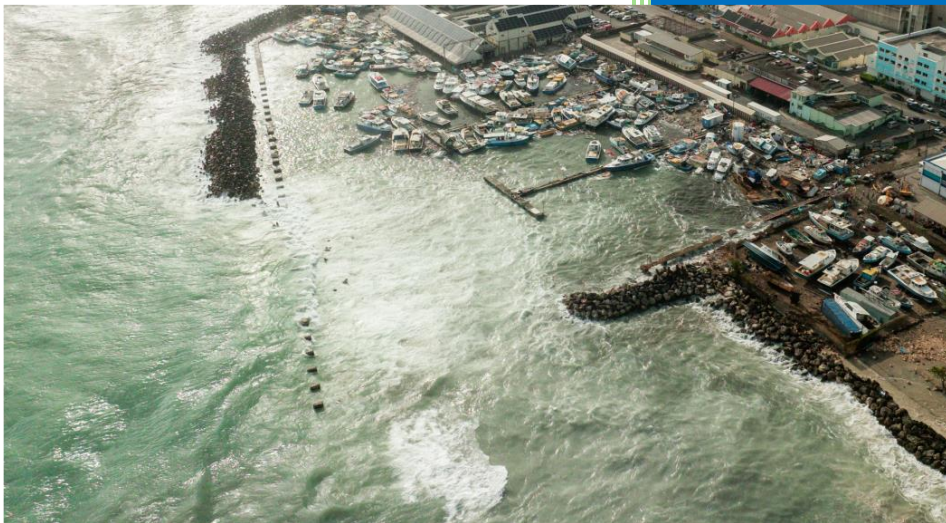


**ENVIRONMENTAL AND SOCIAL
MANAGEMENT PLAN (ESMP) FOR THE
BARBADOS FISHING HARBOUR
BREAKWATER REPAIR**



**FINAL
JANUARY 2, 2025**

ACRONYMS AND ABBREVIATIONS

AOI	Area of Influence
BFC	Bridgetown Fisheries Complex
BNT	Barbados National Trust
BPI	Barbados Port Incorporated
CERC	Contingent Emergency Response Component
COC	Code of Conduct
COWCL	CO Williams Construction Limited
C-ESMP	Contractor - Environmental and Social Management Plan
DRR	Disaster Risk Reduction
ESCP	Environmental and Social Commitment Plan
ESHG	Environmental Health and Safety Guidelines
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESRC	Environmental and Social Risk Classification
ESS	Environmental and Social Standard
FAD	Fishing Aggregating Devices
GM	Grievance Mechanism
GOB	Government of Barbados
JSA	Job Safety Analysis
MENB	Ministry of Environment and National Beautification
PDO	Project Development Objective
PPE	Personal Protection Equipment
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedures
TOR	Terms of Reference

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1) INTRODUCTION

Hurricane Beryl, the most powerful Atlantic hurricane on record to form in June, devastated several Caribbean countries between June 29 and July 5, 2024, as it tore through the region and strengthened to Category 5 status. The eye of the then-Category 4 Hurricane Beryl passed within 150 kilometers of the southern coast of Barbados on June 30 and July 1, causing severe damage to the south and west coasts and the Bridgetown marina, and severely affecting the fishing industry, with 240 vessels damaged or destroyed.¹ The cruise terminal of Bridgetown Port was also affected, including nearby breakwaters. The hurricane disrupted the accessibility, availability, quality, and use of goods and services in the area, especially the fisheries value chain, posing long-term economic challenges. Tourism and housing sectors were also affected, with 73 percent of hotels, apartments, and guest houses and 40 houses suffering various levels of damage.

The Government of Barbados has made substantial efforts to address the most urgent needs in the aftermath of Hurricane Beryl. The government swiftly mobilized resources across ministries, the private sector, and international partners for immediate response and recovery of the fisheries complex and Bridgetown Port. The measures included fishing vessel relocation, debris removal, and rehabilitation works at the Bridgetown Port. Besides the immediate response and repair effort, the government's overarching effort to support the recovery of the fishing industry extended to set up the National Fisheries Benevolent Fund. The fund is expected to support fisherfolk in restoring their livelihoods.² While the government's initial response met the most urgent needs, a more systematic approach for resilient recovery and reconstruction is required. A systematic approach is needed to include climate change adaptation and disaster risk reduction (DRR) measures, requiring global best practices and support to ensure the resilient recovery and long-term sustainability of ports, coastal infrastructure, and disaster-affected sectors and communities.

The Government of Barbados has negotiated financing of US\$54 million from the World Bank to finance the Barbados – Beryl Emergency Response Loan Project. The project development objective (PDO) is to: (i) restore disaster-affected targeted sectors; (ii) enhance climate-resilient infrastructure; and (iii) strengthen emergency preparedness and response capacity. Project activities will focus on supporting climate resilient recovery and reconstruction in the wake of Hurricane Beryl while strengthening the country's resilience to future disasters and climate change, including building capacity for disaster preparedness and response. Activities that directly support the immediate recovery of livelihoods for fisherfolk will be sequenced to ensure timely implementation over those focused on medium- to long-term resilience building. The project is composed of four components:

- Component 1: Immediate recovery from a hurricane
- Component 2: Strengthening Barbados' resilience for future catastrophic events
- Component 3: Contingent Emergency Response Component (CERC)
- Component 4: Project management

Under Component 1, specifically Sub-Component 1.1: Recovery of the affected sectors – will focus on rehabilitation of the Barbados fisheries marina and its coastal protection, as well as

¹ Damage assessment conducted by the Barbados Fisheries Division.

² <https://www.fisheries.gov.bb/national-fisheries-benevolent-fund/>

rehabilitation of landing facilities. This activity is a priority for the government, and toward that end, the Barbados Port Incorporated (BPI) has already hired a firm for the design and supervision of the rehabilitation of the Fisheries Marina and its breakwater. Given the time constraint in having the breakwater rehabilitated before the next hurricane season, the project will ensure the designs for all infrastructure rehabilitation are informed by future climate scenarios, predicted extreme events, and economic and E&S feasibility. BPI is ready to start the procurement for the contractor to carry out the works.

This Environmental and Social Management Plan (ESMP) has been prepared to document existing environmental and social conditions at the fisheries harbour breakwater and its environs including physical, biological, and socio-economic aspects; identify the associated potential risks and impacts and recommend mitigation measures that are to be applied during the implementation and operation of the project to avoid, reduce or mitigate adverse environmental and social impacts. The ESMP is in line with the Terms of Reference (TOR) in Annex 1 to comply with the World Bank's Environmental and Social Standard (ESS1).

2) PROJECT ENVIRONMENT AND DESCRIPTION

2.1 Location and Regional Setting

The Bridgetown Fisheries Complex (BFC) is a marketplace in [Saint Michael, Barbados](#) which is located on Princess Alice Highway. The Bridgetown Fisheries Complex is situated nearby to the bus station [Princess Alice Bus Terminal](#), as well as near the shipyard [Boat Park](#). The Fisheries Harbour adjoins the BFC and serves to provide berthing facilities for fisherfolk boats. This marina and breakwater were severely damaged during the passage of Hurricane Beryl (Figure 1).



Figure 1: Marina and Breakwater damaged during Hurricane Beryl

2.2 Marine Environment and Ecosystem Services

Coastal ecosystems such as coral reefs and eroded beaches sustained extensive damage during the passage of the hurricane Beryl. Fisherfolk at Pile Bay lost 56 pots, Bay Street lost 28 fish pots, Half-moon Fort lost 18, and St. Lawrence lost 12. A total of 114 fish pots have been reported damaged by various landing sites. Fish Aggregating Devices (FADs) 1 and 2 to be forcibly moved from their original locations and FADs 4 and 5 were completely lost.

The fishing industry and vendors within the Bridgetown Fisheries Complex have been severely disrupted with 41 of 66 businesses affected and fisherfolk experiencing substantial loss of equipment, stocks, and supplies. This disruption has not only affected their immediate livelihoods but also posed long-term economic challenges, reducing their ability to support their families and sustain their businesses. Women working as vendors in fish markets and within the Bridgetown Fisheries Complex (poor fisherfolk, women participating in the fisheries market value chain, etc.) have been also heavily impacted. The Hurricane has disrupted the accessibility, availability, quality, and use of goods and services in these markets. The destruction of infrastructure and supply chain interruptions have made it difficult for these women to resume their trade, affecting their income and financial stability. This situation exacerbates existing gender inequalities, as women are often primary caregivers and are now facing additional economic pressures. The tourism industry has also been significantly affected, with 73 percent of hotels, apartments, and guest houses reporting some level of damage, according to the Barbados Hotel and Tourism Association- Tourism is the main driver for growth and the main source of foreign exchange,

accounting for 17.5 percent of GDP in 2019 and directly employing over 12 percent of the labor force (IDB 2019).

Given the economic and social significance of the breakwater protecting the shoreline and fisheries harbour, the repair of breakwater will likely have a positive effect the economic and social dynamics of fisherfolk and other users of the marina facilities.

2.3 Project Background

The Bridgetown Fishing Harbour was severely damaged by the passage of Hurricane Beryl on July 1st, 2024. Approximately one-third of the length of the rubble mound breakwater that protects the Fishing Harbour was destroyed, with localized damage in other locations. In addition, most of the length of the newly reconstructed walkway behind the breakwater was destroyed (Figures 2 and 3). Finally, a significant proportion of the fishing boats moored in the harbour were damaged or destroyed.



