Ministry of Fisheries, Oceans and Maritime Affairs

Vanuatu Pacific Islands Regional Oceanscape Program (VU PROP)

First Phase

P513248

ENVIRONMENTAL AND SOCIAL SCOPING STUDY

Final Draft

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Abbreviations

Abbreviation	***Definition***
aFAD	Anchored Fish Aggregating Device
AI	Artificial Intelligence
CBD	Convention on Biological Diversity
CESMP	Contractor's Environmental and Social Management Plan
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMIP-5	Coupled Model Intercomparison Project Phase 5
DEPC	Department of Environmental Protection and Conservation, Vanuatu
DUAP	Department of Urban Affairs and Planning
EEZ	Exclusive Economic Zone
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMMP	Environmental Management and Monitoring Plan
EN	Endangered (IUCN Red List classification)
ESCOP	Environmental and Social Code of Practice
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework (World Bank)
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards (World Bank)
GIIP	Good International Industry Practice
HACCP	Hazard Analysis and Critical Control Point
ICT	Information and Communication Technology

Abbreviation	*Definition*
ISPS	International Ship and Port Facility Security Code
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated (fishing)
LMP	Labour Management Procedures
MACBIO	Marine and Coastal Biodiversity Management in Pacific Island Countries
MARPOL	International Convention for the Prevention of Pollution from Ships
MCS	Monitoring, Control and Surveillance
MFOMA	Ministry of Fisheries, Oceans and Maritime Affairs
MIPU	Ministry of Infrastructure and Public Utilities
MoET	Ministry of Education and Training
MoU	Memorandum of Understanding
NBSAP	National Biodiversity Strategy and Action Plan
NEPIP	National Environment Policy and Implementation Plan
NFPA	National Fire Protection Association
PEA	Preliminary Environmental Assessment
PIRFO	Pacific Islands Regional Fisheries Observer
PROP	Pacific Islands Regional Oceanscape Program
PSC	Project Steering Committee
PST	Project Support Team
PWD	Public Works Department
QMP	Quarry Management Plan
RFMO	Regional Fisheries Management Organization
SEA/SH	Sexual Exploitation, Abuse and Sexual Harassment
SEP	Stakeholder Engagement Plan
SOP	Series of Projects

Abbreviation	*Definition*
SUMA	Special, Unique Marine Area
TOR	Terms of Reference
UNCBD	United Nations Convention on Biological Diversity
UNCLOS	United Nations Convention on the Law of the Sea
UNELCO	Union Électrique du Vanuatu Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VESS	Vanuatu Environmental Sensitivity Study
VFD	Vanuatu Fisheries Department
VMSA	Vanuatu Maritime Safety Authority
VU	Vanuatu

Executive Summary

Vanuatu, like other Pacific Island countries, face structural development challenges linked to geographic isolation, small domestic markets, limited infrastructure, and high exposure to climate and natural hazards. Fisheries—particularly tuna—are central to national food security, employment, and public revenue, yet much of the value generated from these resources continues to accrue offshore. The Vanuatu Pacific Islands Regional Oceanscape Program (VU PROP), to be implemented by the Vanuatu Ministry of Fisheries, Oceans and Maritime Affairs (MFOMA), has been designed to address these challenges by strengthening fisheries governance, enabling domestic value addition, supporting small- and medium-scale fisheries, and improving resilience to climate change.

This Environmental and Social (E&S) Scoping Study was undertaken at the project preparation stage to identify potential environmental and social risks and benefits, assess their likely significance, and define the scope of subsequent impact assessment and risk management instruments required during implementation. The scoping process focuses on early identification of potentially significant impacts across the planning, construction, and operational phases of the project. It provides recommendations to inform project design, guide future screening and instrument preparation and ensure alignment with national legislation and the World Bank Environmental and Social Framework.

Overview of Proposed Project Components

VU PROP comprises a combination of infrastructure investments, technical assistance, and institutional strengthening activities implemented by the Ministry of Fisheries, Oceans and Maritime Affairs through the Vanuatu Fisheries Department.

The four components are:

Component 1: Tuna Industry Domestication

The core investment is the development of climate-resilient fisheries port infrastructure at Luganville. This includes coastal reclamation, construction of a multipurpose jetty, installation of moorings for large vessels, and associated onshore facilities such as a boatyard and gantry, fuel and water services, cold-storage connections, wastewater treatment, and an integrated administrative building for fisheries inspections, customs, enforcement, and certification. Together, these facilities are intended to reduce port congestion, improve safety and efficiency of vessel operations, facilitate tuna transshipment and servicing, and strengthen fisheries monitoring, control, and surveillance. Infrastructure design will align with national regulations and international standards for maritime safety, security, energy efficiency, and resilience to cyclones, earthquakes, sea-level rise, and coastal flooding.

Component 2: Small and Medium-Sized Fisheries Value Chain Development

The component prioritises investments in domestic value chains through a hub-and-spoke cold-chain model. Key activities include upgrades to the Luganville Provincial Fish Market, installation of solar-powered cold storage, support for fish aggregation, packaging and marketing, and provision of cold-chain equipment and training at dispersed landing sites. These investments are intended to extend shelf life, reduce spoilage, and enable fishers to access higher-value markets, including inter-island trade. In parallel, the project supports fisher associations through targeted technical assistance, entrepreneurship support, and extension services, strengthening their ability to operate collectively, manage logistics, and engage with markets more effectively.

Component 2 also supports safer and more productive fishing practices by facilitating the design, construction, and demonstration of medium-scale fishing vessel prototypes and associated training. These activities aim to enable fishers to safely expand offshore operations, reduce pressure on over-exploited nearshore resources, and improve economic returns. Complementary data collection, digital tools, and analytical capacity building will improve understanding of coastal fisheries performance and inform adaptive management.

Component 3: Fisheries Governance and Institutional Strengthening

This component addresses identified gaps in institutional capacity, data systems, compliance mechanisms, and policy frameworks within the fisheries sector. Investments include the design and construction of a new, climate-resilient and low-emissions headquarters for Vanuatu Fisheries Department in Port Vila to support core fisheries management functions and improve working conditions for staff. The facility is intended to enhance coordination, data management, and service delivery across fisheries governance, while meeting modern standards for disaster resilience, accessibility, and energy efficiency. Supporting investments include equipment, vehicles, and digital tools required for effective day-to-day operations.

Component 3 activities include the expansion of electronic monitoring and reporting systems, capacity building for data analysis and enforcement, and stakeholder outreach to improve understanding of fisheries regulations and compliance obligations. In parallel, the component supports policy and regulatory reviews to strengthen transparency, accountability, and alignment with regional and international fisheries management frameworks.

Component 4: Project Management

This component covers the staffing of the Project Support Team (PST), procurement of necessary equipment and software, and operational costs. Notably it includes funding for E&S resources and the preparation and implementation of E&S instruments and risk management measures.

Environmental and Social Conclusions for Key Investments

Luganville Fisheries Coastal Reclamation and Port Infrastructure

The coastal reclamation, multipurpose jetty, moorings, and associated onshore facilities represent the project's largest and most complex infrastructure investment. The scoping assessment identified several potentially significant environmental and social risks, particularly related to coastal and marine processes, marine turtles and mammals and their habitats, waste and wastewater management, occupational and community health and safety, and long-term changes to foreshore use and access.

While no dredging is required, the permanent occupation of the coastal environment and intensification of maritime activity may alter local hydrodynamics, benthic habitats, and visual amenity. Increased vessel traffic and port operations also introduce risks associated with marine pollution, traffic safety, marine animal collisions, noise, and worker safety. Social risks include potential disruption to customary and recreational use of the foreshore, as well as SEA/SH and community health and safety risks associated with an expanded port workforce.

With appropriate design, stakeholder engagement, and operational controls, these risks are considered manageable. An ESIA, supported by technical biodiversity studies, marine safety institutional analysis, detailed coastal process modelling and robust environmental and social management plans, is required to ensure impacts are avoided, minimised, or mitigated in line

with international good practice. Operational ESHS management procedures are required to manage port health and safety, emissions and waste management.

Land due diligence is required to confirm the current land tenure status and the process for a Foreshore Development Permit and occupational rights

Fisheries Technology Centre – Luganville

The Fisheries Technology Centre is expected to deliver significant social and economic benefits through skills development, food safety training, and support for value-added processing. Environmental and social risks are generally moderate and relate primarily to waste and wastewater management, occupational health and safety, energy use, and life and fire safety during both construction and operation.

These risks can be effectively managed through appropriate building design, compliance with national codes and international standards, and the implementation of operational procedures that follow the waste hierarchy and energy efficiency principles. The scoping study concludes that no standalone ESIA is required; rather, the facility should be addressed through an ESMP integrated into detailed design and construction and operational ESHS management procedures.

Luganville Provincial Fish Market

Upgrades to the provincial fish market are intended to strengthen domestic fisheries value chains, improve food safety, and reduce post-harvest losses. Key construction risks identified include waste handling, hygiene and worker safety, and temporary disruptions to stall holders and visitors.

These risks are localised and well understood. With appropriate design and construction management impacts are expected to remain low to moderate. The scoping study recommends a targeted environmental and social screening proportionate to the scale of works, supported by an Environmental and Social Code of Practice or similar.

Vanuatu Fisheries Department Headquarters – Port Vila

The proposed VFD headquarters is a relatively low-risk infrastructure investment, with most potential impacts associated with construction-phase occupational health and safety and waste management. Designing the building to be climate-resilient, energy-efficient, ensure a safe building for occupants and accessible is central to risk mitigation. The scoping study concludes that an ESMP is required to inform the design and construction phases.

Technical Assistance and Capacity Building

Technical assistance activities, including policy development, data systems, training, and digital tools generally present low environmental risk and primarily positive social outcomes. Potential risks relate to stakeholder engagement, data governance, occupational health and safety, community health and safety and inclusion, particularly ensuring that benefits are equitably distributed and accessible to women, youth, and small-scale fishers.

These activities should be screened for E&S risks, the TOR reviewed and outputs reviewed by the E&S team. Activities should be implemented accordance with the Labour Management Procedures and Stakeholder Engagement Plan.

Beneficiaries and Stakeholders

The primary beneficiaries of VU PROP include artisanal and small-scale fishers, fish workers, women engaged in processing and marketing, fisheries observers, and government institutions responsible for fisheries management. Secondary beneficiaries include coastal communities, market vendors, service providers, and the broader national economy.

Stakeholders span national and provincial government agencies, customary landowners and marine resource users, private sector operators, training institutions, NGOs, and development partners. Meaningful, ongoing stakeholder engagement—particularly in Luganville and Port Vila—is essential to managing social risks, addressing grievances, and ensuring project benefits are inclusive and locally supported.

Summary of Key Environmental and Social Instruments Required, by Component

Component and Activity	**Instrument**
All Components of the VU PROP Project	Environmental and Social Commitment Plan Stakeholder Engagement Plan including Grievance Mechanism Labour Management Procedures including Labor Grievance Mechanism E&S Scoping Report (this report)
Component 1.1 Reclamation, Jetty, Moorings, Admin Building, Boat Gantry, Luganville	Land Due Diligence Report ESIA (including technical biodiversity studies and maritime institutional analysis) and ESMP (including subplans). Assume this document will also satisfy the EIA and EMMP requirements of DEPC Environmental Permit process Land access plan (scope to be determined based on Land Due Diligence Report).
Component 1.2 Fisheries Technology Centre, Luganville	Land Due Diligence Report. ESMP. CESMP.
Component 2.1 Luganville Fish Market Upgrades and other minor works	Land Due Diligence Report. ESCOP
Component 3.1 VFD Headquarters	Land Due Diligence Report ESMP. CESMP.
Components 1.2, 2.1, 2.2, 3.2, 3.3 Technical Advisory	Instruments will depend on the outputs of screening and may include task-specific OSH plans, Community Health and Safety Plans, Waste Management Plans etc.

Immediate Next Steps

- Finalisation of the priority instruments for Project Appraisal including this report and:
  - Vanuatu PROP Stakeholder Engagement Plan
  - Vanuatu PROP Labor Management Procedures
  - Vanuatu PROP SEA/SH Action Plan
  - Vanuatu PROP Environmental and Social Commitment Plan
- Recruit E&S resources for the Project Support Team:

    - E&S Officer – full time, Port Vila based
    - E&S Specialist – part time / intermittent, Port Vila or remote
    - Land Specialist – part time / intermittent, Port Vila or remote
- Stakeholder engagement.
- Land due diligence of all sites.
- Land transfer processes to be completed for the VFD Headquarters site in Port Vila.
- Terms of Reference for the ESIA and ESMP for the reclamation, jetty and moorings, new office block and fisheries technology centre at the VFD compound, Luganville.
- Preparation of the natural hazards and environmental and social aspects of the design TOR.

1 Introduction

1.1 Background and Purpose

Vanuatu and other Pacific Island Countries (PICs) face shared development challenges arising from small economies, geographic isolation, limited resources, and extreme vulnerability to climate change and natural hazards. Fisheries—particularly tuna—are central to economic growth, food security, and public revenues across the Western and Central Pacific Ocean, which accounts for around 60 percent of global tuna production. Although the region has strong conservation and management frameworks, much of the value from tuna fisheries continues to accrue outside PICs. In Vanuatu, fisheries contribute significantly to GDP and livelihoods, yet low levels of in-country landing, processing, and value addition, combined with infrastructure damage from natural disasters, have constrained economic benefits and employment, particularly for women.

The Vanuatu Pacific Regional Oceanscape Project (VU PROP) ('the Project') aims to transform Vanuatu's oceanic and coastal fisheries into a resilient, inclusive, and climate-adaptive economic backbone by increasing domestic value addition, strengthening fisheries governance, expanding processing capacity, and supporting digital transformation for compliance and data management. It also seeks to reduce pressure on overfished coastal resources by enabling small-scale fishers to transition offshore, improving infrastructure, skills, access to finance, and gender inclusion.

