshop/seminar, which will include training and instruction on the HWMS. All training materials will be provided to the MOHWE for subsequent delivery to each of the 33 primary health care facilities in the country.

5. Reporting Requirements and Deliverables

The consultant will report to the MOHWE designated contact person. Shortly after the Consultant has mobilized his/her resources and after having met the staff of the MOHWE PIU and visited key project sites, the consultant will present a brief inception report and work plan to

⁶http://www.who.int/water_sanitation_health/publications/manhcwm.pdf

ensure that both parties (the Consultant and MOHWE) are in agreement that the assignment will be carried out as planned and as stipulated in the contract. The inception report will incorporate a work plan for the development of the different activities and deliverables.

Each of Tasks 1-4 will also have a specific deliverable, as follows:

Task 1 Report - Findings of the assessment of current practice

Task 2 Report – Recommendations for infrastructure and capacity

Task 3 Report – HWMS

Task 4 – Presentations and Training Materials

Each of the deliverables shall be provided in Draft form, to which MOHWE will revert comments within 2 weeks. The Final versions of each deliverable will then be provided taking into account and addressing the comments provided.

6. Logistics and Timing

The assignment is anticipated to last for a period of 14 weeks, or three to four months, as per the following tentative schedule:

Task	Duration (weeks)
Inception Report	2
1	4
2	2
3	4
4	2

The Consultant shall ensure that he/she is adequately supported and equipped in terms of personal technical equipment (transportation, laptop, software and field tools),

The MOHWE will arrange and coordinate access, arrange requested interviews, provide reports and respond promptly to data requests to facilitate the assignment. The MOHWE will provide comments to Draft deliverables within two weeks of receipt.

7. Qualifications

The Consultant or Firm must have at least 5 years of experience in the field of environmental assessment, environmental management, or environmental supervision, with direct and relevant project experience in medical waste planning and/or management. Experience in the Caribbean, is a benefit. Facility in the English language is required.

Appendix 5 Public Consultation Proceedings

List of Consultation Attendees- Public Sector

1. Winsbert Quow
2. Elliot Samuel
3. Danville Toney
4. Imran Williams
5. Desmond Pompey
6. Roxanne Williams
7. Simone Kiezer Beache
8. Cecile James Samuel
9. Andrea Robin
10. Shamanti Labban
11. Lisa Sprott
12. Glanderene Brown
13. Neri James
14. Silma Wilson McLean
15. Cle-Ann Collins

List of Consultation Attendees- Civil Society

1. Andre Liverpool
2. Jose Clarke
3. Eldon O'Garro
4. Neri James
5. Casmos Harry
6. Leslie Cummings
7. Roxanne Williams
8. McAnthony Kirby
9. Rosita Jack
10. Azia Fraser
11. Elliot Samuel
12. Gregory Doyle
13. Cle-Ann Collins
14. Seymore George
15. Emily Samuel
16. Samuel Horne
17. Kevin Caine

Table 10: Results of the Public Service Consultation

Source	Question/Comments	Response
Physical Planning Representative	What is the prospective size of the lab? It would be easier to recommend/select a site if the size is known.	The size required would be better known after the consultation to finalize all the specific duties that the lab would perform.
Physical Planning Representative	Would fast quarantine facilities be incorporated into the project?	Improving capacity for isolation in the various health centers throughout the country will be built into the project There is currently a quarantine tent so the project would involve sourcing more mobile isolation equipment
CWSA/SWMU Representative	1. Waste water streaming is very important and there would be a need for a biomedical waste facility 2. SVG needs to establish its own waste water standards	Plans are currently in place to establish national waste water standards
CWSA/SWMU Representative	The focus should be on repurposing current government labs rather than retrofitting a building to establish the new Public Health Lab	
Public Health Department Representative	The laboratory would require the development of a proper waste water treatment system	
Health Planning Representative	If a member of the public makes a complaint about noise that is necessary for the completion of	The Grievance Redress Mechanism was referred to and it was noted that

	the project how would that be dealt with?	contactors should notify the public of specifics such as time and what would be the source of the noise (drilling, blasting etc).
Physical Planning Representative	There would be a piping issue and risk of contamination at the Nurses Hostel since a river runs to the back of the building and the water table in that area is very high	
Chief Medical Officer	The Nurses Hostel would not be an ideal location for the laboratory since the disaster management unit is currently operating there and there are plans to make that location the unit's permanent home.	
CWSA/SWMU Representative	The Occupational Health and Safety Act should be consulted in guiding the project	
CWSA/SWMU Representative	How would the laboratory maintain itself?	Building and maintenance costs must be clearly understood. Recurrent costs would have to be budgeted for
Physical Planning Representative	What Acts would govern the lab? Would a new Act be needed?	The Environmental Services Act and Public Health Act are suited for this project The framework and safeguards set out by the World Bank would be used to guide the process
Information Technology Representative	How would laboratory information be shared?	There would be an integration of the laboratory information with the present health information system

Table 11: Results of General Public Consultation

Source	Question	Response
Resident	Do we currently have a public health lab?	Testing is done at the MCMH lab however, the lab is currently overwhelmed and there is also unavailability of space for food testing
Resident	What is the size of the lab? If it is established at the PHD Building would it be going two stories up?	The size required would be better known after the consultation to finalize all the specific duties that the lab would perform. Yes, If the PHD Building is selected the addition would be vertical
Resident	Will the Medical Waste affect the persons living around the area?	A waste management system would be put in place
Resident	Is the current fisheries lab not enough to handle the food testing that this new lab would be doing?	No, it cannot facilitate the level of food testing that we want to get done
Resident	It is not suitable to place a Public Health Lab near where people live because of the waste that would be produced. It would be best to put it in an isolated area.	
Resident	The lab should be where there is excess land to maybe bury or treat the waste there.	
Resident	Would it mean that radioactive material would be coming in to the country if we get the lab? What quarantine capacities do we have to manage radioactive material	It is not intended that radioactive material be used in the lab. The capacity to detect radioactive material is not here however public Health Act provides the public Health department to deal with them.
Resident	If the lab is placed around	

here where we lived it would be a good thing where persons can get a job on the site but the medical waste would affect us afterwards.



Figure 5 Some Participants at the General Public Consultation