Figure 2: Wave action during Hurricane Beryl



Figure 3: Breakwater Post Hurricane Beryl

The Government of Barbados approached W.F. Baird & Associates Coastal Engineers Ltd. (Baird) a coastal engineering firm (www.baird.com) to develop a method to restore the basic protective function of the harbour for the 2025 fishing season. The primary mandate was to restore the function of the harbour as quickly as possible given the national emergency resulting from the storm and importance of fishing as a major source of food and value to the economy. Baird was also instructed to recognize the Government's objectives of building a new Fishing Harbour within the next 3 to 5 years, so long term performance was not as important as having the Fishing Harbour operational by January 2025 and until a new Fishing Harbour could be designed and constructed. This dictated the approach to the design:

- Interim protection works to be in place prior to the start of the fishing season in early January 2025 to protect the harbour from waves during the fishing season and allow for near-normal harbour operations. These requirements established time as the overriding design parameter.
- Access must be from land. There are no adequate marine based construction resources in the region capable of mobilizing and repairing this structure within the time frame available. Further, a marine based approach would be cost prohibitive.
- The remaining dolos breakwater structure is damaged and will be a weak point in future storms. However, there is inadequate time to also reconstruct this section of the breakwater in the time available. The large cost of more than doubling the overall project quantities was also a consideration.
- The proposed breakwater repairs should be at least equal to the protection provided by the balance of the structure.
- Full protection works to be completed prior to the start of the hurricane season in June 2025.

The primary objective of the project is to implement emergency repair works to the breakwater on a fast-track basis, including the following specific schedule requirements:

- Interim protection works to be in place prior to the start of the fishing season in early January 2025 to protect the harbour from waves during the fishing season and allow for near-normal harbour operations;
- Full protection works to be completed prior to the start of the hurricane season in June 2025.

2.4 Breakwater Design

Reconstruction of the walkway behind the breakwater will also be undertaken; with the intent to restore as much of the original walkway as possible using the same design as previously built. This clearly has limitations; however, a complete rebuild is not possible in the time frame available and considering that construction access for the breakwater repairs follows the same alignment as the original walkway. The armour layer of the existing breakwater was comprised of dolos units with an overall dimension of approximately 2.1 m and an estimated weight of approximately 3.2 t. Clearly, these armour units were insufficient to withstand the wave conditions generated by Hurricane Beryl. Of note, dolos units have a high degree of interlocking (as quantified by a very high stability coefficient, K_d , in Hudson's equation), but they are very "fragile"; in particular, they are prone to breakage if they rock, with breakage resulting in loss of interlock and damage

to/failure of the armour layer. We believe that this was one of the key damage mechanisms for the existing breakwater. The existing breakwater was built in the early 1980s, and the design likely used very high K_d values published at that time, such as in the 3rd edition of the Shore Protection Manual (USACE, 1977). In response to a number of major failures of breakwaters armoured with “slender” armour units (dolos and tetrapods) in the late 1970s and early 1980s, a significant reduction in K_d was incorporated into later design manuals, such as the 4th edition of the Shore Protection Manual (USACE, 1984). This resulted in a factor of two increase in the required weight of the armour units for a given wave condition, with the objective to reduce the risk of rocking and breakage.

For this project, the availability of suitable construction materials was a critical factor in selecting the design concept. Dolos units were not considered because they failed during Beryl and dolos forms were not available in Barbados. Rather, a solution using Core-Loc armour units was considered as COWCL had forms for 3.0 m³ Core-Locs available from the HMBS Pelican project. In addition, an armour layer comprised of large, quarried stone was also considered. Given the limited availability of large armour stone from local quarries, as well as the low density and poor quality of the locally quarried stone, the project would require importing armour stone from an offshore source. This has been done by Baird and others for a few coastal projects around Barbados. The following section summarizes the results of Baird’s research into offshore sources of quarried armour stone that was available and could be shipped to Barbados in late 2024.

2.5 Sourcing Materials and Final Design

Assuming a design wave height of $H_s \sim 3.5$ to 4 m, preliminary design calculations (refer to Section 4.3), indicated that a “conventional” breakwater design would require armour stone in the order of 6-12 t. Based on prior experience, as well as discussions with COWCL, Baird identified two hard rock quarries in eastern Canada (Zutphen Contractors in Musgrave, NS and Roy’s Trucking in Belledune, NB) and one in Norway (Larvik) that had the potential to supply such armour stone to the project within the required timeline. Baird has prior project experience with all three quarries. Of particular importance, the Larvik quarry has a significant supply of armour stone stockpiled on the quarry floor, quality controlled and ready to load/ship. Baird was unable to identify any other quarries that could supply suitable armour stone within the required timeline. Hence, the Larvik quarry was identified as the preferred source for this project. Figure 4 presents a photograph of large armour stone stockpiled on the quarry floor at Larvik.



Figure 4: Larvik Quarry, Norway - Armour Stone Stockpiled on Quarry Floor

Final design development for the project is currently underway. An overview of the proposed repair works along the outer end of the breakwater is shown in Figures 5 and 6. The proposed repair works will be reconstructed within the original footprint of the breakwater prior to the passing of Hurricane Beryl; no new construction or extension of breakwater.

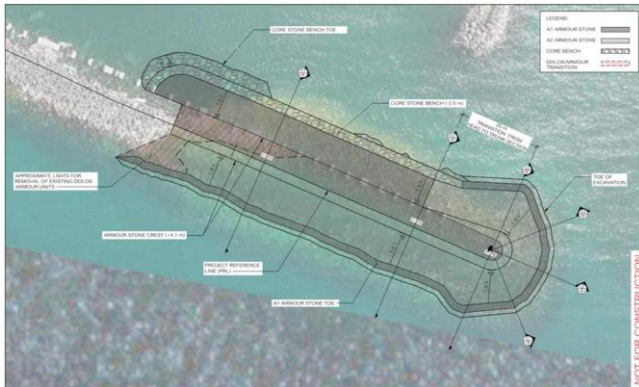


Figure 5: Emergency Repair Works – Outer End of Breakwater

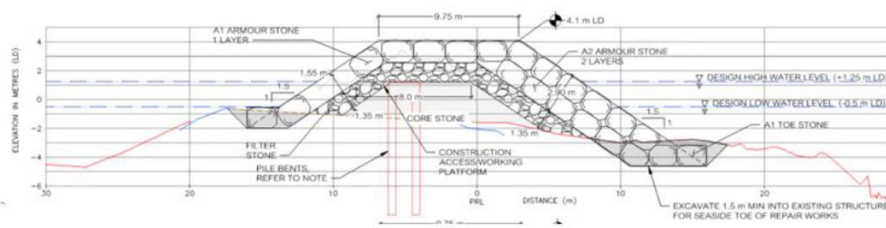


Figure 6: Emergency Repair Works – Full Repair Cross-Section

3) LEGAL AND INSTITUTIONAL FRAMEWORK

The project will be processed under the World Bank’s Environmental and Social Framework (ESF). At the same time, it will follow all the relevant national policies and legislations related to environmental and social issues.

3.1 Relevant National Legislations and Regulations

Based on the preliminary project details and environmental and social risk identification mentioned above, the relevant Government of Barbados (GOB) policies, legislation, regulations, and environmental standards pertaining to this project were reviewed. The review examined those policies, legislation and regulations governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, site selection and land use control at the regional, national, and local levels that relate to or should be considered by Barbados Port Inc (BPI) in the policies, laws, and regulations framework of the project (See Table 1). The list is not exhaustive but highlights the laws and regulations that must be adhered to for the project.

Table 1: Relevant National Legislations and Regulations and Possible Link to the Project

Legislation/Regulation	Applicability to the Project	Entity Responsible
Safety and Health at Work (SHaW) Act, CAP 356	Development and maintenance of safe systems of work by the contractor and management of risk to users of the harbor or facility throughout the lifecycle of the project. Defines requirements for the provision of adequate sanitary conveniences for people engaged in project activities during operating hours	Labour Department, Ministry of Labour, Social Security and the Third Sector
Safety and Health at Work Act (Noise) Regulations, 2022	A regulation enacted under the SHaW Act to control an employee’s personal exposure to noise. Any work conducted by an employer that is likely to expose the employee to a daily or weekly limit of 80 dB (A-weighted) or greater, must be assessed for risk to enact adequate controls.	Labour Department, Ministry of Labour, Social Security and the Third Sector
Marine Pollution Control Act CAP. 392A	Reduce the likelihood of pollution of the marine environment through the accidental release of liquid contaminants to the marine environment.	Environmental Protection Department
Health Services (Nuisances) Regulations, 1969	Limit the presence of nuisances as defined by the regulations to as low as reasonably practicable through the assessment of facilities provided for people working in and around the project site. Specifically, sanitary water, smoke and vermin.	Environmental Protection Department
Emergency Management Act, CAP. 160A	To make appropriate provisions for the management of disasters and other emergencies through the development of an appropriate plan.	Department of Emergency Management

Legislation/Regulation	Applicability to the Project	Entity Responsible
Coastal Zone Management Act, CAP. 394	Effective management of coastal resources in Barbados to eliminate the likelihood of any activity causing damage or harm to coral or other forms of biological diversity.	Coastal Zone Management Unit
Shipping (Oil Pollution) Act, CAP. 296A	Eliminate the likelihood of marine pollution from oily waste from vessels and the instruction of reporting framework and an associated response procedure for the management of an accidental release.	Environmental Protection Department

3.2 Environmental and Social Management System (ESMS) of Barbados Port Inc (BPI)

Barbados Port Inc's (BPI) Environmental and Social Management System (ESMS) is a framework designed by the Port to assess and manage the aspects of operations and expansion in the context of the company's master plan. The ESMS is given effect through the BPI Environmental, Social, Health and Safety (ESHS) policy statement which is built on three pillars:

- The Environment – considering all terrestrial and marine habitats that could be impacted by the activities of the BPI master plan through land use changes, pollution from operations or emergency events and natural disasters.
- Social – addresses incidents with visitors or facility users resulting from trespassing, exposure to hazardous materials, contaminated environments and vector borne diseases
- Occupational Health and Safety – focuses on the health and wellbeing of workers by developing safe systems of work, training and continual improvement.

The ESMS utilizes the World Bank Group (WBG) International Finance Corporation (IFC) Environmental and Social performance standards in addition to the general guidelines for ports and harbors to create a framework that addresses the three pillars of the ESHS policy, local legislation and international conventions to which Barbados is a party. The ESMS is applicable to all projects and operational activities under the responsibility of Barbados Port Inc. BPI successfully applied the ESMS to safely manage twenty-three internal renovation projects in 2023. The ESMS is currently enforced on the Shallow Draught Harbor redevelopment and Berth 6 expansion projects, funded by the InterAmerican Development Bank.

The ESMS will be used throughout project implementation to manage and monitor environmental, social and occupational health risks and impacts associated with the breakwater repair activities.