The purpose of this document is to scope the potential environmental and social (E&S) risks and impacts of VU PROP at the preparation stage. The purpose is also to identify and summarise suitable mitigation strategies, detailing them sufficiently to provide a programme of mitigation activities and first estimate of mitigation costs.

In an environmental and social impact assessment process, scoping is carried out after the initial screening of potential risks and prior to the impact assessment. Risks that are screened out are no longer part of the scoping process. Scoping involves identifying all potentially significant environmental and social impacts resulting from all phases and activities of a project. The outcome of scoping provides the recommendations for the design process, impact assessment studies and for the type of risk management instruments to be prepared and implemented.

1.2 Scoping Study Methodology

Scoping is based on *available information*, and gaps and limitations are acknowledged. Risk screening was initially completed by the World Bank task team in the Concept Environmental and Social Risk Summary and then gap-filled in the E&S Scoping Inception Report. The next step was to collate further information about the activities and investments and the environmental and social context and potentially sensitive receptors.

Define the project activities and investments

Scoping of environmental and social risks are based on best available information on the activities and investments. At this phase in the project there are only very early concepts of the type of infrastructure investments and how they may operate, and only basic information on the technical advisory / assistance activities and outputs. Information has been gleaned from technical documents and conceptual drawings or layouts and from key informant interviews. This information has been reviewed to identify the occupation of land and coastal areas (in other words the infrastructure 'footprint') and associated disturbances, emissions, temporary

or permanent changes in landscape or environment, resource use and other aspects that can cause potential environmental and/or social harm.

Understand the environmental and social context

The other side of scoping is to identify the sensitive receptors and the relevant environmental and social aspects that could be at risk from the proposed investments and activities. This information has been gleaned from desk-top research along with analysis of site photos and interviews with key informants. No site visits by the environmental and social specialist were possible due to travel complications during the assignment. This means that this report has gaps in site specific detail but is sufficient to scope the future studies required during project implementation.

Scope potential risks and impacts

The scoping process concludes with overlaying the project aspects with the baseline context to produce an early estimate of the i) nature and ii) scale (or magnitude) of potential impacts (and, in some cases, benefits) based on the available information as described above. Other aspects such as location, duration (ie short term during construction) are also considered where relevant.

The significance of potential impacts is calculated and categorized using a 5x5 matrix of magnitude and likelihood, based on typical ESIA risk assessment matrices[1].

Figure 1 Impact Significance Matrix

Likelihood	Magnitude of impact				
	Negligible	Minor	Moderate	Major	Severe
Rare	Very Low	Low	Low	Medium	High
Unlikely	Very Low	Low	Low	Medium	High
Possible	Very Low	Low	Medium	High	High
Likely	Very Low	Low	Medium	High	Very High
Almost Certain	Low	Medium	High	Very High	Very High

Finally, the activities and impacts were also assessed against the in-country and financial institution policies, standards, laws and regulations. Gaps and limitations have been identified.

The conclusions of the scoping study highlight the following:

- Alignment with Government of Vanuatu laws and policies and actions to avoid misalignment.
- Alignment with World Bank ESS and actions to avoid misalignment.
- The potentially significant impacts that require action such as:
    - Redefinition of project components or investments.
    - Engineering or architectural design responses.
    - Further research and analysis in the impact assessment process including data gathering, mapping, modelling and stakeholder engagement.
    - Specific instruments for identifying and managing risk and impact.

[1] Note this is different to the World Bank ESF risk classification of Low, Moderate, Substantial and High, which is applied to risk at the Project level.

- The proportionate project area(s) of influence that will form the geographic basis of the impact assessment process.
- Impacts that are categorised as low do not warrant further assessment unless the magnitude or likelihood changes as a result of the impact assessment process.

1.3 Scoping Study Report Outline

- Description of key project activities, by component
- Overview of the legislative framework relevant to environmental and social risk assessment and the World Bank Environmental and Social Standards and a gap analysis.
- For each key project activity:
    - Description of environmental and social context based on available information;
    - preliminarily assessment of the Area of Influence;
    - scoping of potential key E&S risks and impacts of the activity;
    - propose project-specific mitigation measures and/or strategies to address key E&S risks and impacts in accordance with the mitigation hierarchy and in line with the requirements of the World Bank ESSs and the World Bank Group (WBG) EHS Guidelines (General and relevant Sector Guidelines); and
    - list of recommended terms of reference, studies to be undertaken and instruments to be prepared during subsequent phases of development of the project.
- Cost estimates; and
- Next steps

2 Proposed Vanuatu PROP Components and Activities

The E&S scoping has been based on the following project background and component descriptions; summarized from the draft Project Appraisal Document, technical documents and information provided by Vanuatu Fisheries Department (VFD), World Bank task team and technical consultants.

2.1 Project Objective and Background

The VU PROP will be implemented by MFOMA. VU PROP is part of the existing PROP Series of Projects (SOP). PROP SOP is a multi-country, multi-phase regional World Bank initiative aimed to improve fisheries management and economic development of Pacific Island countries by strengthening sectoral institutions, enhancing sectoral governance, including enforcement of fisheries regulations to combat illegal, unreported and unregulated fishing, promoting sustainable fishing practices and diversification of livelihoods for fishing communities, and harnessing national and regional economic benefits of fisheries, including through improving access to regional and international markets.

The Development Objective of VU PROP is to improve access to economic opportunities for fishers and fish workers, increase climate-resilient domestic supply of fish products and strengthen national capacity and regional collaboration for fisheries management.

According to information provided in the Project Appraisal Document, annual oceanic tuna catch varies but, as an example, in 2023 almost 4,000 mt was caught by authorized vessels in Vanuatu waters (albacore (72 % of catch) and yellowfin (21 %)). Most fishing is carried out by foreign vessels resulting in catch not being landed in Vanuatu. For example, in 2019 only 1.7 % of catch (146 mt) caught in Vanuatu's waters was processed in-country. This is well below the

aggregated average of 19 % across 12 Pacific Island counties. Vanuatu is currently not maximising the potential for local employment, diversified revenue and export earnings from activities such as dockside offloading, transshipment, local market supply, processing / adding value to products, vessel servicing, etc..

There is an opportunity to increase the total volume of tuna caught in Vanuatu's EEZ. Vanuatu's EEZ tuna fishery has a sustainable productive capacity level of at least 17,000 mt of tuna per year, allowing for a double to four-fold[10] increase in catch. There is potential to support the upgrading of domestic small-scale fishing fleets and expanding their operation into offshore areas. This would increase the revenue of the national economy and enable more job opportunities for the local labour force.

Climate change is reshaping Vanuatu's fisheries, with economic and food-security implications. Climate models project eastward shifts and overall declines in key Pacific tuna stocks, reducing regional fishing-access revenues by an estimated 13 percent by 2050, although Vanuatu's EEZ may see modest short-term gains in tuna availability despite longer-term biomass decline. These dynamics underscore the need for stronger fisheries management and digital transformation to improve data collection, analysis, and decision-making, enabling better adaptation to climate impacts and safeguarding future growth and economic resilience.

Vanuatu's coastal fisheries are integral to food security, subsistence livelihoods, and local economies, with an estimated 40 percent of households participating in fishing activities, half of which fish for commercial purposes. Vanuatu's coastal fishing vessels are mostly small, fuel-inefficient and with limited operating radius. There is a lack of robust data collection and analysis which makes sustainable coastal fishery resource management challenging. Anecdotally there are reports of nearshore overfishing and resource depletion, which can contribute to food security risks and threatens subsistence livelihoods and local economies. One solution to improve food security while also reducing pressure on nearshore fisheries, is to move fishing activity to stocks that are not currently overfished (e.g. tuna) and to strengthen coastal fisheries management.

The Vanuatu PROP project proposes to respond to some of the key issues in the fisheries sector through the following investments.

2.2 Component 1 Tuna Industry Domestication

Subcomponent 1.1. Investing in enabling public infrastructure for tuna industry domestication

The project will fund investments in fisheries port infrastructure to offer an efficient 'one-stop shop' for dockside inspections and administrative functions, facilities for dockside offloading, services to fleets (maintenance, catch sorting, supplies, cold storage, dock power, etc.), and facilitation of transshipment.

Under this component the project will infill some coastal area with a sheet pile quay (including backfill and paving) and construct a multipurpose, piled, 250 m long jetty near Luganville, Espiritu Santo, SANMA Province, at the location of the existing VFD compound.

The jetty will accommodate tie-up for multiple fishing vessels to avoid fishing port congestion. The jetty investment will be complemented with investments in associated new or renovated onshore facilities, including a boatyard pen and gantry for boat maintenance, an administrative office building that accommodates fisheries inspections, customs service, police and enforcement, seafood certification, and other administrative fishing port functions. The proposed infrastructure will accommodate dockside space and power plug-ins for cold storage

reefer containers, provide fuel storage and refuelling services, potable water reticulation, lighting and liquid waste treatment.

Additional single-point moorings will be installed adjacent to jetty in 30-meter-deep waters to safely accommodate and manage larger fish carrier vessels that serve transshipment of tuna and other high-value species. This supports orderly scheduling of inspections, should reduce anchorage congestions and enhance Vanuatu's fisheries monitoring and compliance capacity by providing designated positions for carrier vessels awaiting port services.

The jetty and associated infrastructure will be designed following national and international standards for climate and natural disaster resilience, taking into consideration earthquake, cyclone, and coastal flooding risks. The infrastructure will be constructed to energy efficiency standards and will include photovoltaic energy investments to supply energy needs, effectively reducing carbon emissions and expanding the local capabilities for installing and operating commercial-scale low-emissions energy systems.

The infrastructure will be designed to meet maritime security regulations for ships and port facilities involved in international trade as per International Ship and Port Facility Security Code (ISPS) necessary for transshipment activities.

Subcomponent 1.2. Developing a workforce for a national fisheries and seafood industry

To transform Vanuatu's fisheries sector into a sustainable, value-adding economic driver this sub-component will support an integrated approach to align curriculum development, workforce professionalization, and technology adoption through the National Maritime and Fisheries Training Institute (formally the Vanuatu Marine College) located adjacent to the multipurpose jetty and onshore facilities. Potential training areas include: aquaculture, boat building, safety at sea, captain certification, boat engine repair and maintenance, refrigeration repair and maintenance, food safety and hygiene, PIRFO[2]-level fisheries observers, electronic monitoring and electronic reporting.

A fisheries technology and commercialization center will be established on site to provide hands-on training, innovation support, and enterprise development services in seafood safety, cold chain logistics, value-added processing, including small-scale canning. The technology training center would operate as a publicly led, industry-supported facility with private sector partnerships and donor support. The proposed preliminary design includes a demonstration lab, hybrid solar-powered ice maker, chill and freezer room, retort canner and can sealing equipment, test kitchen and small-scale processing lines, hygiene training station, and shared workspace or training room and business support tools. It will be purpose-built as a HACCP[3]-compliant facility. The layout will be modular to enable scaling up and changing to industry needs.

The design, construction and operation of the proposed coastal reclamation, jetty and mooring systems and land-side infrastructure is subject to E&S scoping. The technical advisory services including curriculum improvements were screened for E&S risk, identifying potential occupational health and safety risks and opportunities to be scoped.

[2] PIRFO – Pacific Islands Regional Fisheries Observer
[3] HACCP - Hazard Analysis and Critical Control Points

2.3 Component 2. Small and Medium-sized Fisheries Value Chain Development

Subcomponent 2.1. Investing in domestic fisheries value chains

Investments in strengthening value chain development will focus on developing a 'spoke-and-hub' cold chain system ensuring improved shelf life of fish caught by local fishers and reducing spoilage. These investments also increase the value of fish as it reaches markets (i.e., fresh fish is more valuable), allowing fishers to boost the revenues obtained from sales. The outcome will be enhanced food security through increased availability of local, quality protein. The project will support: (i) strengthening of registered fishers' associations by offering extension services for entrepreneurship; (ii) providing targeted technical assistance to fishers' associations to develop satellite distribution systems to enhance inter-island fish trading and to assess barriers and assessing barriers to facilitate business development; (iii) providing upgrades for the Luganville provincial fish market to support fish product aggregation, solar-powered cold storage, packaging and marketing (i.e., "hub"); and (iv) practical training, extension services, and cold chain equipment for maintaining food quality in dispersed landing and handling points (i.e. "spokes").

Sub-component 2.1 will also invest in the construction of two demonstration vessel prototypes of about 7 and 8 meters, respectively, building on work initiated by the United Nations Food and Agriculture Organization and VFD. The project will support: (i) design and construction of two medium-scale fishing boat prototypes and related boat trials; (ii) boat demonstration tours and aFAD[4] fishing and gear innovation workshops for safe offshore movement of fishers; and (iii) associated communication and outreach campaigns. Scaled-up supply of these high-demand larger vessel types is beyond the scope of this project and will rely on scaled-up manufacturing and distribution of these vessel types by private-sector-run boatyards in Vanuatu. The vessels and training will both support offshore movement of fishers and advance fisheries on existing aFADs. No new aFADs are funded by VU PROP.

The design, construction and operation of the infrastructure improvements at the provincial fish market will be subject to E&S scoping. The technical advisory services E&S risk screening identified potential waste management, resource efficiency and occupational health and safety risks and opportunities to be scoped. The vessel design and construction will be scoped for potential community health and safety risks.

Subcomponent 2.2. Informing domestic fisheries value chain management and development

The sub-component will support the development of a pragmatic sampling and statistical extrapolation framework leveraging census and household surveys to improve coastal fisheries data, minimizing cost and effort. The project will support: (i) improved data collection (economic, social, biological) and analysis to inform management decisions and track sector performance, including the sector's economic contribution; (ii) increased use of data tools/apps/technology for efficiency, including upgrading and integration of existing regional tools such as apps for AI-supported electronic data collection, and corresponding ICT equipment; (iii) capacity building support and technical assistance to VFD in data collection and analysis to inform enforcement and management decisions.

[4] aFAD – anchored fish aggregating device.

Equipment purchase and use and data analysis under this component has been screened out as low to no risk.

2.4 Component 3 Fisheries Governance and Institutional Strengthening

The component aims to enhance Vanuatu's fisheries sector by reinforcing fisheries governance, supporting policy and regulatory review and strengthening the institutional capacity of VFD.

Subcomponent 3.1. VFD Headquarters

A site in Port Vila, under Government ownership, has been identified for the construction of the new low-emissions and climate and natural disaster-resilient VFD headquarters. The new cyclone and earthquake-resistant building would accommodate up to 150 staff according to staffing plans and several purpose-designed facilities and incorporate onsite photovoltaic power supply. The project will support: (i) design and construction of the headquarters building; (ii) furniture and fittings; (iii) two vehicles; (iv) equipment such as data recorders, computers, and personal safety gear; and (v) office supplies and services.

The design, construction and operation of the building will be scoped for E&S risks and impacts. Equipment purchase, installation and use has been screened out as low or no risk.

Subcomponent 3.2. Strengthening MCS capacity (US$3.3 million)

To maintain access to high-value export markets (e.g., European Union), it is critical for Vanuatu to demonstrate adequate progress in addressing illegal, underreported and unregulated (IUU) fishing activities. According to the Project Appraisal Document Vanuatu is not meeting regionally agreed requirements for observer coverage of the longline fishery. The project will support procurement, installation, and operation of up to 30 electronic monitoring systems (onboard cameras and equipment) to be implemented alongside electronic reporting to strengthen the vessel monitoring program and support a gradual long-term transition to increased use of electronic monitoring in lieu of observers, while supporting the observer placement program. The project will further support stakeholder outreach and public information campaigns to raise awareness on fisheries management and technical assistance services to support analysing fisheries data and providing capacity building for VFD in data collection and analysis.

The stakeholder outreach and public information campaigns will be scoped for stakeholder engagement risks and opportunities. Equipment installation and use and technical assistance has been screened out as low to no risk.

Subcomponent 3.3. Supporting policy review and updating MCS capacity

The project will support a series of policy and other reviews in support of increased transparency, accountability, and to inform improved regulatory management. Under discussion are the following reviews: review of beneficial ownership of locally based fishing companies, audit of the Vanuatu shipping register and its compliance with international legal obligations related to fishing vessels, review of opportunities and responsibilities under regional fisheries management organisation memberships, review of terms and conditions of fishing access agreements and licenses, policy and regulatory review of the management of small- and medium-scale fisheries.

The policy advisory and technical assistance will be scoped for E&S risks and opportunities.

2.5 Component 4 Project Management

This component covers the staffing of the Project Support Team (PST), procurement of necessary equipment and software, and operational costs. Notably it includes funding for E&S resources and the preparation and implementation of E&S instruments and risk management measures.

2.6 Project Implementation Arrangements

VFD will be responsible for project implementation. VFD is housed in MFOMA, designated as the implementing agency for purposes of the legal agreement. MFOMA was established in October 2024, is in the process of setting up its institutional and operational arrangements and has no prior experience implementing World Bank projects.

A Project Support Team (PST) will be established to assist VFD with management and reporting responsibilities for the proposed project. The PST will be led by a Project Coordinator and staffed with international Advisors and national Officers, as well as external consultants as needed. The minimum staffing to be maintained by the PST during implementation includes be included are an Engineer Advisor, a Procurement Officer, a Procurement Advisor (as needed), a Financial Controller (Officer), E&S Officer, E&S Specialist (intermittent, as needed), Land Specialist (intermittent, as needed), a Monitoring and Evaluation Officer (as needed), and a Communications Officer. Other areas of expertise may become necessary and will be evaluated as possible external consultancies and/or PST staff. The PST will operate based on a Program Operations Manual approved by the World Bank.

A Project Steering Committee (PSC) will provide strategic oversight, cross-sectoral coordination and alignment with relevant sector initiatives. The PSC will be chaired by the Director General, and will include the participation of representatives from various Ministries.

3 Legislative and Policy Framework

The Project will comply with the Vanuatu Government's environmental laws, standards, rules and requirements which impose restrictions on activities to avoid, minimize, or mitigate likely impact on the environment and the people. It is the responsibility of VFD and MFOMA to ensure that all activities under the Project are in accordance with the legal framework. The Project will also apply the World Bank's ESF which defines ten specific Environmental and Social Standards (ESSs) designed to avoid, minimize, reduce or mitigate adverse environmental and social risks and impacts of projects.

This section outlines the relevant laws and regulations in Vanuatu and the relevant World Bank ESS standards. A gap analysis is provided along with recommendations.

Overall, the objective of the project - improved fisheries management, including policy, institutional strengthening and infrastructure investments - aligns with Vanuatu's hierarchy of development and fisheries sector policies and plans.

3.1 The Constitution of the Republic of Vanuatu

Key aspects of the Constitution include:

- **Structure of Government:** Defines a parliamentary system with a Prime Minister elected by Parliament and a ceremonial President.

- **Fundamental Rights:** Guarantees rights to life, liberty, and security, alongside protection against discrimination based on race, gender, or religion.
- **Official Languages:** Recognizes Bislama, English, and French as official languages.
- **Customary Law:** Acknowledges the role of traditional chiefs and customary practices in the legal system.
- **Citizenship:** Outlines rules for automatic citizenship and naturalization.

3.2 Fisheries, Maritime and Oceans Management

Fisheries Act 2014

This Act provides for the management, development and regulation of fisheries within Vanuatu waters, and for the control of fishing vessels entitled to fly the flag of Vanuatu outside of Vanuatu waters in a manner consistent with Vanuatu's international obligations.

The Act provides for fisheries management plans that can outline the target species, license requirements, controls and limitations on fishing operations and catch. It also provides for compliance with international obligations, obligations to provide fisheries data and catch information, and other matters. Directly relevant to environmental and social risk management are the provisions for marine reserves:

The Minister may, after consultation with owners of any adjoining land and with the appropriate Local Government Council, declare any area of Vanuatu waters and the seabed underlying those waters to be a marine reserve.

(2) Any person who, except with the written permission of the Minister, within any marine reserve:

(a) engages in fishing; or

(b) takes or destroys any coral; or

(c) dredges or takes any sand or gravel; or

(d) otherwise disturbs the natural habitat; or

(e) takes or destroys any wreck or part of a wreck;

is guilty of an offence punishable on conviction to a fine not exceeding VT 50,000,000.

(3) The Minister may make regulations, not inconsistent with this Act, in relation to the establishment, management and protection of marine reserves.

The entire Vanuatu PROP project is consistent with the Fisheries Act, supporting the Government of Vanuatu to strengthen the implementation and compliance obligations.

Maritime Sector Regulatory Act No. 26 of 2016

This Act stablishes VMSA as the national maritime regulator and outlines its governance, powers, and responsibilities for maritime safety, security, maritime pollution prevention and response and environmental stewardship across Vanuatu's ocean territory.

This Act may be relevant to vessel and jetty operations.

Bill for the Oceans Act

The bill is for an Act to '*provide for a sustainable management of the ocean's space of Vanuatu through the adoption of a comprehensive Vanuatu Spatial Plan, and for related matters*'. The Act, once passed, will require a Marine Spatial Plan to be developed through a consultative and inclusive process. In 2026, the Government of Vanuatu is planning to conduct consultations with communities, chiefs, local leaders, and stakeholders across all provinces to ensure that the Marine Spatial Plan reflects local needs, customary governance, and national aspirations (blue prosperity Vanuatu)[5]. Ocean zones include general use and sustainable use where fisheries and other activities can be carried out sustainable, and no-take zones and tabu zones for the purposes of biodiversity and ecological protection. Section 15 confirms the institutional arrangements for management: *Jurisdictional areas:*

The Director must ensure that the different jurisdictional areas are managed by the respective authorities as follows: (a) The offshore jurisdictional area is to be managed by the National Government; and (b) The inshore and intermediate jurisdictional area is to be managed by the Provincial Government of each province in close collaboration with the Department; and (c) The inshore and coastal jurisdictional area is to be managed by the existing traditional entities in close collaboration with the Department.

The Act explicitly recognises custom ownership and management of inshore and coastal marine resources.

Policies and Plans

The *National Fisheries Sector Policy 2016-2031* has strategic goals for institutional strengthening and good governance; fisheries investment to increase economic growth and food security; infrastructure development; and enhancing fisheries compliance and IUU fishing prevention. Relevant to environmental and social assessment of investments is Strategic Action 13:Minimise Adverse Environmental Impacts on Fisheries Development, with the following policy directives:

> *"1. Undertake an environmental impact assessment (EIA) of major developments …*
>
> *5. Ensure that EIA activities undertaken by the Fisheries Department are cost recovered*
>
> *6. Develop a guideline or standard practice for EIA work*."

The Vanuatu *National Ocean Policy (2016, revised 2024 with addition of the Vanuatu Marine Spatial Plan)* and *National Roadmap for Coastal Fisheries (2019-2030)* outline frameworks for the development and management of fisheries, ensuring participatory decision-making among government agencies.

3.3 Environmental Protection, Resource Management, Conservation, Biodiversity and Biosecurity

Environmental Protection and Conservation Act 2002 and Amendments and EIA Regulation 2011

[5] www.blueprosperityvanuatu.org

The Act is the main legislation for environment risk management and biodiversity conservation. The Act is administered by the Department of Environmental Protection and Conservation (DEPC). It was originally titled 'Environmental Management and Conservation Act', but was officially changed under 2010 amendments.

Environmental Permits and Impact Assessment

Part 3 of this Act requires all projects, proposals or development activities, that are likely to impact on the environment or may require license, permit or approval under this law, must produce an Environmental Impact Assessment (EIA) and / or an Environmental Management and Monitoring Plan (EMMP), as follows:

Section 12 (1) All projects, proposals or development activities that:
a) cause or are likely to cause significant environmental, social and/or custom impacts; or
b) cause impacts relating to the matters listed in subsection (2); are subject to the EIA provisions of this Part.
Section 12 (2) Without limiting subsection (1), all projects, proposals or development activities that will do or are likely to do all or any of the following are subject to the EIA provisions of this Part:
a) affect coastal dynamics or result in coastal erosion;
b) result in the pollution of water resources;
c) affect any protected, rare, threatened or endangered species, its habitat or nesting grounds;
d) result in the contamination of land;
e) endanger public health;
f) affect important custom resources;
g) affect protected or proposed protected areas;
h) affect air quality;
i) result in the unsustainable use of renewable resources;
j) result in the introduction of foreign organisms and species;
k) result in any other activity prescribed by regulation

Subject to subsection (2), any Ministry, Department, Government Agency, local government or municipal council that receives an application for any project, proposal or development activity not exempted by Section 13 must undertake, or have undertaken on its behalf, a preliminary EIA (PEA) of that application to determine:

(a) whether the project, proposal or development activity is likely to cause any environmental, social or custom impact; and

(b) the significance of any identified impact; and

(c) whether any proposed actions are likely to effectively mitigate, minimise, reduce or eliminate any identified significant impact.

The application for a PEA must:

a) be submitted by the project proponent to the Director in a form approved for that purpose by the Director;

b) be accompanied by the prescribed application fee; and

c) include any information, plans, specifications and other document and information that the Director may require.

The main purpose of the PEA is to assess whether an Environmental Permit can be issued or if further technical studies must be undertaken before the DEPC will take a decision. DEPC has 21 days to complete the PEA and provide a written decision to the applicant. The results of further study are submitted to the Department in the form of an EIA Report and/or an EMMP. The EIA process includes assessment of social and cultural impacts as well as mitigation management plans.

Based on a screening of the process and regulations, it is likely that the coastal reclamation, jetty and moorings will require a PEA and, as a result of the DEPC review, are likely to require an EIA Report and an EMMP. For smaller physical works EMMP may be sufficient.

According to DEPC guidelines the coastal reclamation, jetty and moorings will need to demonstrate that the Government has considered all suitable alternatives and that the project plan minimises environmental damage like the destruction and removal of flora and fauna such as coral reefs and mangroves. "*Coastal processes must be considered in the project and some designs, such as solid wharves or piers, are generally unsuitable as they provide a barrier to natural coastal processes. Site drainage must also be designed to avoid damage to the environment*".

Other Project activities, such as new buildings and renovations, are not likely to reach the thresholds in Part 12 but must still apply for a PEA. DEPC will confirm whether an EIA and / or EMMP is required.

The Act is explicit that an approved EIA is required for foreshore developments prior to works starting, even when written consent has been obtained under the Foreshore Development Act.

Amendments to the Act have clarified that the **precautionary principle** is to be *applied if, in the event of a threat or damage to the environment or human health exists in Vanuatu, a lack of full scientific certainty regarding the extent of adverse effects of the threat or damage is not to be used to prevent or avoid a decision being made to minimise the potential adverse effects or risks of environmental damage or degradation (section 5a(2))*. Furthermore, Section 5a(3) requires consideration of **climate adaptation and mitigation** issues.

Community Conservation Areas

Part 4 Division 2 enables the Director to negotiate with custom landowners to protect and register sites as Community Conservation Areas for the following reasons:

(a) possesses unique genetic, cultural, geological or biological resources; or

(b) constitutes the habitat of species of wild fauna or flora of unique national or international importance; or

(c) merits protection under the Convention Concerning the Protection of World Cultural and Natural Heritage.

Pollution Control Act no 10 of 2013

The Pollution (Control) Act No. 10 of 2013 aims to control the discharge and emission of pollution in Vanuatu. 1) A person who occupies or owns any premises must not:

"(a) cause or increase the discharge of pollution, or the emission of odour, electromagnetic radiation or unreasonable noise from the premises; or (b) alter the nature of pollution discharged, or to increase the emission of noise, odour or electromagnetic radiation emitted from the premises, unless that person is permitted to do so under a permit issued under this Act."

Discharge and emissions from vehicles, vessels or aircrafts
(1) A person must not drive a vehicle, sail or conduct a vessel, or operate or fly an aircraft capable of discharging or emitting pollution into the environment unless the vehicle, vessel or aircraft complies with the prescribed standards and the pollution discharged or emitted is within the prescribed limit.