3.3 World Bank Environmental and Social Framework (ESF)

The World Bank Environmental and Social Framework (ESF) sets out the requirements for projects it supports through Investment Project Financing. The Environmental and Social Standards (ESSs) under the ESF explain the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank. The application of these standards, by focusing on the identification and management of environmental and social risks, will support Borrowers in their

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goal to reduce poverty and increase prosperity in a sustainable manner for the benefit of the environment and their citizens. The standards aim to:

- support Borrowers in achieving good international practice relating to environmental and social sustainability.
- assist Borrowers in fulfilling their national and international environmental and social obligations
- enhance non-discrimination, transparency, participation, accountability and governance
- enhance the sustainable development outcomes of projects through ongoing stakeholder engagement

The ten (10) Environmental and Social Standards (ESSs) establish the standards that the Borrower and the project will meet through the project life cycle and set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention. These Standards establish objectives and requirements to avoid, minimize, reduce, and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts. Detailed information on the Bank's ESF is available at: <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

The Framework is also accompanied by guidance and information tools to assist Borrowers in implementing the Standards, Bank staff in conducting due diligence and implementation support, and stakeholders in enhancing transparency and sharing good practice. The World Bank Access to Information Policy, which reflects the Bank's commitment to transparency, accountability, and good governance, applies to the entire Framework and includes the disclosure obligations that relate to the Bank's Investment Project Financing. Borrowers and projects are also required to apply the relevant requirements of the World Bank Group Environmental, Health and Safety Guidelines (EHSs). The EHSs are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP) and are referred to in the World Bank's Environmental and Social Framework. The EHS can be accessed from the following link: <https://www.ifc.org/content/dam/ifc/doc/2000/2007-general-ehs-guidelines-en.pdf>

3.4 Environmental and Social Standards (ESS) Relevant to the Project

The Project's Environmental and Social Risk Classification (ESRC) is Substantial. Eight of the ten Environmental and Social Standards (ESSs) of the ESF have been identified as relevant for the project:

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts
- ESS2 Labor and Working Conditions
- ESS3 Resource Efficiency and Pollution Prevention and Management
- ESS4 Community Health and Safety
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS8: Cultural Heritage
- ESS10: Stakeholder Engagement and Information Disclosure

4) SIGNIFICANT ENVIRONMENTAL IMPACTS

4.1 Identification of Impacts

This section identifies and evaluates the potential impacts that the repair (minor civil works) of the Fisheries Harbour Breakwater may have on environmental and social receptors. The analysis included two aspects. The first was delineating the Area of Influence (AOI) of the breakwater repair construction works. The primary AOI, i.e., the area of direct influence, comprises the physical boundaries of the Fisheries Marina, which encompasses the existing damaged breakwater and the area to be used as the active construction zone, including areas for material storage and stockpile areas. The secondary AOI, i.e., the area of indirect influence, includes the Fisheries Complex which houses fisherfolk and fish market which may be affected by the proposed repair works (Figure 7).



Figure 7: Bridgetown Fisheries Complex

Based on the screening, according to WB guidelines, a site-specific Environmental and Social Management Plan (ESMP) is to be prepared before breakwater repair works begins and environmental and social requirements outlined in the respective bidding documents. According to the project's [Environmental and Social Commitment Plan \(ESCP\)](#), Environmental and Social Standard 1 (ESS1), the ESMP should identify the potential environmental and social risks and impacts related to the construction activities, and should propose mitigation measures to avoid, minimize or mitigate said risks affecting the marine ecosystem, fisherfolk livelihoods and health and safety of workers, fisherfolk and vendors.

The risk and impacts of associated with the project's activities in repairing or upgrading of breakwater are likely to be Low to Moderate, not significant, not complex, or large, predictable and expected to be temporary and reversible, site specific without the likelihood of impacts beyond the project's AOI, and low probability of serious adverse effects to human, health and the environment.

4.2 Physical Environment

The potential impacts on environmental resources may include, among others, marine resources, biodiversity, ambient noise levels, and ambient air quality, during construction. Generally, the project's environmental risks are considered Low to Moderate, and can be mitigated during project construction.

4.2.1 Terrestrial Environment

The project is situated in a built urban environment with no terrestrial species of importance (Rare, Endangered, and Endemic) inhabit the fisheries Harbour and is not considered a protected area. As such, the project construction activities will not impact biological resources.

4.2.2 Marine Environment

Project activities may temporarily increase sedimentation and pollution during project construction, specifically during the construction of access roads and the removal and replacement of damaged dolos (old breakwater material) and placement of armour stone to rebuild the breakwater. Repair works will be confined to the existing Breakwater footprint, no dredging will be undertaken and there are no coral reefs within the immediate environs of the breakwater. Baseline assessment findings did observe that surface waters turbidity is often elevated during heavy rainfall due to road drains emptying into marine waters.

4.2.3 Waste Management

Surface waters may be accidentally or intentionally contaminated during the construction phase. To a limited extent, surface waters may be contaminated by small quantities of hazardous materials and waste, such as fuels used for construction machinery, and by waste oils released during planned or unplanned maintenance of construction machinery. However, project construction activities are expected to have limited heavy machinery and vehicle use. Improper storage of construction waste and debris may also result in soil contamination. Similarly, wastewater from any temporary facilities to manage sewage or washing stations may also contaminate water resources if the discharge streams are not properly designed and managed. The implementation of good environmental management measures can mitigate these risks. Plans to manage waste and control discharges to the surrounding surface water should be outlined in the contractor's Environmental and Social Management Plan (C-ESMP) and fully implemented during works. Potential impacts of pollution of surface waters are negative, direct, short- to long-term, and localized, of minor significance but are unlikely to occur if appropriate management measures are implemented.

4.2.4 Noise Levels

Then projects activities will generate noise that may affect construction workers, fisherfolk, vendors and other businesses within the AOI. As such, occupational exposures to noise-generating activities that exceed the permissible limits could be managed using ear-protecting devices with adequate noise reduction ratings. The Contractor should strictly enforce the use of personal protection equipment (PPE) at the construction site, and monitoring that they are used as recommended should be incorporated into the C-ESMP. Additionally, construction activities should be confined to general working hours 8 am to 5 pm. The potential impacts of occupational exposure to noise are negative, direct, short-term and localized, of minor significance and unlikely to occur if appropriate PPEs are provided and used.

4.2.5 Air Quality

During the construction phase, particulate matter emissions are anticipated to increase due to the transport of armour rock, construction material and waste and, to a limited extent, soil-disturbing activities. Fuel combustion by construction equipment and machinery emissions of particulate matter and gases are also expected to increase. The sensitive receptors include construction workers, students, fisherfolk, vendors and businesses within the AOI. Ensuring that construction materials are covered in haul trucks transporting materials to the construction site will also mitigate environmental exposure to dust emissions. Since construction activities will occur in open areas, fugitive dust and emissions from fuel combustion will disperse and are expected to add insignificantly to the current elevated levels. These impacts on construction workers, fisherfolk, and vendors are negative, direct, short-term and localized, of negligible significance and certain to occur.

The primary direct source of greenhouse gas emissions is fuel combustion by construction machinery and equipment. These emissions are not expected to be significant. The potential impacts of greenhouse gas emissions from this project contributing to climate change are negligible, short term and localized.

4.3 Socio-Economic Environment

The Fisheries Harbour is located in heart of Bridgetown and serves as a marina and fish market which houses boats, fisherfolk and fish market vendors. The benefits expected to be derived from the project include improved protection of the coastline and the berthing fisherfolk boats. The anticipated impacts associated with the project are limited to the construction phase and include impacts associated with noise, dust, traffic and health and safety for which appropriate mitigation measures will be implemented. The project will help the GOB to enhance climate-resilient infrastructure and support fisherfolk livelihoods.

4.3.1 Livelihoods and Employment

Project activities may have a positive impact on the livelihoods of fisherfolk and fish market vendors that operate within the Fisheries Harbour. The project will enhance the breakwater infrastructure that protects fisherfolk boats and the fish market. In addition, the fish market may experience increased sales to workers during project construction. The potential benefit impact of this project is safe berthing of fisherfolk boats and protection of fish market. No resettlement impacts are envisaged. The breakwater repair/construction activities will not result in relocation of services, disrupt economic activities, berthing of fisherfolk boats or fish market.

4.3.2 Community Infrastructure and Traffic

Construction materials, equipment, and machinery must be transported to the project site, resulting in increased traffic. The project site is in a commercial area. Access to the site will be through the main Fisheries Complex entrance and a temporary road will be constructed to facilitate construction equipment and haulage trucks. The adjoining main road is heavily trafficked, and project activities are not anticipated to cause congestion. However, there may be disruption of traffic flow on adjoining main road whenever equipment and construction materials are taken to the site and waste is being removed. However, these risks are low and expected to be experienced temporarily only when materials are needed or waste is being removed. Stockpiling will be done to avoid materials being transported to the site daily.

Commented [SK3]: Indicate here if any disruption of economic activities/relocation of services, fish market, fisherfolk is anticipated due to construction.

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Pedestrian traffic on the main road may also be disrupted. However, this may be mitigated by a clear demarcation of the construction zone and requiring drivers to give way to pedestrians if it is safe to do so. Potential impacts of traffic congestion during construction are short-term and localized.

4.3.3 Cultural Heritage

The Fishers Harbour has a long history as a commercial area and no significant archaeological finds are known to have been found. The breakwater earmarked for repair is of no special historical or cultural importance. Given the project's limited footprint and historical disturbance, no significant archaeological and other cultural heritage finds are anticipated. Nonetheless, a precautionary approach to excavation should be followed, and a Chance Find Procedure should be implemented during excavation activities (refer to section 5.2.2. below for general guidance).