Discharge or emission of pollutants from premises
(1) A person must not discharge or emit pollutants from any premises on or onto any land, body of water, foreshore or air so as to result in:

(a) unreasonable interference with the health, welfare, or amenity of any other person; or

(b) any adverse effect on the environment.

This Act is relevant to the operational phases of the infrastructure investments and upgrades, including the VFD fisheries facilities and the boat gantry and boat maintenance facilities in Luganville.

Waste Management Act no 24 of 2014

This Act provides for the protection of the environment through encouragement of effective waste services and operations. It provides definition of waste categorization (e.g., hazardous waste) and authorised dumping sites, as well as outlines the authorities responsible to administer the duties of waste management and waste management operations (including the operation procedures and code of practice for waste management, reporting, and offences relating to waste management). Waste Management Regulation Number 15 of 2018 regulates manufacturing, use and disposal of some single use plastics.

Waste produced by VU PROP activities shall be managed and recycled or disposed of in accordance with the Act, including the use of licensed private operators and designated waste management operators.

Public Health Act 1994

This Act has various controls on water supply, sanitation treatment and disposal, stormwater drainage, waste management, littering, public nuisances (odour, exposure to diseases or injury) and building and housing safety amongst other aspects. Abatement notices can be issued by local authorities to cease or remedy harm from nuisance.

Water Resources Management Act 2022 and Amendments

Water Resources Management Act outlines the requirements on protection, management and use of water resources in Vanuatu. The Act applies to all water in the country, i.e., inland waters including groundwater and any estuarine or coastal sea water prescribed as water under this Act (Section 1 and 2). It also includes the application of the rights to use water in which a person/entity shall apply to the Director responsible for water resources for the right to use water (section 4 or 5) and likewise shall apply for the right to construct, operate or maintain works (sect. 7).

If water resources are required beyond those provided by local water utilities, then this Act will apply.

Vanuatu National Environment Policy and Implementation Plan 2016–2030

The NEPIP's core objective is to bolster the connections and coordination among various sectoral policies, government entities, and private sector organizations engaged in environmental matters. Its overarching aim is to advocate for the prudent and secure management and preservation of Vanuatu's natural resources and environment.

There are a number of policy objectives relevant to the development objectives of the Vanuatu PROP Project and relevant to the construction and operation of fisheries-related infrastructure:

PO 1.5: Protect biodiversity and ecosystems and their significant role in our culture, society and environment.

PO 2.5: Increase agricultural and fisheries food production using sustainable practices.

PO 2.6: Reduce and prevent the degradation and erosion of foreshore and coastal areas.

PO 3.1: Reduce waste and pollution through effective waste management and pollution control.

PO 4.1: Support the implementation of the Climate Change and Disaster Risk Reduction Policy.

PO 6.2: Ensure new infrastructure and development activities cause minimal disturbance to the natural land and marine environment.

Vanuatu National Biodiversity Strategy and Action Plan 2018-2030

Vanuatu Government ratified the Convention on Biological Diversity (CBD) in 1993. As a party to the CBD, the government is obliged to report to the other convention signatories on in-country biodiversity management activities and to develop a strategy and action plan to manage and conserve Vanuatu's biological diversity. Several Principles are relevant:

Principle 2. Biodiversity is the foundation for all development and inter-generational equity. Biodiversity conservation is the collective responsibility of all levels of government, the private sector, resource users and landowners.

Principle 3. Biodiversity mainstreaming and ownership. This Principle is based on the understanding that lasting conservation in Vanuatu can only be achieved if:

- *Biodiversity is mainstreamed into national development and poverty reduction efforts*
- *… and,*
- *Sectors and development partners commit to biodiversity-development mainstreaming and cross-sector coordination.*

The following targets are relevant:

VANUATU COASTAL AND MARINE ECOSYSTEMS TARGET
FOCUS AREA CME1: Reduce major threats to Vanuatu's coastal and marine ecosystems such as overharvesting, reclamation, unsustainable tourism development, natural disaster impacts, climate change impacts, river dredging and pollution.

This focus area is relevant both the fisheries management and development objectives of Vanuatu PROP and for the location and approach to coastal reclamation.

FOCUS AREA CME2: Inshore Fisheries Management: strengthen management of coastal fisheries to reduce overharvesting and destructive fishing methods to maintain and improve coastal and coral reef ecosystems.

This focus area is relevant to the development objectives of the VU PROP, in particular the training of fisheries workforce and future outcomes of building prototype safe and purpose-built fishing vessels to reduce pressure on inshore fisheries.

FOCUS AREA CME3: Integrated Offshore fisheries management: Objective CME3: Improve management of Vanuatu's marine resources within the EEZ.

This focus area is addressed by the development objectives of the Vanuatu PROP Project and SOP.

Strategic Area 5: Management of Invasive Alien Species
FOCUS AREA MIAS1: Building a strong foundation for effective invasive alien species management
Objective MIAS1c: To ensure appropriate policies, legislations, protocols and procedures are in place and operating to underpin the effective management of IAS.

This may become relevant if there are risks for introducing or exacerbating the spread of invasive alien species under VU PROP.

National Biosecurity Policy 2016-2030

Mission: To protect Vanuatu's borders against the introduction and spread of foreign pests and diseases that could affect crops, animals, humans and the environment and, to enhance trade of Vanuatu's products. The policy does not extend to marine species or threats to coastal and marine ecosystems but does relate to the biosecurity management of vessels at ports.

National Invasive Species Strategy and Action Plan 2014 – 2020

The Strategy identifies marine invasives pathways into Luganville / Espiritu Santo from commercial shipping, yachts and cruise ships. Fishing vessels are not specifically identified as a pathway. The Action plan identifies one marine invasives activity - community-led removal of crown of thorns starfish during an outbreak, with the support of VFD.

According to the Strategy it is the responsibility of the Ports and Harbour Department to carry out vessel inspections and to permit the master of a vessel to discharge ballast, ashes, oil and ships' refuse at such places and in such manner as he may direct. Any quarantine (biosecurity) or customs issues identified during inspections of international vessels are referred to the relevant departments.

Invasives management may be relevant for the jetty and transshipment operations.

3.4 Land Tenure, Urban Planning and Building

Land Acquisition Act 1994 and Act 34 of 2000 (Amendment) Chapter 215

This Act is the key law related to land acquisition and gives the Minister for Lands and Natural Resources powers to acquire land on the Government's behalf for a public purpose. It provides for compensation for damages made during the process of land valuation, compensation entitlements for land and for rent and business losses, basic rights for grievance and appeals, and notice periods. This Act recognizes market value compensation for land. Section 12

provides a judicial appeal mechanism to the Supreme Court for cases where affected landowners are not satisfied with the compensation.

Land for most of the physical investments has been screened as being in Government land ownership or lease except for the coastal reclamation, jetty and moorings beyond the existing VFD compound in Luganville. Access to the foreshore and seabed is required; the legal framework is discussed further below.

Land Reform Act 35 of 1980 and 2013 (Amendment)

Under Vanuatu's Constitution, all land in Vanuatu belongs to the indigenous custom owners and their descendants and is to be managed customarily. At Independence in 1980, the majority of land in urban Port Vila and Luganville was set aside as public or state-owned land. While all land outside the municipalities is custom owned, not all land has an agreed custom owner. Disputes regarding land ownership are common and widespread. Land in Vanuatu was formally restored to the Indigenous customary landowners through the provisions of the Land Reform Act. As a result, non-Indigenous citizens and immigrants cannot own land, but can obtain tenure through registered lease.

The Land Reform (Amendment) Act of 2013 was aligned with the Customary Land Management Act (see below) to introduce strict processes and requirements for the grant of leases over customary land. The Land Reform Act Amendment established the Land Management Planning Committee (LMPC) and the requirement for certified, registered negotiators. The Act provides for processes to ensure that custom owners give their free, prior and informed consent to lease negotiations and that consent must be granted by consensus. The Act further provides processes for negotiation, verification, notification and registration of lease titles.

Due diligence of Government leases and ownership of the building and renovation locations is ongoing. Land access to the foreshore, seabed and marine area is discussed further below.

Customary Land Management Act 33 of 2013

The Act is explicit (section 6 (2)) that "*the rules of custom form the basis for determining land ownership and state that all land in Vanuatu is held by custom owners as a group* …unless in situations where *customary institutions applying the rules of custom determine that rights over an area of land are held by an individual*."

Section 3 is explicit that the *Act "extends to the waters within the outer edge of any reef adjacent to custom land including all fringing reefs, and the land below those waters to the extent that they are considered to belong to custom owners under the custom of that custom area*."

The Act also outlines the process for custom ownership of land to be determined and formally recorded, along with a disputes process based on customary practices and backed up with mediation, land tribunal and court procedures. The Land Records Office (Land Registry Section) maintains records of the names of all custom owners identified in a recorded interest of custom land. Land due diligence will be required on the current land tenure status of all land required for the Project.

Land Leases Act 1983 and 2014 (Amendment)

This legislation provides for the rights and obligations of person or entities entering into an arrangement or agreement with another person and/or entity for the use of land under a lease or rent agreement. Customary Land can be leased for up to 75 years. State land was generally leased for a period of 50 years, with leases within the Port Vila Municipality already being

extended or coming due for extension in 2030. Land leases are administered by Ministry of Lands and Natural Resources on behalf of the state and customary landowners and are registered in the Land Leases Register. Leases for development on customary land require the free, prior and informed consent of the custom landowner(s).

Foreshore Development Act (Cap 90) and Amendments

This Act is to guide developments in different coastal areas, ports and harbours within the country. The Act is administered by the Department of Urban Affairs and Planning (DUAP). Part 2 states *"A person must not undertake, cause or permit to undertake any development on the foreshore of the coast of any island in Vanuatu without the written consent of the Minister"* (meaning the Minister responsible for town and country planning). A consent application must be made according to the regulations.

'Foreshore' under the Act means the land below mean high water and the bed of the sea within the territorial water of Vanuatu (including the ports and harbours thereof) and includes land below mean high water mark in any lagoon having direct access to the open sea. Under the *Customary Land Management Act*, this land under the high water mark cannot be leased (unless it is formally reclaimed). It remains part of the custom land owners domain and therefore approvals must be provided for any development. The Foreshore Development Act requires custom land owner approvals prior to the consent of the Minister and the issuance of the permit.

Any development in the marine area will require due diligence on customary ownership and consultations and approvals from relevant parties.

Physical Planning Act 22 of 1986

The DUAP is responsible for the administration of the Physical Planning Act, which regulates and manages developments arriving within any declared physical planning area. The legislation provides for the controlling and development of land. This means the carrying out of building or other operations in, on, over or under the land or the making of any material change in the use of buildings or land, or the subdivision of any land that is in the jurisdiction of the Municipal Council or Local Government Council. The Act gives power to the City Council or Provincial Administration to declare and make decisions over a physical planning area.

This legislation is relevant to the renovation of facilities and the investment in new facilities if there are planning regulations for the sites at Luganville and Port Vila.

Building Act 36 of 2013 and Building Code

This legislation provides for a National Building Code to ensure proper quality of construction of buildings or facilities intended for use by the public. Building permits are issued under section 11 and approvals are given by the Director of Public Works. A building permit will be required for all new buildings and some renovations.

The building code was published in 2025, replacing outdated regulations. The overall objective of the Code is to ensure that acceptable standards of structural sufficiency, fire safety, health and amenity, are maintained for the benefit of the community now and in the future. Minimum building standards are provided. Some key features are:

- **Modernization:** Updates standards for current technology, climate, and disaster risks.
- **Resilience:** Emphasizes building for climate resilience, crucial for disaster-prone Vanuatu.

- **Accessibility:** Mandates features like ramps and disabled bathrooms for inclusivity.
- **Scope:** Covers all building types, including semi-permanent structures, and addresses both materials and construction practices.
- **Framework:** Establishes a national framework for structural design, fire safety, and sustainable materials

All building design and construction funded by Vanuatu PROP, including renovations that are more than minor, will need to comply with the Building Code. The code does not relate to sea walls, jetties, wharves, pipework and minor renovations to existing buildings.

3.5 Labor and Working Conditions

Employment Act 2001

The Employment Act provides for the general principles relating to contracts of employment. The Department of Labour and Employment Services is responsible for oversight. The Act includes working conditions, leave entitlements, overtime, sanitary conditions, redundancies, duration and termination of contracts, management of misconduct, prohibition of forced labour and prohibition of discrimination of employment or pay based on gender. However, it does have limitations on women working during the hours of 7pm and 6am except in some cases.

The Act prohibits employment of persons under 15 for industrial work and on any ship, and has other limitations for persons under 18.

All citizens of Vanuatu who are workers on Vanuatu PROP will need employment contracts that comply with this Act. This act does not apply to any non-citizen contract workers on the Project who are legally permitted to work in Vanuatu temporarily for the Project but who have employment contracts with a third party (consulting firm, contracting firm etc.) under law in their home country.

Workmen's Compensation Act

This Act provides for the compensation for injuries and death suffered by an employee in the course of their employment.

The construction contractors in this Project will be required take into account the definitions and requirements related to workplace injury management and compensation in this Act.

Health and Safety at Work Act 1987

The Health and Safety at Work Act relates to the Employment Act. The Act deals with various aspects of occupational health and safety and requires the employer to provide for the health, safety, and welfare of the workers during their employment. Part 2 of this Act strongly calls for the employer to exercise the duty of care for its employees. It also outlines the duty of the employee to its employer while at the worksite in Part 4. Part 7 outlines the substance and articles for use while at work. This includes personal protective equipment (PPE), instruments and other equipment that must be appropriate and fit for purpose.

All employers and work places under the Project will be subject to compliance with this Act.

National Action Plan to Combat Trafficking in Persons 2024-2028

The Action Plan was prepared by International Organisation for Migration on behalf of the Ministry of Internal Affairs with key roles and responsibilities for the Ministry of Fisheries and VFD along with customs and other government agencies and NGOs.