4.4 Health and Safety

4.4.1 Workers Health and Safety

Health and safety are key concerns at any construction site. Workers are usually exposed to situations which can result in serious accidents, some of which can be fatal if established guidelines and practices are not properly communicated or complied with. Risks can result from the improper use of construction machines and equipment or accidents on the work sites. Given the nature of this project, the possible occurrence of such risks the health and safety of workers are therefore a concern during the construction period. The following are possible health and safety risks which are likely to be encountered at the construction site:

- Injuries from slips, trips and falls.
- Injuries from manual lifting of heavy loads.
- Injuries or death from being struck by objects, including objects falling from height.
- Injuries or ill health caused by heat-related illnesses such as sunburn, heat stress, heat exhaustion or heat stroke due to strenuous work on hot days.
- Injuries from the improper use of PPEs or heavy machinery.

Training and monitoring can reduce the risk of any serious incidents, but accidents can still occur. Incidents/accidents must be reported to the Bank within forty- eight (48) hours using the Environmental and Social Incident Response Tool Kit Forms in Annex 2. In addition, the contractors will perform a Job Safety Analysis (JSA) and will develop Standard Operating Procedures (SOP) or method statement for the activities that present most risks. Risks may include accidents during site preparation, transporting and offloading of construction materials, improper use of equipment, slip or trip while traversing the work sites, etc. In such cases, these exposures can result in physical injuries such as cuts, bruises, and loss of limbs or can even be fatal. These potential impacts are of major significance but can be largely avoided if appropriate mitigation measures are put in place and are, therefore, unlikely to occur.

4.4.2 Public Health and Safety

Public safety should be a priority since the construction zone will be within a commercial compound and the site is accessed by public road. As such, public access to the site should be

Commented [SK7]: Consider including in an annex based on the Bank ESIRT (Borrower reporting forms) to inform the project incident tracking.

Commented [KB8R7]: Annex 2 ESIRT added

restricted and security fences should be erected around the footprint of the construction. Visitors should not be allowed to move around the site unchaperoned. In addition, the contractor or project workers should not disturb or interfere the fisherfolk or fish market vendors. All workers should be required to comply with a Code of Conduct (COC) to be prepared by the contractor. A Grievance Mechanism (GM) should be implemented to manage and address any complaints or concerns reported by fisherfolk or fish market vendors.

4.5 Emergency Preparedness and Response

The natural disaster risks (tropical storms, hurricanes and earthquakes) that Barbados faces may impact the project. Where necessary the Contractor will be notified by the Barbados Port Inc (BPI) of official climatic threats or national emergencies to ensure that the project is protected, equipment is secured, and workers are not put in harm's way. Additionally, the BPI will provide the contractor with contact information for institutions and agencies to be contacted in case of emergency.

5) IMPACT MITIGATION AND MANAGEMENT MEASURES

Project implementation must comply with the legislation and guidelines outlined in Chapter 3 and in accordance with the requirements of the Barbados Port Inc and World Bank. In this regard, this section has been prepared to guide the project's activities by setting out measures and strategies to mitigate the environmental, social, health and safety issues identified in Section 4 above. It is requirement that the contractor prepare a brief Contractor's Environmental and Social Management Plan (CESMP), using the guidance provided in this ESMP, to outline how they intend to manage the impacts identified and implement the mitigation measures recommended.

5.1 Physical Environment

5.1.1 Marine Environment

The following measures should be implemented to reduce the impact of sedimentation:

- Adequate temporary drainage should be provided at the temporary work areas;
- Areas of exposed soil should be monitored during periods of heavy rainfall, and proper control of stormwater flow over exposed soil surfaces should be practiced;
- Weather patterns should be considered during construction, as heavy rainfall would increase sedimentation rates;
- Material stockpiles should be kept to a minimum and berming to collect sediments from runoff during periods of heavy rainfall.
- The contractor should implement erosion control measures, particularly, but not limited to the stockpile area;
- Excavated materials should be reused, where possible. In general, excavated materials should not remain onsite for more than two weeks

5.1.2 Waste Management

Waste likely to be generated during construction includes domestic garbage and construction waste. Liquid waste, including sewage and wastewater from the contractor's sanitary facilities. Hazardous waste may be generated, including waste oil, filters, and oil and chemical containers. Waste can contaminate soil and surface water, contribute to ill health, and affect environmental aesthetics if not managed properly. Proper waste management is important especially since project activities are mainly within fish market and commercial environment. The handling, storage and disposal measures will vary for each waste category. The disposal frequency of each waste type will also vary, depending on the generation rate. It is recommended that no significant amount of waste be allowed to accumulate onsite. The measures that should be implemented to collect and dispose of waste properly are outlined below. The contractor should include a plan to manage waste in the C-ESMP and take into consideration the guidance provided below:

a) Liquid Waste

Sewage will be generated from work site associated with the project's construction phase. It is recommended that the contractors utilize portable toilets and that these washrooms remain within the security fence that demarcates the construction zone.

b) Solid Waste

- Garbage should not be allowed to accumulate onsite and should be collected and disposed of in an area and manner approved by the local authorities;
- All construction waste should be consolidated and reused as much as possible. It should be properly disposed of at an approved disposal site. Waste should not be left in the open to litter the work areas and should be disposed of within two weeks;
- All workers should be educated about the proper waste handling and disposal requirements and practices. This ensures that all are aware of how to dispose of the different types of wastes generated, therefore minimizing the impacts that may occur from improper disposal.

c) Hazardous Waste

- Waste oil from servicing machinery and vehicles should be collected and reused/disposed of safely and acceptably. Waste oil drained from vehicles and machinery should be collected by pans and transferred to storage containers;
- Empty hazardous material containers should be disposed of at an approved disposal sites;
- Hazardous wastes should not be stored at the construction site for extended periods. As such, timely removal is recommended.
- Fuel should be transported to the work areas as needed or in small quantities. Small quantities of fuel kept onsite will minimize the possibility of spills and the impacts if spillages occur;
- Storage of a significant amount of fuel should be within a contained, impervious area covered from the elements. The containment area should have the capacity to hold 110% of the fuel stored onsite;
- Any fuel stored in secondary containment should be placed higher than ground level to detect any leaks easily;
- Fuel storage containers should be regularly monitored for leaks;
- When handling fuel, care should be taken to prevent spillage and leaks, especially during offloading and refuelling;
- Regular maintenance should be conducted to ensure the proper functioning of machines, equipment and vehicles to avoid unnecessary leaks;
- Spill kits should be made available in the event of spillages. The kits should be placed in strategic locations accessible to key personnel who should be trained in properly using these kits through the executions of drills. Spill kits should contain sorbents with high absorbing capacity. The kits should include a pair of PVC gloves, a disposal bag and operating instructions.

5.1.3 Noise Levels

Noise can be a significant impact if the contractor conducts works outside normal working hours, 8 am to 5 pm. No work should be undertaken by the contractor on weekends without consultation with the Barbados Port Inc. Noise levels should comply with the relevant Government of Barbados regulations and the World Bank's EHS Guidelines for noise levels recommend 55dB during the day (07:00 to 22:00 hrs.) and 45dB at night (22:00 to 07:00 hrs.). Compliance with these limits is necessary to ensure the noise impacts on project workers, fisherfolk, fish market vendors and the surrounding businesses are reduced. Therefore, the following measures should be implemented to reduce the impacts of noise:

- Inform the BPI in advance of any construction activity that will result in significant noise and likely to fisheries complex;
- Equip workers who work on high-noise duties with the necessary PPEs for hearing protection: earmuffs and earplugs;
- Noisy activities (including offloading materials) should not occur near receptors during the night, on Sundays and Holidays. Works should not be conducted after 6 pm and before 6 am unless in exceptional circumstances and when agreed with the BPI and affected parties;
- Noise levels should be controlled at the source through the installation of mufflers on the exhaust systems of equipment and machinery;
- Noisy equipment such as generators should be sited away from receptors;
- The contractor should ensure that machinery and equipment are working efficiently; and
- Periodic monitoring of noise levels should be conducted.

5.1.4 Air Quality

Dust and gaseous emissions can affect fisherfolk, fish market vendors and project workers. The following measures should be implemented to reduce the impacts:

- Schedule major construction works to be executed during normal work hours, 8 am to 5 pm;
- Visual monitoring of dust generation/accumulation should be done;
- Workers should be equipped with the necessary personal protective equipment (PPE) to combat dust nuisance. Personnel working within dusty environments should be required to use dust masks and respirators;
- During dry periods, it may be necessary to soak some areas of the construction zone;
- Dry material stockpiles should be covered to minimize dust emissions;
- All vehicles transporting loose materials should be covered to minimize dust emissions;
- Offloading dry materials to the stockpile areas should be done outside of normal working hours, 8 am to 5 pm;
- All dry materials stored inside the compound should be covered; and
- All mechanical equipment should be adequately maintained to reduce gaseous emissions.

5.2 Socio-Economic Environment

5.2.1 Community Infrastructure and Traffic

The following measures should be implemented to manage the risks of public road infrastructure being deteriorated and traffic during project construction activities:

- The BPI the supervisory consultants and the contractor should agree on a transportation route from the public road to the Fisheries Complex before construction begins;
- The condition of the roads to be used on the route to the Fisheries Complex should be documented in georeferenced photographs before construction begins. This should be done jointly between the contractor and the supervisory firm;
- The condition of the roads during and after project construction should be monitored, and georeferenced photos should also be taken;

- The BPI and the supervisory consultants should approve altering the agreed traffic route.
- Any deterioration of public roads due to project activities should be fixed by the contractor after project construction ends.
- All drivers and operators from the contractor must be licensed in accordance with the Laws of Barbados and have the requisite experience and training;
- Drivers should be instructed to observe and respect all traffic and warning signs along the various roadways and to maintain speed limits;
- Appropriate safety signage should be posted leading up to the entrance of the construction site;
- All equipment and vehicles should be properly maintained and in good working condition to comply with the national road fitness/safety requirements and the manufacturer's safety recommendation;
- Passengers should not be permitted on mobile equipment unless they are being trained to operate the machine or are required to ride on it as an unavoidable part of their duties, provided it is safe;
- Construction materials should not be placed or discharged on the roadways;
- Trucks and other construction-related vehicles and machinery should not be parked along the roadway for extended periods;
- A flag person should direct equipment and vehicles entering and leaving the site;

5.2.2 Cultural Heritage

The following procedure should be followed during project construction if archaeological materials or sites are discovered:

- All activities in the immediate vicinity of the remains should cease immediately.
- The find location should be recorded, and all remains left in place.
- The contractor should inform the BPI which should then inform the Barbados National Trust (BNT) of the find. The BNT should coordinate with the relevant personnel to determine the significance of the findings and assess appropriate mitigative options. If the significance of the remains is judged to be sufficient to warrant further actions which cannot be avoided, the BPI in collaboration with the BNT should determine the appropriate course of such action.
- Relocation of the artefacts for preservation and security reasons may be determined an appropriate action.
- In the case of human remains, the appropriate authority should be contacted. In addition, a coroner and/or physical anthropologist may be involved if the remains are classified as an artefact. Options for removal and burial should be considered if the location must be disturbed.
- The BNT should inform the BPI when work may recommence in the specific area.
- In addition, to effectively safeguard potential archaeological finds, it should also be ensured that the contractor provides training to employees on identifying and protecting finds by causing limited disruption and damage to archaeological materials if found.

5.2.3 Workers Health and Safety

The health and safety of workers involved in activities during the construction phase can be compromised. It is necessary to implement measures to prevent these situations and the contractor should include measures to ensure that the health and safety of workers are preserved in the C-ESMP. The following measures should be implemented to reduce the risk to workers:

- The Contractor should include in the C-ESMP occupational health and safety measures to ensure compliance with the laws of Barbados and World Bank's EHS Guidelines;
- The contractors should designate someone with the responsibility for ensuring occupational safety and health;
- Workers should be properly oriented to the safety and health rules and guidelines;
- Adequate training should be provided to workers in the execution of their tasks, including for heavy lifting and materials handling techniques, training in the use of temporary fall prevention devices and personal arrest systems when working at heights, and the correct use of PPEs;
- Machinery/equipment should be operated by competent, licensed and authorized personnel only and in a manner that does not endanger other employees or the contractors' equipment;
- An Emergency Response Plan should be prepared and made available to all relevant personnel, and the necessary training and resources required should be provided;
- Well-equipped first aid kits should be provided;
- At least one personnel trained in first aid should be present at the construction site;
- Arrangements should be in place for transporting any ill or injured personnel to a health care facility when urgent medical care is needed;
- Potable water for workers should be provided;
- Protective gear should be provided for workers and be worn at all times while work is ongoing. Gear to be provided should include safety vests, hard hats, dust masks, ear plugs, gloves and safety boots where necessary. Workers should be required to wear safety equipment the contractors provide in all working areas. Monitoring should be done to ensure workers utilize the gears provided;
Safety rules and guidelines should be posted at strategic locations at the project site;
- The contractors will perform a Job Safety Analysis (JSA) and develop Standard Operating Procedures (SOP) or method statements for the activities that present the most risks, such as clearing vegetation, excavation and trenching, working at heights, preparing cement, electric works, and working in confined spaces.

5.2.4 Workers Code of Conduct

A Code of Conduct (COC) for workers should be prepared by the contractor to guide the behaviour of workers onsite during project construction (Annex 3). The COC for workers is a set of guidelines to ensure care and caution are taken by employers and employees when undertaking the project. The COC should be written in plain language that is clear, accessible, and easily understandable and address prevention and management measures for environmental, labour, and social risks of the project, including health and safety risks, sexual and gender-based violence, discrimination, and sexual abuse and exploitation of children and other individuals or vulnerable groups. It should apply to the contractors' and subcontractors' employees. It should be properly

communicated to the employees. Some measures that ensure that the communication is effective include the employees:

- Affix their signature to the COC after reading it,
- Receive a copy of the COC,
- Have the COC explained to them,
- Understand that the COC is a condition of employment, and violations can result in consequences, including fines and dismissals.

To ensure the effective communication of the COC to the employees and stakeholders throughout the project implementation, a copy of the COC should be displayed at an accessible location in comprehensible, jargon-free language. The COC should be prepared with reference to the issues, impacts, and mitigation measures identified in:

- The project's Environmental and Social Management Plan (ESMP) and the required standards of the World Bank Environmental and Social Standards
- Relevant national, legal and/or regulatory requirements
- Grievance mechanisms

Some of the specific issues to be addressed by the COC are:

- Compliance with applicable laws, rules, and regulations and World Bank's relevant standards.
- Compliance with applicable health and safety requirements (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment).
- Compliance with school rules for what activities are permissible in the school compound such as, no-smoking, no illegal substances on the premises, etc.
- The prohibition of the use of illegal substances.
- Sexual harassment (for example, to prohibit the use of language or behaviour, in particular towards women or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate).
- Violence or exploitation (for example, the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favours or other forms of humiliating, degrading or exploitative behaviour).
- Protection of children (including prohibitions against abuse, defilement, or otherwise unacceptable behaviour with children, limiting interactions with children, and ensuring their safety in the project area).
- Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by the contractor and not open areas).
- Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favours, are not provided to any person with whom there is a financial, family, or personal connection).
- Respecting reasonable work instructions (regarding environmental and social norms, including using indecent language and not playing loud and/or lewd music at the project site).

- Protection and proper use of property (for example, to prohibit theft, carelessness or waste).
- Duty to report violations of the COC
- Nonretaliation against workers who report violations of the COC
- Non-discrimination of the Employer's Personnel, and the Contractor's Personnel (for example, on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status).

5.2.5 Public Health and Safety

It is anticipated that during construction works, the fisherfolk and fish market vendors will be exposed to certain activities that could present a risk to their safety. The C-ESMP should outline measures to ensure that the safety of the public is not compromised, especially if work is to be done during the regular working hours. Specific areas that should be considered and incorporated in the Plan and implemented include:

- The contractor will develop and implement an **Access Plan (Annex 4)** to ensure only authorized personnel can access the worksite, including appropriate barriers and signage (day and night).
- All hazardous areas should be secured to prevent access to unauthorized personnel, especially students.
- All hazardous areas should be demarcated, the construction area cordoned off, and a physical barrier installed around the work area. A security fence should be installed around the entire site, and a safety net should be installed around the building under construction.
- Warning signs should be installed in areas with a risk for incidents.
- The school administration, teachers, and students should be engaged prior to the commencement of work and made aware of the risks presented by the work and the precautionary measures that they should follow.
- Construction materials and construction waste should be kept in an organized and orderly manner.
- A separate access from what is being used by teachers and students should be used by the contractor. The contractor should utilize the access south of the school compound.
- The schools' management should be informed prior to any high-risk activities.

Commented [SK9]: Consider providing an outline of an expected Access Plan as an annex.

Commented [KB10R9]: Addressed

5.3 Emergency Preparedness and Response

Even though the contractor may have implemented proper systems and is complying with all the environmental and occupational health and safety requirements to ensure a safe and healthy work environment, occasions can still arise when an environmental emergency can occur. In the event of an emergency, the objectives are to ensure a prompt and effective response by the contractor. In this regard, this Emergency Response Plan (ERP) should be and include:

- Emergency Contact Details;
- Emergency Procedures;
- Description of an Emergency;
- Authority of Control;
- Scenario Description and Response

- Materials Inventory; and
- Incident Reporting.

The ERP must also include contact information for institutions and agencies to be contacted in case of emergency.

5.4 Environmental and Social Impacts Monitoring Matrix

Table 2 below describes the mitigation measures for managing the project's environmental and social impacts, by highlighting the monitoring methods that should be utilized, the parties responsible for implementation, and the resulting actions and indicators for environmental and social management.

Table 2: Mitigation Measures, Parties Responsible and Resulting Actions

Potential Impact	Monitoring Methods	Responsible Parties	Resulting Actions	Indicators
Soil and Surface Water Resources	Site visits, spot checks and water quality monitoring	Contractor Supervising Consultant E&S Specialist Environmental Protection Department	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards to prevent harm to the water resources. In cases of non-compliance, issuing a stop order, and instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> Monthly E&S Reports Photos Reports of complaints from fisherfolk, fish vendors, boat owner, neighbouring businesses or government agencies. Water quality parameters
Environmental damage caused by the workforce	Site visits and spot checks	Contractor Supervising Consultant E&S Specialist Environmental Protection Department	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards to mitigate damage to the environment. In cases of non-compliance, issuing a stop order, and instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> Monthly E&S Reports Photos Reports of complaints from fisherfolk, fish vendors, boat owner, neighbouring businesses or government agencies.
Air Quality degradation from dust and emissions	Site visits, spot checks and air quality monitoring	Contractor Supervising Consultant E&S Specialist Environmental Protection Department	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards to mitigate damage to the environment. In cases of non-compliance, issuing a stop order, and instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> Monthly E&S Reports Photos Reports of complaints from fisherfolk, fish vendors, boat owner, neighbouring businesses or government agencies. Concentration of air pollutants
Exposure to VOCs	Site visits and spot checks	Contractor Supervising Consultant E&S Specialist Environmental Protection Department	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards to mitigate damage to the environment. In cases of non-compliance, issuing a stop order, and 	<ul style="list-style-type: none"> Monthly E&S Reports Photos Incident reports

Potential Impact	Monitoring Methods	Responsible Parties	Resulting Actions	Indicators
			instructing the contractor to take corrective action.	
Noise Pollution	Site visits, spot checks and noise monitoring	Contractor Supervising Consultant E&S Specialist Environmental Protection Department	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards to mitigate damage to the environment. In cases of non-compliance, issuing a stop order, and instructing the contractor to take utilize noise reduction measures. 	<ul style="list-style-type: none"> Monthly E&S Reports Photos Reports of complaints from fisherfolk, fish vendors, boat owner, neighbouring businesses or government agencies. Noise levels
Traffic Management	Site visits and spot checks	Contractor Supervising Consultant, E&S Specialist	Compliance with the approved traffic management measures.	<ul style="list-style-type: none"> Monthly E&S Reports Reports of accidents Reports from the motoring public
Occupational Health and Public Health and Safety	Site visits and spot checks	Contractor Supervising Consultant E&S Specialist Ministry of Labour Social Security	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards including the Code of Conduct, and the Labour Management Procedures. In cases of non-compliance, issuing a stop order, and instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> Monthly E&S Reports Incident and accident reports Reports of grievances from employees. Reports of grievances from the public.
Slippage and Falling, Working at Heights	Site visits and spot checks	Contractor Supervising Consultant, E&S Specialist	<ul style="list-style-type: none"> Compliance with the required contractual environmental and social standards. In cases of non-compliance, issuing a stop order, and instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> Monthly E&S Reports Incident reports