Purpose: Addresses human trafficking, smuggling, and protects vulnerable migrants through a "whole-of-government" and "whole-of-society" approach. The plan addresses risks such as forced labour in fishing, sexual exploitation, and child trafficking in remote areas.

Core Pillars: Focuses on prevention, protection of victims, and prosecution of traffickers and partnership with domestic and international organisations.

Key Strategies: Includes strengthening border controls, increasing pre-departure training for migrant workers, and establishing a database to track anti-trafficking efforts.

3.6 Preservation of Sites and Artefacts Act No 21 of 2008 and Amendment

This Act provides for the protection of sites and objects, which are classified as national heritage site due to their historical significance, archaeological significance, ethnological significance or artistic significance. The Vanuatu Cultural Center maintains a register of all classified sites and objects and can provide guidance on the identification and protection procedures. The Act does not cover intangible cultural heritage.

Any physical works funded Vanuatu PROP that have the potential to harm sites or objects, as identified in environmental and social assessments, shall be subject to the requirements of this Act.

3.7 Quarry Act 2013

This Act makes provision for the control of extraction of building minerals and related operations in Vanuatu, including the licensing of quarry operators and issuance of aggregate prospecting permits. The Amended Quarry Act (No.17, 2016) specifically bans the extraction of quarry on environmentally protected areas or sacred sites. It also warns of the suspension of the permit if there is breach of the provisions of the Act.

Any quarry materials used in the project will be required to be sourced from premises compliant with the Act.

3.8 Disability, Access and Inclusion Policies

National Disability Inclusive Development Policy 2018-2025

Policy Goal: *To set the direction of action in priority areas to ensure persons with disabilities enjoy their right to participate effectively in all areas of development in Vanuatu on an equal basis with others.*

Society 4.5: Ensure all people, including persons with disabilities, have access to government services, buildings, and public spaces;

Economy 1: A stable and prosperous economy, encouraging trade, investment and providing economic opportunities for all members of society throughout Vanuatu;

Economy 2.3: Ensure that all public infrastructure, including health, education and sports facilities are safe, accessible, secure and maintained in compliance with building codes and standards;

Economy 4.5: Increase the number of decent, productive employment opportunities, particularly for young women and men and persons with disabilities.

Technical advisory and building design for VU PROP shall take into account the policy.

Inclusive Education and Training Policy 2025-2030

Goal on Access:

MoET will ensure that all schools and Post-Secondary Education and Training providers across Vanuatu offer inclusive education environments, providing all learners with the opportunity to participate and succeed.

MoET will strengthen its inclusive education and training workforce to enable policy implementation

Technical advisory, particularly curriculum development, shall take into account the policy.

3.9 Relevant International Conventions, Treaties and MOU

- Abolition of Forced Labour Convention
- Agreement on the International Dolphin Conservation Program
- Convention Concerning the Protection of the World Cultural and Natural Heritage
- Convention on Biological Diversity
- Convention on International Trade in Endangered Species of Wild Flora and Fauna ('CITES')
- Convention on Migratory Species, including:
    - Memorandum of Understanding (MOU) on the Conservation of Migratory Sharks
    - The Memorandum of Understanding (MoU) for the Conservation of Cetaceans and their Habitats in the Pacific Island Region
    - The Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range ('Dugong MoU').
- Convention on the Elimination of All Forms of Discrimination Against Women
- Convention on the Rights of Persons with Disabilities
- Convention on the Rights of the Child
- Discrimination (Employment and Occupation) Convention,
- Equal Remuneration Convention
- Forced Labour Convention
- Freedom of Association and Protection of the Right to Organise Convention
- International Convention for the Prevention of Pollutions from Ships, 1973 ('MARPOL 73')
- International Labor Organisation
- Minimum Age Convention
- Right to Organise and Collective Bargaining Convention
- United Nations Convention Framework Convention on Climate Change (UNFCCC)
- United Nations Convention on the Law of the Sea (UNCLOS) Including …. Part V prescription of exclusive economic zones (EEZs) stretching to 200 nautical miles from its coast over which a country has special rights over the exploration and use of marine resources and … Part XII which contains provisions for protection and preservation of the marine environment including minimising pollution and preventing the introduction of invasive species.
- Waigani Convention on the transnational shipment of specific types of wastes

- Worst Forms of Child Labour Convention

A full list of maritime conventions is located on the Maritime Safety Authority website: https://vmsa.vu/wp-content/uploads/2025/07/Maritime-Conventions-Vanuatu-Ratifies.pdf

3.10 World Bank ESF

The World Bank Environmental and Social Framework requires projects to be classified based on risk. At the concept stage, the Project was classified as 'Substantial' for environmental risk, meaning impacts are expected to be predictable, temporary, reversible, medium in magnitude or geographic extent, cumulative impacts can be readily avoided and low probability of serious harm because there are reliable methods for mitigation and management. The Project was classified 'Moderate' for social risk, meaning that the potential harm to people are not likely to be significant or complex; impacts are likely to be predictable, temporary, reversible and readily mitigated, site specific and any impacts are likely to be easily avoided or managed with routine precautions. Overall, the Project therefore has an E&S risk rating of Substantial (being the higher of the two classifications).

3.10.1 Environmental and Social Standards

The World Bank ESF has ten Environmental and Social Standards (ESS). At the concept stage of VU PROP preparation, the relevant ESS were identified and these have been reconfirmed in the scoping study. The table below provides a summary of how the ESS apply to VU PROP, the Vanuatu laws and regulations, and relevant as well as measures and actions required by the VU PROP Environmental and Social Commitment Plan are outlined:

Table 1 Summary of World Bank ESS and Relevance to Vanuatu PROP and Gap Analysis between ESS and Vanuatu Laws and Regulations

Environmental and Social Standards, Gap Analysis and Actions		***Vanuatu Laws and Regulations***	***Relevance to the Vanuatu PROP Activities***				
			Reclamation and Jetty	***Fisheries Tech Centre***	***VFD headquarters***	***Luganville Fish Market***	***Technical advisory***
ESS1 Assessment and Management of Environmental and Social Risks and Impacts	Environmental and social risks of physical investments (and associated facilities) and technical advisory need to be screened, scoped, assessed, managed, monitored, reported and disclosed. Assessment covers relevant direct, indirect and cumulative impacts. Mitigation hierarchy applies to all impacts, prioritizing avoidance and minimization before mitigation, compensation and offsets. Utilise and follow country systems as well as the ESF. Relevant tools such as management plans, are required to manage impacts during implementation. ***Gap analysis and actions*** *ESS1 and the Environmental Management and Conservation Act are aligned in principle, both requiring screening, scoping and impact assessment and management proportionate to risk. The Act is more specific about the application of the precautionary principle. ESS1 is specific about both environmental and social impacts whereas the Act is focussed primarily on environmental impacts.* *This scoping study will identify the specific risk management commitments for the Government of Vanuatu which will be laid out in the Environmental and Social Commitment Plan.* *This scoping study outlines the potentially significant risks and determine the instruments that are required for each investment.*	Environmental Management and Conservation Act 2002 and Amendments	R	R	R	R	R

Environmental and Social Standards, Gap Analysis and Actions		***Vanuatu Laws and Regulations***	***Relevance to the Vanuatu PROP Activities***				
			Reclamation and Jetty	***Fisheries Tech Centre***	***VFD headquarters***	***Luganville Fish Market***	***Technical advisory***
	The Ministry will establish a PST to support the management of the Project. The Project PST will include E&S Officers to identify and manage risks and remedy impacts throughout the project. *PEA applications will be lodged with DEPC as per the regulations and works will not start without the appropriate permits.*						
ESS2 Labor and Working Conditions	Workers are defined as direct, contracted, community or primary supply workers. Workers health and safety is protected. Workers are entitled to fair treatment, non-discrimination and equal opportunity. Vulnerable workers are protected. Workplace concerns can be raised and the freedom of association is supported. ***Gap analysis and actions*** *ESS2 and Vanuatu systems for employment conditions are aligned in principle, but ESS2 has specific categories of workers that are not defined in the Vanuatu laws.* *The project will prepare a Labor Management Plan (LMP) that outlines the labour requirements, associated risks, and necessary procedures to manage labour issues and working conditions effectively for each type of Project worker. All workers will be hired and managed as per the Labour Management Procedures.*	Employment Act 2001 Workmen's compensation Act, 2004 Health and Safety at Work Act 1987 Disability, Access and Inclusion Policies.	R	R	R	R	R

Environmental and Social Standards, Gap Analysis and Actions		***Vanuatu Laws and Regulations***	***Relevance to the Vanuatu PROP Activities***				
			Reclamation and Jetty	***Fisheries Tech Centre***	***VFD headquarters***	***Luganville Fish Market***	***Technical advisory***
	Occupational Health and Safety at Work Act requires workplaces to provide safe and healthy work environments which is aligned with the Principles of ESS2. ESS2 provides requirements for Projects to identify, prevent, protect, train, document, report, be prepared for emergencies and remediate. None of these requirements appear in the Act. *E&S risk assessment for each investment shall include occupational hazards and risks and the appropriate management systems and controls are included in construction bid documents and CESMP and, for low risk activities, in the terms of reference or Environmental and Social Codes of Practice.*						
ESS3 Resource Efficiency and Pollution Prevention	Sustainable use of materials and resources is promoted Risks to human health and environment from pollution is avoided and minimized Short and long-lived climate pollutants are avoided or minimized Impacts associated with pesticide use is avoided or minimized ***Gap analysis and actions*** *The Vanuatu laws and regulations do not emphasise or require efficient use of materials and resources, however pollution control measures and responsibilities are set out in detail in the Waste Management Act, Pollution Control Act, Public Health Act and Maritime Sector Regulatory Act.*	Environment Management and conservation Act 2006 Physical Planning Act 1986 Waste Management Act 2014 Water Resources Management Act 2003 Quarry Act 2013 Pollution Control Act 2013	R	R	R	R	

Environmental and Social Standards, Gap Analysis and Actions		*Vanuatu Laws and Regulations*	*Relevance to the Vanuatu PROP Activities*				
			Reclamation and Jetty	*Fisheries Tech Centre*	*VFD headquarters*	*Luganville Fish Market*	*Technical advisory*
	ESS3 issues have been scoped in this study and the risks and opportunities will be assessed in the design specifications environmental and social assessments for each activity.	Maritime Sector Regulatory Act 2016 Public Health Act 1994					
ESS4 Community Health and Safety	Adverse effects on the health and safety of communities is avoided or minimized Quality, safety and climate change effects are considered in the design and construction of infrastructure community exposure to project-related traffic and road safety risks, diseases and hazardous materials is avoided or minimised emergency measures are in place risks from project security personnel are avoided or minimised ***Gap analysis and actions*** *The Building Act and the newly updated code are aligned with ESS4 quality, safety and climate change requirements, including life and fire safety. The Public Health Act is aligned with ESS4 for public nuisance and diseases and for some hazardous materials such as sewerage. There are gaps in the Vanuatu systems for construction-related road safety, emergency management and risks from project personnel.* *ESS4 issues have been scoped in this study and the risks will be assessed in the design specifications and environmental and social assessments for each activity. Relevant permits will be sought.*	Waste Management Act 2014 (no 24) Building Act 2013 Building Code 2025 Maritime Sector Regulatory Act 2016 Public Health Act 1994 Disability, Access and Inclusion Policies	R	R	R	R	

Environmental and Social Standards, Gap Analysis and Actions		***Vanuatu Laws and Regulations***	***Relevance to the Vanuatu PROP Activities***				
			Reclamation and Jetty	***Fisheries Tech Centre***	***VFD headquarters***	***Luganville Fish Market***	***Technical advisory***
ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Involuntary resettlement is avoided or minimized Adverse impacts from land acquisition or restrictions on land use by are avoided or mitigated. Displaced people directly benefit from the project through the resettlement activities. ***Gap Analysis and Actions*** *The legislation and ESS5 are mostly aligned, but differences may be apparent in the approaches to, and compensation for, involuntary resettlement.* *Most land for proposed investments is already in government lease or ownership except for the foreshore reclamation in Luganville. The scoping study will identify potential land requirements for each activity and develop a scope of work for land due diligence during project implementation, including examination of relevant land documentation and screening for potential physical or economic displacement. The Project will avoid involuntary resettlement and only acquire land on a willing buyer / willing seller basis, except the acquisition process for the land reclamation under the Foreshore Development Act is yet to be confirmed, following the Land Due Diligence Process.*	Land Acquisition Act 1994 and Amendment Land Reform Act 1980 and Amendment Customary Land Management Act 2013 Land Lease Act 2003 Physical Planning Act 1986 The Constitution of the Republic of Vanuatu 1980 (Chapter 1 on Rights and Chapter 12 on Land) Foreshore Development Act	R	R	R	R	R
ESS6 Biodiversity Conservation and	Biodiversity and habitats are protected and conserved. The mitigation hierarchy and the precautionary approach is applied to activities that could have an impact on biodiversity sustainable management of living natural resources is promoted	Environment Management and Conservation Act 2006	R				

Environmental and Social Standards, Gap Analysis and Actions		*Vanuatu Laws and Regulations*	*Relevance to the Vanuatu PROP Activities*				
			Reclamation and Jetty	*Fisheries Tech Centre*	*VFD headquarters*	*Luganville Fish Market*	*Technical advisory*
Sustainable Management of Living Natural Resources	livelihoods are supported through practices that integrate conservation needs and development priorities ***Gap Analysis and Actions*** *The legislation is aligned in principle with ESS6 for biodiversity conservation and the connection between conservation and livelihoods of customary land owners. The Fisheries Act and Oceans Bill emphasise sustainable management of fisheries and the habitats they rely on.* *ESS6 has specific habitat classification (modified, natural and critical) and criteria for the type of mitigation that is required of Projects, which is not reflected in Vanuatu laws and regulations.* *The scoping study will scope potential risks for each physical investment and technical advisory studies and determine the appropriate level of assessment in the ESIA for the reclamation, jetty and moorings development. Buildings and renovations on land that is already developed for commercial use are not anticipated to have relevance for ESS6.*	Fisheries Act 2014 Water Resources Act 2006					
ESS7 Indigenous Peoples[6]	Indigenous Peoples are defined as[7]: -self identification Collective attachment to specific areas Distinct customary, cultural, economic, social or political institutions and Distinct language or dialect.	The Constitution of the Republic of Vanuatu	R	R	R	R	R

[6] Full title: Indigenous Peoples / Sub-Saharan African Historically Underserved Traditional Local Communities
[7] Refer to ESS7 for the full definition.