Potential Impact	Monitoring Methods	Responsible Parties	Resulting Actions	Indicators
Security	Site visits and spot checks	Contractor Supervising Consultant E&S Specialist	<ul style="list-style-type: none"> • Compliance with the required contractual environmental and social standards. • In cases of non-compliance, instructing the contractor to take corrective action. 	<ul style="list-style-type: none"> • Monthly E&S Reports • Incident reports
Community Conflict and Grievances	Site visits, spot checks, consultation meetings and monitoring the Grievance Mechanism	Contractor Supervising Consultant E&S Specialist	<ul style="list-style-type: none"> • Compliance with the required contractual environmental and social standards specifically the Code of Conduct. • Consultation meetings to address community concerns/issues 	<ul style="list-style-type: none"> • Monthly E&S Reports • Grievances from the public. • Consultation Meeting Reports

6) STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISM

Stakeholder engagement is essential to ensure all stakeholders are aware of the project and to provide feedback and recommendations. A Stakeholder Engagement Plan (SEP) for the Barbados Beryl Emergency Response Project has been consulted and disclosed (<https://www.fisheries.gov.bb/barbados-beryl-emergency-response-and-recovery-project/>). This SEP should be implemented at the local level during the construction period. It is recommended that project specific measures be implemented, especially to address engagement between the BPI, the contractor, fisherfolk and fish market vendors.

Persons affected by project activities should also be provided with a forum to be heard and have their grievances addressed. A Grievance Mechanism (GM) is prepared for the Barbados Beryl Emergency Response Project. However, a site-level grievance mechanism should be implemented for the project, outlining a clear set of opportunities for affected people or any other interested stakeholder to post a claim, request information and have a formal communication mechanism.

A separate grievance mechanism should be established to address workers grievances. This should be guided by the workers grievance mechanism and form part of the C-ESMP which addresses contractors' requirements.

7) CONCLUSION

The proposed intervention to be done at the Fisheries Harbour under the Barbados Beryl Emergency Loan Response Project will be repairing the breakwater that was severely damaged Hurricane Beryl. The is action will support the Government of Barbados (GOB) efforts in achieving the goals of enhancing climate-resilient infrastructure, protecting fisherfolk boats and securing the livelihoods of fisherfolk and fish market vendors. The project has been welcomed by all stakeholders engaged during the Environmental and Social Management Plan (ESMP) preparation and consultation process.

The implementation of the project will need to comply with the relevant GOB laws and regulations and the World Bank environmental and social framework, and the ESMP prepared for the project. The ESMP has identified the potential impacts of the intervention and outlines the mitigation measures to be applied during the construction phase of the project to avoid, reduce or mitigate adverse environmental and social impacts. The project is not complex and most of the environmental and social impacts will occur during the construction phase (minor civil works) and are considered temporary, short term, localised, and are classified as low to moderate risk. Most of the direct impacts can occur within the Fisheries Harbour environment itself. The ESMP outlines measures which should be implemented during the planning and construction phases of the project to mitigate and manage the ESHS risks.

Implementation of the recommended management and mitigation measures during the preconstruction and construction phases will ensure that potential project impacts are prevented or reduced. Importantly, the contractor should prepare a Contractor Environmental and Social Management Plan (C-ESMP), incorporating the recommendations of the project's ESMP and the implementation of this plan should be stringently monitored by the Supervisory Consultants and Barbados Port Inc (Annex 5). The relevant stakeholders, especially the fisherfolk, fish market vendors and other key stakeholders should also be kept informed of the project and allowed the opportunity to provide feedback and recommendations. The mechanism to address grievances should also be implemented.

Commented [SK11]: Consider providing an indicative budget to inform the extent of expenditures required to be allocated within the contract to implement these activities.

Commented [KB12R11]: @Svetlana Khvostova Please share an example.

Commented [SK13R11]: Please see my response in the email (with an example outline)

8) ANNEX 1: ESMP TERMS OF REFERENCE

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR REPAIR/REHABILITATION OF FISHERIES MARINA AND BREAKWATER AT THE FISHERIES COMPLEX

TERMS OF REFERENCE

1. PROJECT BACKGROUND

Hurricane Beryl, the most powerful Atlantic hurricane on record to form in June, devastated several Caribbean countries between June 29 and July 5, 2024, as it tore through the region and strengthened to Category 5 status. The eye of the then-Category 4 Hurricane Beryl passed within 150 kilometers of the southern coast of Barbados on June 30 and July 1, causing severe damage to the south and west coasts and the Bridgetown marina, and severely affecting the fishing industry, with 240 vessels damaged or destroyed.³ The cruise terminal of Bridgetown Port was also affected, including nearby breakwaters. The hurricane disrupted the accessibility, availability, quality, and use of goods and services in the area, especially the fisheries value chain, posing long-term economic challenges. Tourism and housing sectors were also affected, with 73 percent of hotels, apartments, and guest houses and 40 houses suffering various levels of damage.

The Government of Barbados has made substantial efforts to address the most urgent needs in the aftermath of Hurricane Beryl. The government swiftly mobilized resources across ministries, the private sector, and international partners for immediate response and recovery of the fisheries complex and Bridgetown Port. The measures included fishing vessel relocation, debris removal, and rehabilitation works at the Bridgetown Port. Besides the immediate response and repair effort, the government's overarching effort to support the recovery of the fishing industry extended to set up the National Fisheries Benevolent Fund. The fund is expected to support fisherfolk in restoring their livelihoods.⁴ While the government's initial response met the most urgent needs, a more systematic approach for resilient recovery and reconstruction is required. A systematic approach is needed to include climate change adaptation and disaster risk reduction (DRR) measures, requiring global best practices and support to ensure the resilient recovery and long-term sustainability of ports, coastal infrastructure, and disaster-affected sectors and communities.

The Government of Barbados has negotiated financing of US\$54 million from the World Bank to finance the Barbados – Beryl Emergency Response Loan Project. The project development objective (PDO) is to: (i) restore disaster-affected targeted sectors; (ii) enhance climate-resilient infrastructure; and (iii) strengthen emergency preparedness and response capacity. Project activities will focus on supporting climate resilient recovery and reconstruction in the wake of Hurricane Beryl while strengthening the country's resilience to future disasters and climate change, including building capacity for disaster preparedness and response. Activities that directly support the immediate recovery of livelihoods for fisherfolk will be sequenced to ensure timely implementation over those focused on medium- to long-term resilience building. The project is composed of four components:

³ Damage assessment conducted by the Barbados Fisheries Division.

⁴ <https://www.fisheries.gov.bb/national-fisheries-benevolent-fund/>

- Component 1: Immediate recovery from a hurricane
- Component 2: Strengthening Barbados' resilience for future catastrophic events
- Component 3: Contingent emergency response (CERC)
- Component 4: Project management

Under Component 1, specifically Sub-Component 1.1: Recovery of the affected sectors – will focus on rehabilitation of the Barbados fisheries marina and its coastal protection, as well as rehabilitation of landing facilities. This activity is a priority for the government, and toward that end, the Barbados Port Incorporated (BPI) has already hired a firm for the design and supervision of the rehabilitation of the Fisheries Marina and its breakwater. Given the time constraint in having the breakwater rehabilitated before the next hurricane season, the project will ensure the designs for all infrastructure rehabilitation are informed by future climate scenarios, predicted extreme events, and economic and E&S feasibility. BPI is ready to start the procurement for the contractor to carry out the works.

This document presents the terms of reference (TOR) for preparing an Environmental and Social Management Plan (ESMP) for the repair/rehabilitation of fisheries marina and breakwater. The ESMP will detail (a) identify potential risks and impacts associated with the repair/rehabilitation of fisheries marina and breakwater; (b) the mitigation measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (c) the actions needed to implement these mitigation measures.

The ESMP will document the existing environmental and social conditions at the fisheries marina and its environs including physical, biological, and socio-economic aspects. The nature of expected emissions from the proposed incinerator type will be determined and the quantity and likely distribution of pollutants established.

2. OBJECTIVE OF THE ASSIGNMENT

The objective of the assignment is to prepare an Environmental and Social Management Plan (ESMP) to identify and mitigate the risks and impacts for the repair/rehabilitation of the Fisheries marina and breakwater. The ESMP will ensure that the environmental and social risks associated with the civil works and operational phases are identified and either avoided, minimized, reduced, or mitigated, while ensuring that the projects are environmentally and socially sound and sustainable.

3. SCOPE OF WORK

The scope of work includes assessing Fisheries Marina and breakwater locations, operational procedures, stakeholders, and risks and impacts. Under the supervision of the Ministry of Environment and National Beautification (MENB) and Barbados Port Inc (BPI), the Consultant will be required to perform the following tasks:

Task 3.1: Description of the Fisheries Marina and Breakwater

Briefly describe the location of the project site and indicate the area around the site that will be considered as part of the study area for the ESMP. Identify the project's areas (analysis of alternatives) of influence and delineated on maps of appropriate scales, showing the site layout,

contiguous areas (environmentally sensitive areas), and highlighting areas likely to be directly impacted by noise, air emissions, equipment, temporary access roads/routes, materials (aggregates, oversized boulders) required for the repair/rehabilitation.

Describe the type of repairs/rehabilitation works to be undertaken that are in-line with the designer's design specifications and drawings. Provide operational guidelines specifically outlining occupational health and safety.

Task 3.2: Description of the Environment

Collate, evaluate, and present baseline data on the study area, including the following:

- a) Physical environment: Summarize the physical setting of the Fisheries Marina and Breakwater sites. Assess existing water and air quality within the project area, identifying existing sources of pollution.
- b) Biological environment: Describe in general the marine and terrestrial ecosystems within the project area, including identifying any unique ecosystems.
- c) Socio-economic environment: Describe in general the population, land use, settlement and community structures, employment, public health, historical, archaeological and cultural resources within or adjoining the project area.

Task 3.3: Legislative and Regulatory Considerations

Identify the relevant policies, regulations and legislative requirements of the Government of Barbados governing land use, noise, water and air quality, wastewater discharge, waste (hazardous) disposal and public health and safety, as well as World Bank Environmental and Social Standards and Environmental Health and Safety Guidelines⁵.

Task 3.4: Identification of Potential Impacts

Identify the major issues of environmental concern and indicate their relative importance to the design of the project. Distinguish construction and post-construction phase impacts, significant positive and negative impacts, and direct and indirect impacts. Identify impacts that are cumulative, unavoidable or irreversible. Special attention should be paid to:

3.4.1 Site preparation and construction phase:

- Temporary access roads/routes
- Securing project site access
- Occupational health and safety issues that could result directly from the repair/rehabilitation works to marina or breakwater.
- Construction phase impacts including sourcing, transport, and storage of earth materials, building construction methods, construction site management, noise, fugitive dust, solid waste disposal, traffic and employment.
- Characteristics of any hazardous materials resulting from or involved in the project, indicating appropriate management strategies (e.g., handling, storage, treatment, disposal).

⁵

https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/

Based on the foregoing include any risk assessment and risk management of hazardous materials.

3.4.2 Operation phase:

- Solid/construction waste management during post-construction phase, with reference to waste collection, transport, sorting, loading, and disposal.

Reference should be made to the extent and quality of the available data and any information deficiencies, and uncertainties associated with the prediction of impacts should be clearly identified.

Task 3.5: Mitigation Measures

Develop required mitigation measures for adverse impacts identified for the proposed project activities outlined in Tasks 1, 2, 3 and 4. These mitigation measures will describe technical details: each mitigation measure, including the type of impact to which it relates and the conditions under which it is required and be in-line with the World Bank’s Mitigation Hierarchy”, that is (a) anticipate and avoid risks and impacts, (b) minimize or reduce risks and impacts to acceptable levels and mitigate risks and impacts that have been minimized or reduced. The mitigation measures proposed should be realistic, feasible and suitable under local conditions to remedy significant adverse environmental and socio-economic impacts to acceptable levels. For each of the mitigation measures, identify the parties responsible for implementation and relevant cost requirements.

Where avoidance or minimisation cannot be applied, mitigation measures and management strategies shall be formulated and discussed in alignment with the respective environmental and socio-economic baseline conditions and comparison with local environmental, health and safety and international standards/guidelines, which will be adopted by the Contractor in their Contractors – Environmental and Social Management Plan (C-ESMP).

Task 3.6: Development of a Monitoring Plan - Prepare a plan for monitoring the implementation of mitigating measures and the impacts of the project during pre-construction, construction and operation phases.

Task 3.7: Public Consultation - Prepare and deliver a presentation to stakeholders on the description of the project, significant impacts and proposed mitigation measures for pre-construction, construction, and operation phases.

4. REPORTING

The individual Consultant will report directly to the Ministry of Environment and National Beautification (MENB) and Barbados Port Inc (BPI). The Consultant will prepare a Draft Environmental and Social Management Plan (ESMP) addressing tasks outlined in Section 3 Scope of Work. The EMSP report will be concise and limited to significant environmental and social impacts and appropriate mitigation measures to minimize or reduce risks and impacts to acceptable levels. The main text will focus on findings, conclusions and recommended actions supported by summaries of the data collected. The ESMP report will be organized according to the outline below:

Commented [SK14]: Has there been a public consultation on this ESMP? Please include the summary info to the document.

Commented [KB15R14]: No consultations have been undertaken as yet. Consultations will be conducted and summary will be included in the document. The ESMP will also be published on the BPI's, MENB and Fisheries Division websites.

- Acronyms
- Executive Summary
- Description of Proposed Project
- Description of the Environment and Anticipated Impacts (by environmental/social component)
- Legal and Institutional Framework
 - National framework
 - International treaties
 - World Bank ESF
- Significant Environmental and Social Impacts
- Impact Mitigation and Management Measures
 - Mitigation measures for each impact with Table of consolidated Mitigation Measures
- Environmental and Social Monitoring Plan
- Public Consultation (Annex)

The Consultant is expected to submit electronic versions of each deliverable in Microsoft Word and PDF. All submissions must be completed in English. The Ministry of Environment and National Beautification and Barbados Port Inc is responsible for approving all submissions. The ESMP must be reviewed and cleared by the World Bank.

5. DELIVERABLES

The Consultant will deliver the following outputs/products:

- Deliverable 1: Inception Report
- Deliverable 2: Draft Environmental and Social Management Plan (ESMP) - Findings of the assessment of current situation, practices, risks and impacts and mitigation measures.
- Deliverable 3: Public consultation for Draft Environmental and Social Management Plan (ESMP) – Presentation of findings of the assessment of current situation, practices, risks and impacts and mitigation measures.
- Deliverable 4: Final Environmental and Social Management Plan (ESMP)) - Findings of the assessment of current situation, practices, risks and impacts, mitigation measures and inputs for public consultations.

6. LOGISTICS AND TIMING / SCHEDULE OF PAYMENT

The consultancy is anticipated to last for a period of per 21 days as per the tentative schedule. The Consult is expected to charge for days worked to reach the deliverables in the below matrix

Deliverable	Duration (days)
#1 Inception Report	7
#2 Draft ESIA	14
#3 Public Consultation	14
#4 Final ESIA	21

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 Ministry of Environment and National Beautification and Barbados Port Inc will arrange and coordinate access, arrange requested interviews, provide report and respond promptly to data requests to facilitate the assignment. The Ministry of Environment and National Beautification and Barbados Port Inc will provide comments to Draft deliverables within one (1) weeks of receipt.

7. QUALIFICATION AND EXPERIENCE

Eligible consultant must have the following minimum qualifications, experience, and competencies:

- The Consultant must have at least ten (10) years proven experience in environmental and social impact assessment, environmental compliance, public health, health facilities planning and management, marine assessments, with direct and relevant project experience in Barbados and the Caribbean Region.
- Demonstrated previous success in preparing Environmental and Social Management Plan (ESMP) for construction of ports and breakwaters in the Caribbean Region.
- Knowledge of and experience implementing international World Bank Environmental and Social Standards (ESS1-10).
- Knowledge of the policies, legislation and procedures associated with environmental management in Barbados and the Caribbean Region.
- Excellent written and oral communication and interpersonal skill

9) ANNEX 2: ENVIRONMENT AND SOCIAL INCIDENT RESPONSE TOOL KIT (ESIRT)

Part B: To be completed by Borrower within 24 hours

B1: Incident Details			
Date of Incident:	Time:	Date Reported to PIU:	Date Reported to WB:
Reported to PIU by:	Reported to WB by:	Notification Type: Email/phone call/media notice/other	
Full Name of Main Contractor:		Full Name of Subcontractor:	

B2: Type of incident (please check all that apply) ¹
Fatality <input type="checkbox"/> Lost Time Injury <input type="checkbox"/> Displacement Without Due Process <input type="checkbox"/> Child Labor <input type="checkbox"/> Acts of Violence/Protest <input type="checkbox"/> Disease Outbreaks <input type="checkbox"/> Forced Labor <input type="checkbox"/> Unexpected Impacts on heritage resources <input type="checkbox"/> Unexpected impacts on biodiversity resources <input type="checkbox"/> Environmental pollution incident <input type="checkbox"/> Dam failure <input type="checkbox"/> Other <input type="checkbox"/>

¹See Annex 1 for definitions

B3: Description/Narrative of Incident
<p>Please replace text in italics with brief description, noting for example:</p> <ol style="list-style-type: none"> I. <i>What is the incident?</i> II. <i>What were the conditions or circumstances under which the incident occurred (if known)?</i> III. <i>Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?</i> IV. <i>Is the incident still ongoing or is it contained?</i> V. <i>Have any relevant authorities been informed?</i>

B4: Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status

For incidents involving a contractor:
 Have the works been suspended (for example, under GCC8.9 of Works Contract)? Yes ; No ;
 Trading name of Contractor (if different from B1):
 Please attach a copy of the instruction suspending the works.

B5: What support has been provided to affected people

Annex 1: Incident Types

The following are incident types to be reported using the environmental and social incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hrs or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Part C: To be completed by Borrower (following investigation)

C1: Investigation Findings

Please replace text in italics with findings, noting for example:

- I. *where and when the incident took place,*
- II. *who was involved, and how many people/households were affected,*
- III. *what happened and what conditions and actions influenced the incident,*
- IV. *what were the expected working procedures and were they followed,*
- V. *did the organization or arrangement of the work influence the incident,*
- VI. *were there adequate training/competent persons for the job, and was necessary and suitable equipment available,*
- VII. *what were the underlying causes; where there any absent risk control measures or any system failures,*

C2: Corrective Actions from the investigation to be implemented (To be fully described in Corrective Action

Action	Responsible Party	Expected Date

Part C cont.: To be completed by Borrower (following investigation)

C3a: Fatality/Lost time Injury information

Immediate cause of fatality/injury for worker or member of the public (please check all that apply) ²:

1. Caught in or between objects 2. Struck by falling objects 3. Stepping on, striking against, or struck by objects
 4. Drowning 5. Chemical, biochemical, material exposure 6. Falls, trips, slips 7. Fire & explosion
 8. Electrocution 9. Homicide 10. Medical Issue 11. Suicide 12. Others
Vehicle Traffic: 13. Project Vehicle Work Travel 14. Non-project Vehicle Work Travel
 15. Project Vehicle Commuting 16. Non-project Vehicle Commuting 17. Vehicle Traffic Accident (Members of Public Only)

Name	Age/DOB	Date of Death/Injury	Gender	Nationality	Cause of Fatality/Injury	Worker (Employer)/Public

²See Annex 2 for definitions

C3b: Financial Support/Compensation Types (To be fully described in Corrective Action Plan template)

1. Contractor Direct 2. Contractor Insurance 3. Workman's Compensation/National Insurance
 4. Court Determined Judicial Process 5. Other 6. No Compensation Required

Name	Compensation Type	Amount (US\$)	Responsible Party

C4: Supplementary Narrative

Annex 2: Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
2. **Struck by falling objects:** slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
3. **Stepping on, striking against, or struck by objects:** stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
4. **Drowning:** respiratory impairment from submersion/emersion in liquid.
5. **Chemical, biochemical, material exposure:** exposure to or contact with harmful substances or radiations.
6. **Falls, trips, slips:** falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.
7. **Fire & explosion:** exposure to or contact with fires or explosions.
8. **Electrocution:** exposure to or contact with electric current.
9. **Homicide:** a killing of one human being by another.
10. **Medical Issue:** a bodily disorder or chronic disease.
11. **Suicide:** the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally.
12. **Others:** any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

13. **Project Vehicle Work Travel:** traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
14. **Non-project Vehicle Work Travel:** traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
15. **Project Vehicle Commuting:** traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
16. **Non-project Vehicle Commuting:** traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
17. **Vehicle Traffic Accident (Members of Public Only):** traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

10) ANNEX 3: CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

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

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

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

REQUIRED CONDUCT

Contractor's Personnel shall:

1. carry out their duties competently and diligently;
2. comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
 - a. ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - b. wearing required personal protective equipment;
 - c. using appropriate measures relating to chemical, physical and biological substances and agents; and
 - d. following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to their life or health;
5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another;

8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH);
11. report violations of this Code of Conduct; and
12. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.