Environmental and Social Standards, Gap Analysis and Actions		*Vanuatu Laws and Regulations*	*Relevance to the Vanuatu PROP Activities*				
			Reclamation and Jetty	*Fisheries Tech Centre*	*VFD headquarters*	*Luganville Fish Market*	*Technical advisory*
	Ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource based livelihoods of Indigenous Peoples are avoid, minimize, mitigate and compensate for impacts on Indigenous Peoples Promote sustainable development benefits and opportunities to Indigenous Peoples improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples The culture, knowledge, and practices of Indigenous Peoples are recognised, respected and preserved ***Gap Analysis and Actions*** *At the country level, Vanuatu meets the ESS7 IP criteria; the country has distinct social and cultural groups, 98% of lands are held in customary ownership, separate customary institutions are present and the country has over 100 recognized indigenous languages.* *IP considerations will be streamlined into Project Design and all project E&S instruments. Free, Prior and Informed Consent approaches will be required for all land access consultations with custom land owners.*						
ESS8 Cultural Heritage	Cultural heritage will be protected from adverse impacts Cultural heritage is an integral aspect of sustainable development Meaningful consultation is promoted	Preservation of Sites and Artefacts Act 2008	R	R		R	

Environmental and Social Standards, Gap Analysis and Actions		*Vanuatu Laws and Regulations*	*Relevance to the Vanuatu PROP Activities*				
			Reclamation and Jetty	*Fisheries Tech Centre*	*VFD headquarters*	*Luganville Fish Market*	*Technical advisory*
	Gap Analysis and Actions *The principles of the legislation are aligned with ESS8 but does not address intangible heritage and does not associate cultural heritage as an integral aspect of sustainable development.* *Cultural heritage values will be scoped in this report and included in the environmental and social assessments of each physical investment activity during implementation. Chance finds will be included in all ESMP or ESCOP for physical works.*						
ESS10 Stakeholder Engagement and Disclosure	A systematic approach to stakeholder engagement to build and maintain relationships Enable stakeholders' views to be taken into account in project design and environmental and social performance promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances ***Gap Analysis and Actions***	Environmental Management and Conservation Act 2002 and Amendments	R	R	R	R	R

Environmental and Social Standards, Gap Analysis and Actions		***Vanuatu Laws and Regulations***	***Relevance to the Vanuatu PROP Activities***				
			Reclamation and Jetty	***Fisheries Tech Centre***	***VFD headquarters***	***Luganville Fish Market***	***Technical advisory***
	The legislation requires the consideration of consultation, participation and involvement of relevant interested parties, including customary land owners and chiefs, but does not mandate stakeholder engagement, and it does not specify the methods nor a grievance mechanism. In practice, consultation is an integral part of policy and project development and ESIA and ESMP preparation. *The project is anticipated to involve a wide range of stakeholders. A Stakeholder Engagement Plan (including a Grievance Mechanism) will be prepared for the project and each activity will adapt the SEP and Grievance Mechanism to the site specific needs of the stakeholders.*						

3.10.2 World Bank Guidelines

Relevant World Bank Group EHS Guidelines used in the E&S Scoping Study:

- General EHS Guidelines
- Fish Processing
- Ports, Harbors and Terminals
- Construction Materials Extraction

Relevant World Bank Environmental and Social Framework Guidance used in the E&S Scoping Study:

- ESS Guidance Notes
- Good Practice Note on Gender
- Good Practice Note on Road Safety
- Good Practice Note on Non-Discrimination and Disability
- Good Practice Note on SEA in Major Civil Works
- Good Practice Note on Assessing and Managing the Risks of Adverse Impacts on Communities from Project-Related Labor Influx
- Tip Sheet: Life and Fire Safety Requirements for Buildings Accessible To The Public

4 Coastal Reclamation, Multipurpose Jetty, Moorings, Boatyard Pen, Gantry and Admin Building – Luganville

4.1 Key Features

Project Component: 1.1

Proposed facilities and activities:

- Coastal reclamation, sheet pile seawall / quay to create additional land for the construction of a new office building and for vehicle connection to the jetty.
- Construction and operation of a 30m long Multipurpose Jetty and associated infrastructure (cranes, gantries, dock space) which will support tuna transhipment and allow for vessel servicing, crew changes and onshore experiences.
- High value fish handling, sorting, processing and chilling (no canning).
- Installation and operation of moorings to allow for additional, large draft, vessels to dock for fish transshipment, customs and other functions.
- Construction and operation of a boatyard pen and gantry for boat maintenance.
- Construction and operation of a new administration building to support fishing port functions.
- Onsite fuel storage and vessel refuelling for operational purposes
- Operations leading to an estimated increase of up to 50 vessel movements in the Segond Channel per annum[8]

Temporary facilities:

[8] Analysis on the scale of vessel movements has not been completed at this time and will be addressed in Project implementation. For the basis of scoping E&S hazards and risks, up to 50 vessel movements (up to 25 vessel calls) has been used.

- Construction contractors yard and lay down area(s).

Ancillary facilities, resources, activities or services:

- Assume that local guesthouses and accommodation providers will be used for any workforce that comes from other islands and abroad.
- Contractor-operated quarry for fill material for the reclamation (if PWD or commercially operated quarries are not available) – approximately 30,000m^3 of fill is required
- Wastewater collection, treatment and / or disposal facilities for operational purposes.
- Landfill for construction and operational waste disposal purposes.
- Quarry materials or imported aggregates for concrete making (if local quarries or aggregates are not suitable for structural concrete).
- Stormwater treatment and disposal systems.
- No capital or maintenance dredging is required based on natural bathymetry.

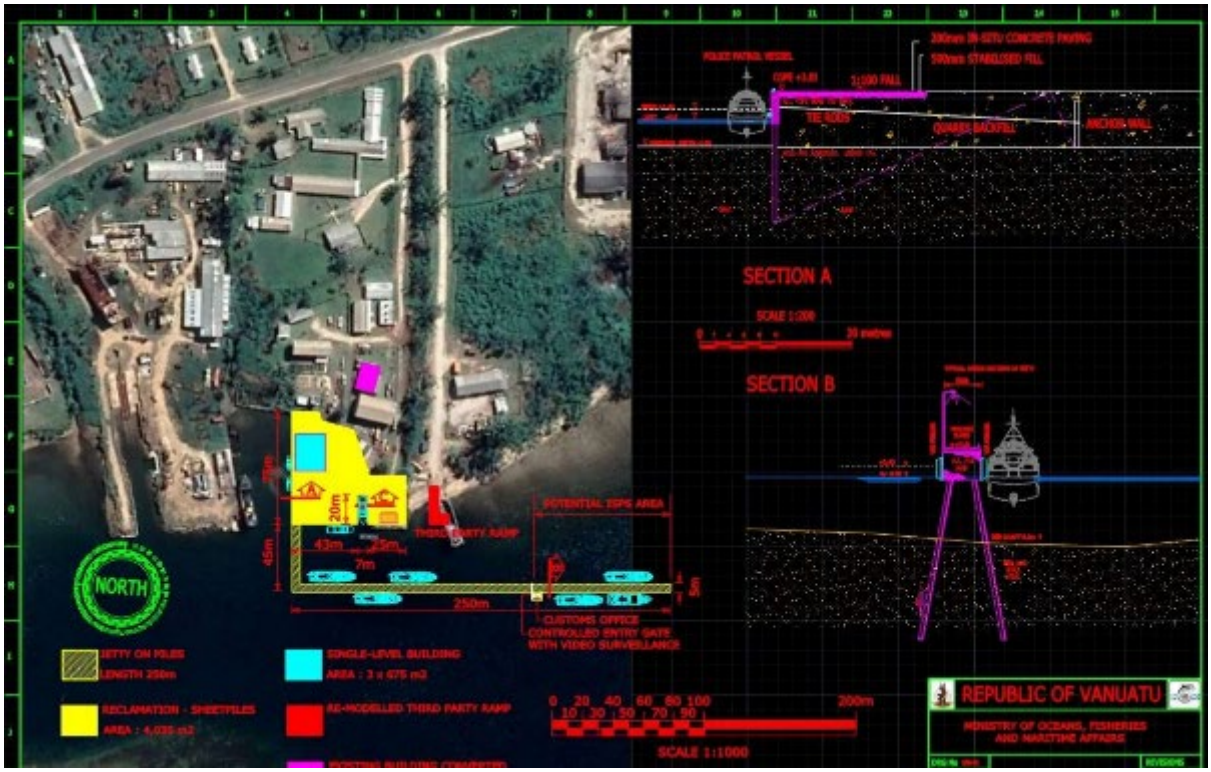
Associated facilities:

- None.

Primary Supplier:

- Commercially-operated or PWD land-based quarry on Espiritu Santo to supply fill material for the reclamation (approximately 30,000m^3) (unless a quarry will be operated by the Contractor).

Figure 2 Proposed layout of activities



4.2 Location and Baseline Context

The location of the developments is the VFD compound on xx road, in semi-urban area west of Luganville township, Espiritu Santo. Espiritu Santo is the largest island, the most northern of

the main islands. The topography is shaped by tectonics with a significant mountain range to the west; home to Vanuatu's highest peak of Mount Tabwemasana (1,879 m above sea level). Luganville is located on a coastal plain, created by the alluvial processes of the Sarakata River.

Figure 3 Luganville on the island of Espiritu Santo, in the north of the Vanuatu Archipelago

Figure 4 VFD Compound Location (approximate) near Luganville, Espiritu Santo

The coastline is located on the north western side of the Segond Channel, a deep, sheltered, natural water way between Espiritu Santo and Aero Islands.

The island has dual lithology of volcanic rock and marine limestone. Soils on site are predominantly alluvial soils and sands from weathering of limestone. Limestone fill was used in the 1990's to reclaim a small part of the site.

4.2.1 Site and Surrounds

4.2.1.1 Land, Foreshore and Seabed Tenure

The VFD Compound is on a plot leased or owned by the Government of Vanuatu. Land due diligence is continuing; paperwork confirming the status of land tenure is in the process of being prepared.

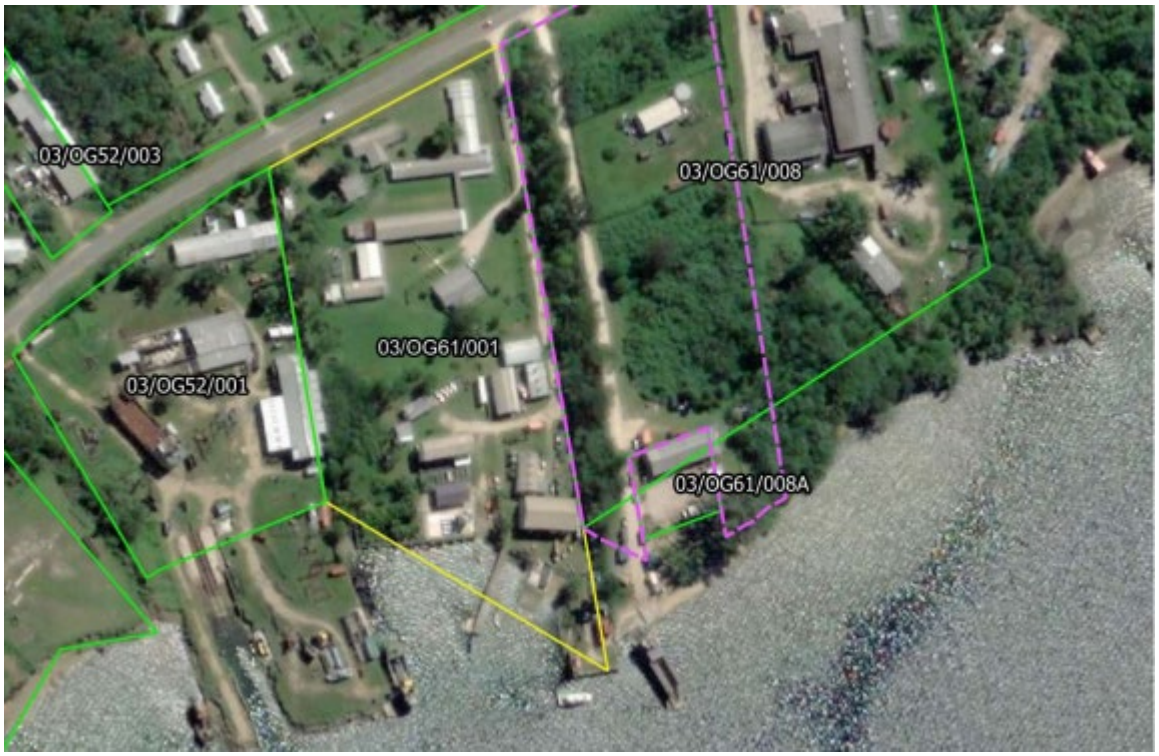
The land tenure status of the foreshore and marine area where the reclamation will occur and the jetty and moorings will occupy is currently unclear because land due diligence is not complete. If no legal processes have already transferred ownership to the government, then it is most likely still considered custom land in accordance with the Customary Land Management Act. Due diligence is required to confirm the current land tenure status, determine who the custom land owners are (if relevant) and how access rights will be secured, including approval

to reclaim occupy and use the land and seabed under the Foreshore Reclamation Act and to occupy and use the seabed for the jetty and moorings

4.2.1.2 Site Description

The VFD Compound currently comprises: The Maritime Training College, aquaculture fish hatchery facilities, boat storage / maintenance, jetty and offices / workshops. At least 20m of the coastal edge of the site is reclaimed land but the quality of the fill and the natural hazards risks are currently not known.