RAISING CONCERNS

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

1. Contact [*enter name of the Contractor's Social Expert with relevant experience in handling gender-based violence, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [] or by telephone at [] or in person at []; or
2. Call [] to reach the Contractor's hotline (*if any*) and leave a message.

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

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

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

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

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [*enter name of Contractor's contact person with relevant experience*] requesting an explanation.

Name of Contractor's Personnel: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____

ATTACHMENT 1: Behaviours constituting Sexual Exploitation and Abuse (SEA) and behaviours constituting Sexual Harassment (SH)

**ATTACHMENT 1 TO THE CODE OF CONDUCT FORM
BEHAVIORS CONSTITUTING SEXUAL EXPLOITATION AND ABUSE (SEA) AND
BEHAVIORS CONSTITUTING SEXUAL HARASSMENT (SH)**

The following non-exhaustive list is intended to illustrate types of prohibited behaviours:

- (1) **Examples of sexual exploitation and abuse** include, but are not limited to:
 - A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g., cooking and cleaning) in exchange for sex.
 - A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
 - A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
 - A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favour.
 - A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

- (2) **Examples of sexual harassment in a work context**
 - Contractor's Personnel comment on the appearance of another Contractor's Personnel (either positive or negative) and sexual desirability.
 - When a Contractor's Personnel complains about comments made by another Contractor's Personnel on their appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
 - Unwelcome touching of a Contractor's or Employer's Personnel by another Contractor's Personnel.
 - A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

11) ANNEX 4: GUIDELINES FOR SITE ACCESS PLAN

Outline of an Access Plan

1. Introduction

- **Purpose of the Access Plan:**
Define the aim of the plan, focusing on facilitating rehabilitation activities while maintaining safe, efficient access for fishermen, visitors, and rehabilitation workers.
- **Overview of the Marina:**
Provide a description of the marina, including its historical, economic, and cultural significance to the local fishing community.
- **Stakeholders Involved:**
List stakeholders such as local fishermen, marina authorities, construction workers, environmental agencies, and the local community.

2. Site Assessment and Current Conditions

- **Physical Condition of the Marina:**
Assess the current state of infrastructure, including piers, docks, sea walls, ramps, buildings, and utilities, and identify areas that require rehabilitation.
- **Current Access Points:**
Evaluate the existing access points for boats, workers, and visitors, including public roads, pedestrian pathways, ramps, and docks.
- **Environmental and Ecological Conditions:**
Document any environmental concerns such as marine wildlife, coastal erosion, pollution, or fragile ecosystems in or around the marina.

3. Objectives of the Access Plan

- **Support Rehabilitation Efforts:**
Ensure safe and effective access for rehabilitation workers and equipment without disrupting the marina's functionality.
- **Maintain Fishing Operations:**
Ensure that rehabilitation activities do not negatively impact daily fishing operations or the livelihoods of local fishermen.
- **Public and Visitor Access:**
Improve or maintain public access to the marina for recreational purposes, including safe viewing areas or boat rentals.
- **Environmental Protection:**
Incorporate measures to protect the marina's natural environment, water quality, and wildlife during the rehabilitation work.
- **Safety and Compliance:**
Comply with safety regulations and ensure secure access to areas under construction or rehabilitation.

4. Access Requirements

- **Personnel Access:**
Define the requirements for personnel access, including workers, contractors, and engineers, ensuring safe entry and egress from work zones.
- **Boat Access:**
Define how fishing boats, leisure craft, and delivery vessels will access the marina during rehabilitation. Identify areas where access may be restricted or rerouted.
- **Visitor Access:**
Specify areas where the public can access the marina for sightseeing, fishing, or recreational activities while rehabilitation is ongoing. Consider alternative routes or entry points.
- **Emergency Access:**
Ensure there is unobstructed access for emergency services, such as fire and medical teams, during the rehabilitation process.

5. Infrastructure and Access Modifications

- **Temporary Access Routes:**
Outline temporary pathways, ramps, or scaffolding required for workers and equipment. This may include pedestrian walkways to avoid disturbance to marina activities.
- **Modifications to Docks and Piers:**
Plan for necessary modifications to docks or piers for construction equipment and to ensure access to fishing vessels during the work period.
- **Parking and Vehicle Access:**
Detail parking areas for workers and delivery vehicles. Consider the minimization of impact on the marina's public access and parking areas for customers.
- **Signage and Wayfinding:**
Install clear and prominent signage directing workers, visitors, and boats to safe areas and alerting them to any restricted zones.

6. Environmental Considerations

- **Pollution Control:**
Develop protocols for managing waste, including oil spills, construction debris, and other pollutants that could harm the marine environment.
- **Marine Life Protection:**
Incorporate strategies to protect marine life, including creating buffer zones to avoid disturbing sensitive ecosystems, implementing noise reduction measures, and avoiding construction work during critical breeding seasons.
- **Sustainability Measures:**
Use environmentally friendly materials and methods for rehabilitation, including energy-efficient lighting, green building practices, and eco-friendly waste management.
- **Water Quality Management:**
Monitor water quality throughout the rehabilitation process to prevent contamination from construction activities.

7. Timeline and Phases of Rehabilitation

- **Phase 1: Initial Assessment and Planning**
Initial surveys, stakeholder consultations, and preparation of rehabilitation plans and environmental assessments.
- **Phase 2: Structural Rehabilitation**
Major construction and repair works, including fixing piers, sea walls, docks, and boat lifts. Temporary access routes may be established during this phase.
- **Phase 3: Enhancements to Public and Boat Access**
Improvements to visitor facilities, such as walkways, viewing platforms, and docks. Safety upgrades to boat access points.
- **Phase 4: Final Inspections and Public Access Restoration**
Final checks for safety, water quality, and infrastructure readiness. Officially reopen all areas of the marina to full public access.

8. Safety and Emergency Management

- **Safety Protocols for Workers:**
Define safety measures for workers, including personal protective equipment (PPE) requirements and safe operation of machinery near water.
- **Safety for Fishermen and Boaters:**
Ensure that safe access to fishing boats and other vessels is maintained, and that marina users are informed of any hazards.
- **Emergency Procedures:**
Develop emergency response plans for potential accidents, including water rescues, equipment failures, and fires.
- **Monitoring of Hazardous Conditions:**
Continuously monitor weather conditions, tides, and water levels to ensure the safety of construction work and marina operations.

9. Public Engagement and Communication

- **Stakeholder Consultation:**
Ensure regular communication with local fishermen, marina operators, and the community to keep them informed of progress, disruptions, and rehabilitation goals.
- **Community Feedback Mechanisms:**
Set up channels through which the public can voice concerns or suggestions regarding rehabilitation work and access issues.
- **Educational Outreach:**
Create educational programs or signage to inform visitors about the rehabilitation process, the history of the marina, and its environmental importance.

10. Monitoring and Evaluation

- **Progress Tracking:**
Monitor the progress of the rehabilitation works to ensure adherence to the planned timeline, budget, and access protocols.
- **Access Evaluation:**
Regularly assess how the Access Plan is functioning, focusing on safe access for workers, fishermen, visitors, and emergency services.

- **Post-Rehabilitation Review:**

Conduct a review of how well the rehabilitation activities have addressed access and safety concerns and make adjustments as necessary.

11. Conclusion

- **Summary of Key Objectives:**

Recap the key goals of the Access Plan, including ensuring minimal disruption to fishing operations, improving public access, and preserving environmental integrity.

- **Commitment to Future Monitoring:**

Highlight ongoing monitoring and commitment to maintaining access and safety at the marina post-rehabilitation.

12) ANNEX 5: SAMPLE ESMP BUDGET

Category	Estimated Cost (USD)
1. Environmental Impact Mitigation	
Setup of waste collection points, waste disposal, recycling programs	5,000
Installation of erosion control measures (e.g., breakwaters, vegetation restoration)	15,000
Air and water quality monitoring, noise level checks, spill response systems	7,000
2. Social Impact Mitigation	
Public meetings, focus groups, stakeholder consultations, local community engagement programs	10,000
Compensation programs for any displaced individuals, land access arrangements	25,000
Programs to support local fisherfolk, vulnerable groups, training, and capacity building	12,000
3. Health and Safety Measures	
PPE for workers, health and safety training, emergency response planning	8,000
On-site welfare facilities, insurance, and medical support for workers	6,000
4. Monitoring and Compliance	
Continuous monitoring of air/water quality, noise levels, and ecosystem impacts	10,000
Ongoing assessment of social impacts, community feedback, grievance mechanisms	5,000
Regular ESMP audits, environmental and social impact reporting, and compliance checks	7,000
5. Capacity Building and Training	
Training for marina operators, local government officials, and fishermen on sustainable practices	5,000
Contingency: Allowance for unforeseen environmental or social risks	8,000
TOTAL	123,000

13) REFERENCES

- 1) Fisheries Sector Damage Assessment Report
- 2) Barbados Fishing Harbour Breakwater Design