Figure 5 VFD Compound Plot in Yellow



4.2.1.3 Neighbourhood

The compound is located in la Roseraie on the coastal side of the main road, west of the Luganville township and east of St Michele in Velit Bay. The compound is located in a commercial area. The immediate neighbours are:

- East – Silent World Shipping – a private shipping operator with a boat launch ramp.
- West – Killan Limited – private shipping services with wharf facilities
- North / across the road – housing compound for Maritime Training College staff.

Figure 6 la Roseraie neighbourhood and Luganville

In the vicinity is timber milling, manufacturing, gravel crushing, tourist accommodation and other privately-operated wharves and shipping services.

The nearest sensitive receptors are the Maritime Traning Centre housing compound (across the road, approximately 100m from the driveway), Beachfront Resort (>350m to the east), Santo Seaside Villas (>600m to the west) and Lycee de Luganville Secondary School (>1km to the east). No churches, medical centres or other private dwellings are within 300m of the boundaries of the compound in any direction.

The route from the main wharf (which is where customs is located) to site is via Main Street, through Luganville township. As a main thoroughfare, trucks and other heavy vehicles are common on Main Street.

4.2.2 Infrastructure and Services

The site receives reticulated, potable water from the Luganville network operated by the Public Works Department. Currently wastewater is discharged onsite via septic tanks and disposal field. There is no current reticulated sewerage network or centralised treatment and disposal plant in Luganville. The Government of Vanuatu is planning to install a new Septage Treatment Plant in the next few years[9].

The site is connected to the Santo electricity grid, operated by Vanuatu Utilities and Infrastructure Limited (VUI).

4.2.3 Climate, Climate Change and Natural Hazards

Vanuatu is the highest ranked country at risk to natural hazards and climate change in the world[10]. The Vanuatu Climate Change Adaptation and Disaster Risk Reduction Policy[11] identifies the following climate change-related hazards: (i) by 2040, daily temperatures will increase from 1995 levels by 1.2°C; (ii) sea level rise will continue and accelerate; (iii) extreme

[9] Ministry of Internal Affairs, Department of Urban Affairs and Planning and the Ministry of Finance and Economic Management. July 2025. Vanuatu: Luganville Resilient Urban Water Supply and Sanitation Project Sanitation Subproject Initial Environmental Examination. Asian Development Bank. https://www.adb.org/projects/documents/van-51335-001-iee-3

[10] UNDRR (2022). Disaster Risk Reduction in the Republic of Vanuatu: Status Report 2022, United Nations Office for Disaster Risk Reduction (UNDRR), Sub-Regional Office for the Pacific

[11] Secretariate of the Pacific Community (SPC) 2015 (amended 2022). Ministry of Climate Change and Adaptation. Vanuatu Climate Change and Disaster Risk Reduction Policy Second Edition. 2022-20230.

weather events, including cyclones and storms, will increase in intensity but not necessarily in frequency; (iv) dry periods will last longer; and (v) extreme rainfall will be more frequent and intense. The associated consequences could include coastal inundation, damage to infrastructure, and loss of coastal land, among others

Temperature

Espiritu Santo lies at approximately 15°S and has a tropical maritime climate. The wet season is November to April and the drier, cooler season from May to October. Daytime air temperatures are continually warm, fluctuating little across the year from 24°C to 27°C. The highest monthly average maximum daily temperature for Vanuatu is 33°C[12]. The number of 'hot days' per year, defined as the upper end of the range of maximum temperature values, has increased by 25 days in the last 40 years and annual average temperature is expected to increase by between 1°C and 2.8°C. By 2070, projections of mean sea surface temperature increase could be up to 2 °C, with much higher warming possible by the end of the century under continued high emissions[12].

Cyclones and wind

The predominant winds are trade winds from the east and south east, averaging around 5 knots, but increasing to an average of 10 knots during the dry season. The island landscape, with a mountain range aligned north to south, means a rain shadow effect occurs, resulting in a slighter drier east compared to west. The main regional influence on weather is the South Pacific Convergence Zone, leading to a predominance of low pressure, convectional activity, cloudiness and rainfall. Santo's weather is also influenced by the El Nino Southern Oscillation. Vanuatu is located at the centre of the Pacific "cyclone belt" and is exposed to between 2-3 cyclones each cyclone season i.e., between the months of November and April[13]. Santo Island can experience extremes such as drought and tropical cyclones.[14] Cyclones lead to wind damage, storm surges, coastal and river flooding and landslides.

Sea level rise

Local sea level rise rates is 4mm/year. Storm surges and tsunami risks are compounded by sea level rise[12].

Earthquakes and volcanic risks

Geographically, Vanuatu is located in the "Pacific ring of fire" with the potential to generate devastating volcanic eruptions, earthquakes, landslides and tsunamis. The most recent deadly earthquake was magnitude 7.3, centred 30km west of Port Vila in December 2024, resulting in 14 fatalities and widespread infrastructure and building damage. Numerous volcanoes are active and volcanic eruptions are frequent from Ambrym, Yasur (Tanna Island) and Ambae. In 2018 communities on Ambae and Ambrym were displaced due to ash damage.

[12] Information obtained from the World Bank Climate Change Knowledge Portal https/:climatechangeportal.worldbank.org March 2026.
[13] UNDRR (2022). Disaster Risk Reduction in the Republic of Vanuatu: Status Report 2022, United Nations Office for Disaster Risk Reduction (UNDRR), Sub-Regional Office for the Pacific
[14] Terry, J. The Climate of Santo, pp52-56 in BOUCHET 1', LE GUYADER H. &: PASCAL O. (Eds) 2011. - The Natural History of Santo. Museum national d'Histoire naturelle, Paris; IRD, Marseille; Pro-Natura international, Paris.

4.2.4 Terrestrial Habitat

According to the National Biodiversity Strategy and Action Plan (NBSAP[15]), Vanuatu's biodiversity remains poorly known, with detailed studies of only a few genera and few studies of the biota of smaller or less accessible islands. Much of Vanuatu's diversity beneath the species level has only been classified by indigenous knowledge systems that vary from one language group to another and are not documented[15]. However a review of studies of the flora and fauna of Vanuatu has shown that there are endemic species, rare species and uncommon variants within many of the genera that have been studied in detail. Typical of archipelago island environments, conditions have favoured relatively rapid subspeciation and speciation. Frequent disturbance due to the passage of tropical cyclones or volcanic activity has also had a profound effect on the distribution and abundance of species, especially on smaller islands.

Overall, due to the relatively young geological history, biodiversity is lower compared to neighbouring countries like New Caledonia, Solomon Islands, Fiji and Papua New Guinea[16].

The greatest threats to biodiversity conservation result from human activities. Human settlements are generally found concentrated in the coastal lowlands; consequently, Vanuatu's biodiversity is most at risk in these locations.

There are no natural terrestrial habitats on or near the VFD compound. The site is fully developed with buildings and ornamental trees. Across the road there is some bush / shrubland that may be part of a larger farmed area or may be undeveloped commercial sections that have become overgrown. This is considered modified habitat because it has been cleared and left to colonise by invasives, native and exotic species. The nearest gazetted terrestrial nature reserve or key biodiversity area on Espiritu Santo is at least 25km away from the site.

4.2.5 Freshwater and estuarine

The Sarakata River mouth is just over 1km east of the site along the coastline of Velit Bay, Segond Channel. The Sarakata River is one of the longest in Vanuatu (approximately 32km) starting in the high mountains of volcanic geological origins then flowing through limestone terrain and coastal hinterlands[17]. The river catchment includes forest, agricultural land use, semi-urban and urban areas of Luganville in the south east of Espiritu Santo.

The river has a very short saline estuary including mangroves. The river is quite deep and banks quite steep, limiting the extent of mangroves.

The river is a source of sediment and pollutants into the marine environment, especially during flood events. Pollution sources include industry, agricultural and livestock waste, septic systems, sand mining, sediment from logging and urban run off[18]. There is an open drain along the driveway access, but no natural creeks or streams on or adjacent to the site.

[15] Department of Environmental Protection and Conservation. 2018. Vanuatu National Biodiversity Strategy and Action Plan 2018-2030.
[16] Environment.gov.vu/index.php/biodiversity-conservation/biodiversity
[17] Terry, J. Drainage, Hydrology and Fluvial Geomorphology, pp 42-51, in Bouchet, le Guyader H. &: PASCAL O. (Eds) 2011. - The Natural History of Santo. Museum national d'Histoire naturelle, Paris; IRD, Marseille; Pro-Natura international, Paris.
[18] Integrated Water Resource Management Demonstration Project Sustainable Management of Sarakata Watershed Republic of Vanuatu July 2007 Prepared on behalf of Department of Geology, Mines and Water Resources, Vanuatu For SOPAC, Fiji

4.2.6 Coastal and Marine Environment

The reclamation, jetty and moorings are located in the foreshore and marine area of the Segond Channel, opposite Aore Island and just over 1km southwest of the Sarakata River mouth. Generally the coastline is sheltered from oceanic swells and storm surges which is why the location has been developed firstly as an urban centre and then as series of jetties and wharves along the waterfront. Currents are generally flowing north to south along the channel and are slow to moderate depending on the winds and tide. Sediment movement and sedimentation patterns are expected to follow this general pattern of currents, with longitudinal shoreline drift.

The current uses of the marine environment is mainly shipping and boating. The Segond Channel is deep and is used by domestic and international shipping vessels and naval vessels to access the various public and private wharfs along the Luganville foreshore. Private fishing or recreational boats can be launched at the VFD compound boat ramp or at other ramps in the location. There is little commercial or subsistence fishing in the Segond Channel due to the limited reef habitat for target species. Local fishers will fish at the south western end of the channel or around Aore and Male islands. Some fishing occurs near the Sarakata River mouth, particularly for whitebait and estuarine species. Within the footprint of the reclamation, jetty and moorings and within the existing shipping channels in Segond Channel there are no fishing grounds[19].

Kids are known to swim in the shallows at the foreshore of the VFD compound because of the easy access to the water. They are likely to swim at any safe access point along the foreshore. It is possible that guests from nearby accommodation use watercraft along the coastline although it is heavily commercialised and many shipping risks already exist.

There are some landscape values in the area. A number of tourist accommodation on Aore Island and along the Luganville coastline will be benefiting from the bush-clad hill vistas in either direction and the contrasting oceanscape, even though the foreshore is already commercially developed around the project site with associated lights, noise and commercial shipping activity.

4.2.6.1 Water Quality

No water quality data has been fond in the literature for the channel or Velit Bay in the project area of influence. Anecdotally, water clarity is good (between 5-6m) except after heavy rainfall when the Sarakata River brings silt into the Velit Bay and reduces visibility to less than two meters[19].

4.2.6.2 Biodiversity

The project area is at the south-western extent of a 'biophysically special, unique marine area' or 'SUMA' of Vanuatu defined by the MACBIO[20] Project[21], which extends from Palekula in the south west to Turtle Bay in the north, along the coastline and including Luganville.

[19] Personal communication, Deputy Director, VFD. December 2025.
[20] Marine and Coastal Biodiversity Management in Pacific Island Countries.
[21] Ceccarelli DM, Molisa V, Wendt H, Davey K, Kaitu'u J, Fernandes L (2018) *Biophysically special, unique marine areas of Vanuatu*. MACBIO (GIZ, IUCN, SPREP), Suva.

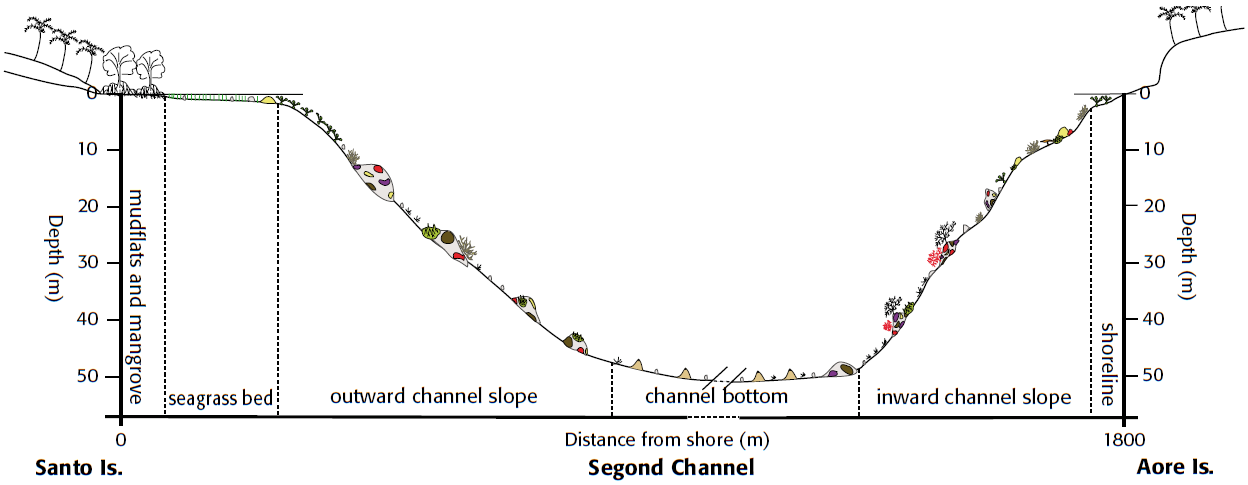
Figure 7 Palekula to Turtle Bay 'SUMA' site

The documented key values include a complex ecological system of seagrass beds, mangroves, estuaries and fringing reefs, which leads to high diversity and supports species with different habitat needs through their life cycles such as predatory fish, migratory wading birds, turtles and dugongs.

The Segond Channel is quite deep and has a variety of benthic communities between Espiritu Island and Aore Island, changing primarily with water depth and substrate type. Payri (2011)[22] documented that around the Luganville area and down to the south there are few reef formations and coral communities, mainly located on sandy slopes and rubble. Narrow reef flats are present, mostly at both entrances to the Channel and along the Aore Island coast.

[22] Payri, C. Benthic Algal and Seagrass Communities from Santo Island in Relation to Habitat Diversity pp 337-368 In BOUCHET 1', LE GUYADER H. &: PASCAL O. (Eds) 2011. - The Natural History of Santo. Museum national d'Histoire naturelle, Paris; IRD, Marseille; Pro-Natura international, Paris.

Figure 8 Sketch of Typical Cross Section of Segond Channel, Near the Project Site



In the Palekula to Turtle Bay SUMA, seagrasses are more common on fringing sandy flats adjacent to estuarine and river catchments, sheltered embayments and inner reef sandy flats. On the shallow muddy flats adjacent to the shore of Santo island in the Segond channel seagrasses such as *Halodule* and *Cyniodocea* form sparse patches. Deeper sandy slopes support *Halophila* sea grass species. The channel bottom is up to 70m deep and muddy, with communities dominated by ghost shrimp, soft corals and sea urchins. On the channel slopes, the coral are mostly *Acroporidae* and occasional massive *Porites*. More diverse coral communities are found in the channel entrance, around Aore and Malo islands and the east coast of Santo, where the currents are greater and there are more suitable benthic conditions for reef development.

While in general there are seagrass communities on the Santo side of the channel, it is reported that there are no significant patches of seagrass in front of the VFD compound or in the footprint of the jetty and moorings[23].

Dugongs (*Dugong dugon*) are known to be present in the Palekula to Turtle Bay SUMA due to the suitability of habitat (shallow and sheltered areas of seagrass meadows). The VESS identifies this SUMA as one of the top four hotspots for Dugongs in Vanuatu due to the suitability of the habitat and known populations that are resident[24]. Vanuatu is the eastern extent of the natural global distribution of Dugongs. Dugongs are Vulnerable under the IUCN Red List Classification, with decreasing population trend due to human-induced and climate-related habitat deterioration, unintentional or illegal by-catch, coastal developments, human interactions and hunting[25]. Ceccarelli et. al (2018) conclude that the SUMA habitat is also likely to support a variety of shark species, apex predators that indicate the food web is still intact.

The Sarakata and Wambu estuaries provide spawning sites for amphidromous fish and are important for larval/juvenile fish exchange between marine and freshwater ecosystems and thus are favourite sites for fishing during “whitebait” runs, with people targeting both the larval fish themselves and the large predatory fish chasing them such as trevallies.

[23] Personal communication, Deputy Director, VFD. December 2025.
[24] www.vess.org; March 2025.
[25] www.iucnredlist.org ; January 2025; www.dugongconservation.org/wherewework/vanuatu January 2025.

Intertidal zones on coral reef flats, mangrove mudflats, rocky shores and river mouths are important habitats for migratory waders (families Charadriidae and Scolopacidae), which migrate from breeding grounds mostly in Siberia but also in Alaska, and include species such as the Bristle-thighed Curlew (*Numenius taitensis*). Most species recorded from the hotspot are passage migrants *en route* to or from "wintering" (i.e. northern hemisphere winter) grounds in New Zealand but a few are regular winter visitors and remain in the islands through the non-breeding season, and, in some cases, the first few years of life. These include Whimbrel (*Numenius phaeopus*), Ruddy Turnstone (*Arenaria interpres*), common Sandpiper (*Actitis hypoleucos*) and Pacific Golden Plover (*Pluvialis fulva*)15. None of these species are endangered or critically endangered and while they may be present in the SUMA, none of them are expected to rely on the foreshore and marine environment in the reclamation / jetty and moorings because it is already highly modified and is disturbed by shipping activity on either side of the site.

Marine species of conservation concern that may be present in the SUMA or in the project area of influence include the following (Table 2):

Table 2 List of IUCN Red List Critically Endangered and Endangered Marine Species in that may be present in the SUMA

Category	Scientific name	Common name	IUCN Red List Classification	Range	Migratory
Iguana	*Brachylophus fasciatus*	Fiji banded iguana	EN	4,000–10,000 km^2	no
Petrel	*Nesofregetta fuliginosa*	Polynesian storm-petrel	EN	32,000,000 km^2	yes
Petrel	*Pseudobulweria becki*	Beck's petrel	CR	770,000 km^2	yes
Sea cucumber	*Holothuria scabra*	Golden sandfish	EN	Indo-Pacific	no
Sea cucumber	*Holothuria whitmaei*	Black teatfish	EN	Pacific	no
Sea cucumber	*Thelenota ananas*	Prickly redfish	EN	Indo-Pacific	no
Sea turtle	*Chelonia mydas*	Green turtle	EN	Circum-global	yes
Sea turtle	*Eretmochelys imbricata*	Hawksbill turtle	CR	Circum-tropical and subtropical	yes
Shark	*Sphyrna lewini*	Scalloped hammerhead	EN	Circum-global, warm, coastal	yes

Source: IUCN Redlist. www.iucnredlist.org.; accessed January 2025.

Major threats to marine biodiversity in Vanuatu include cyclones, bleaching events, climate change (storm events and longer term changes in sea level, baseline temperature and pH/acidity), overfishing / exploitation of certain species, destructive fisheries practices,

pollution and sedimentation from urbanization and land clearances and coastal development (reclamation, structures, barriers, seawalls etc.)[16,21].

4.2.6.3 Protected Areas

There are three gazetted reserves in the marine environment near Segond Channel and the project site:

1. Aore Recreation Reserve (0.37km^2 of marine environment) located on the south east coast of Aore Island.
2. Bucaro Aore Recreation Reserve (0.2km^2 of marine environment) located on the northern coast of Aore Island.
3. President Coolidge and Million Dollar Point Marine Reserve (1km^2 of marine environment) located approximately 5km east of Luganville township. This marine reserve was established under the Fisheries Act (1982) and is a Category III IUCN site (natural monument or feature). It is the location of WWII relics from the US Army and Navy including the SS President Coolidge. The ship was a luxury passenger liner converted to a troop carrier and is a very popular dive location because of the accessibility and the unique combination of features belonging to its dual function as a luxury passenger liner and a military vessel.

Figure 9 Reserves Located Near the Project Site ★

Source: Department of Environment and Conservation Protection. https://environment.gov.vu/index.php/biodiversity-conservation/vanuatu-biodiversity-and-conservation-map

None of the three protected areas are considered in the area of influence of the Project because of the separation distance.

4.2.6.4 Invasive Alien Species

Investigations into invasive alien species in coastal and marine environments in Vanuatu has been limited[26]. Most research and literature, and the National Biosecurity Policy, are focussed on agricultural and forestry threats. In the marine habitat the species of concern is the crown-of-thorns starfish. The starfish is native to the Indo-Pacific region, so its provenance in Vanuatu is 'uncertain'[26]. The species is reported to be spreading aggressively and is the main threat to coral reefs.

[26] Pagad, S. and Tan, M. 2013. Review and Compile a Vanuatu Invasive Alien Species (IAS) Bibliography, a Database for IAS Information and add Data to the PESTLIST Database. Invasive Species Specialist Group for the Pacific Regional Office.

4.2.6.5 Conclusion on Biodiversity Values

The site is located in the Palekula to Turtle bay SUMA, which can be considered natural habitat as per the ESS6 definition due to the intact nature of the area and the diversity of ecosystems. Some EN and CR species may be present, likely making it a critical habitat as defined by ESS6. The foreshore and immediate sea bed at the VFD compound and surrounds is considered modified and not likely to be habitat that EN and CR species depend on because of the history of development of wharves, reclamations, jetties and commercial land uses and the shipping and commercial activities.

4.2.7 Social Context

Demographics

Luganville is the second-largest city in Vanuatu behind the capital Port Vila with a population of 18,062 as of the 2020 National Census[27]. Luganville has almost equal numbers of male and female residents. The Sanma Province is the second most populous province behind Shefa, with a population of 60,884 in 2020.

Urban literacy in Vanuatu is high at 99.1 % for youth, significantly higher than rural areas. Unlike rural areas where 96.8 % of employment is informal (primarily agriculture), Luganville residents are more likely to be engaged in the services and industry sectors, which account for a growing share of the national workforce. Sanma Province had an unemployment rate of 3.8 % but also has a low formal economy participation rate (64.1% for males and 52.3% for females). It is common for a mix of subsistence living and formal employment in a household. The census showed that around 17% of workers from the province had worked overseas in the past 12 months, indicating a significant reliance on seasonal worker programmes and other migrant labour agreements with New Zealand and Australia.

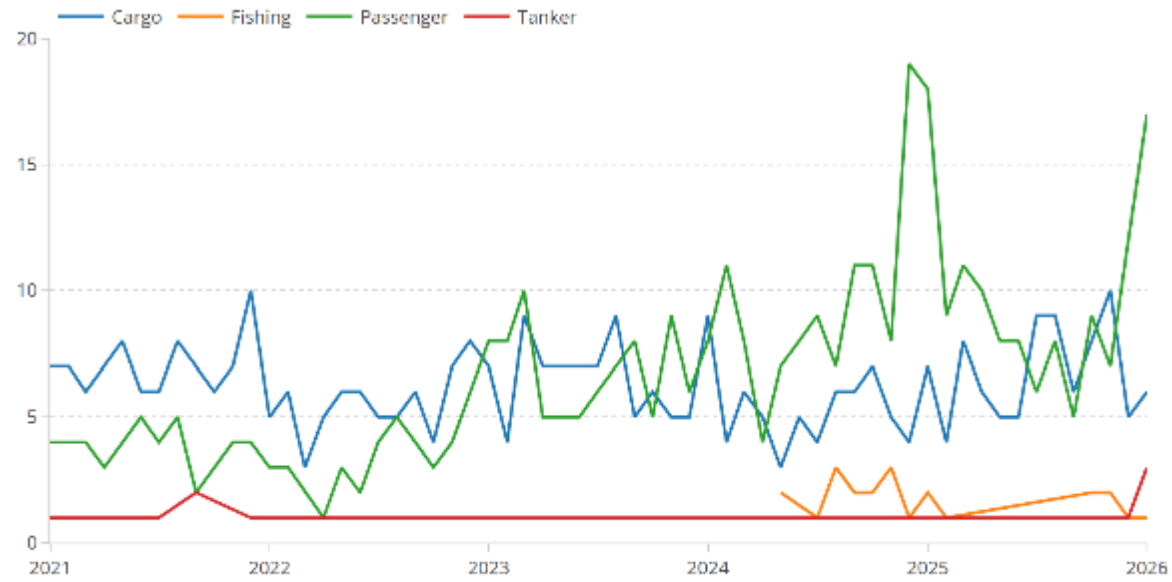
Bislama, English, French and indigenous languages are all spoken, but Bislama is a common language and the first language learnt by the young generations. The 2020 census confirms that the city is predominantly Christian, with high participation in the Presbyterian, Catholic, and Anglican churches.

Shipping and Vessel Calls

Luganville has several private and public docks and wharves in operation. The Vanuatu Ports Authority operates the Luganville Main Wharf, which is one of seven ports of entry in the country. Shipping activity includes cruise ships, interisland ferries, container vessels, naval vessels from visiting allies and some bulk vessels. An estimate of vessel calls at the Luganville is provided in the chart below (Source:

[27] https://vnso.gov.vu/index.php/en/ March 2025.

Figure 10 Number of Port Arrivals per Month at Luganville 2021 to 2026



Source: https://worldbank.github.io/pacific-observatory/ais/ais_trade.html (March 2026).

The graph shows a gradual increase in traffic after Covid-19 travel restrictions, with peaks in passenger vessels (cruise ships) each Southern Hemisphere summer in 2024/2025 and 2025/2026. Without these peaks, the typical monthly shipping visits is regularly around 15 – 20.

Shipping and navigation through the Segond Channel is controlled through the Vanuatu Ports Authority under a range of safety laws and regulations based on international maritime agreements (Section 3.2). An institutional analysis was not completed for this scoping study, however it is recommended in the ESIA to understand the strength of country systems for environmental and health and safety measures for risk management related to ports and harbours in Vanuatu.

Cultural heritage

The VFD compound, access and adjacent marine area is highly modified and no information on cultural heritage sites has been uncovered in the scoping phase.

Recreation

The current boat slip location is used for personal boat access and informally for swimming / recreation by locals.

Human trafficking

While information on human trafficking in the Pacific Region is limited, available information confirms that human trafficking is occurring on industrial fishing vessels. This includes evidence of forced labour, poor labour conditions, and child labour.

Vanuatu is both a transit and destination country for human trafficking, with criminal networks exploiting both domestic and foreign victims. Displaced people from natural disasters are vulnerable due to economic hardships and reduced community and family ties. Women and girls are particularly vulnerable to debt-based coercion for the purpose of sexual exploitation and domestic servitude. Reports also highlight forced labour occurring on fishing vessels, as

well as instances where foreign tourists exploit underage girls in remote communities by offering marriage in exchange for short-term sexual exploitation[28].

Sex Work

Sex work is illegal in Vanuatu. Sex work around ports and in transshipment is reported to occur across the Pacific Region. This includes women provide sex work to local and foreign seafarers both on the boats and in venues surrounding the port. There are reports of girls, under the age of 18, engaged in transactional sex with seafarers. There are also reports of women exchanging sex for fish.

Other

There are otherwise no livelihoods, subsistence activities or ecosystem services scoped at the site or in the adjacent marine environment.

4.2.8 Quarries

Reclamation materials are likely to come from land-based quarries on Espiritu Santo. The local limestone materials are suitable for reclamation and there are several licenced operators. The Public Works Department (PWD) operates a limestone quarry approximately 5 km inland from the site, through rural, unsealed roads. This has been used for the World Bank-funded road rehabilitation project and PWD road maintenance on island. Other small quarries are located within 10 km of the site.

Figure 11 Public Works Department Quarry

Any third party operated quarry that may be used for the Project will undergo due diligence assessments as part of the ESIA process.

It is not yet certain whether the Contractor will use a third party quarry such as the above, or open and operate their own quarry or reopen a former quarry. The location and nature of any

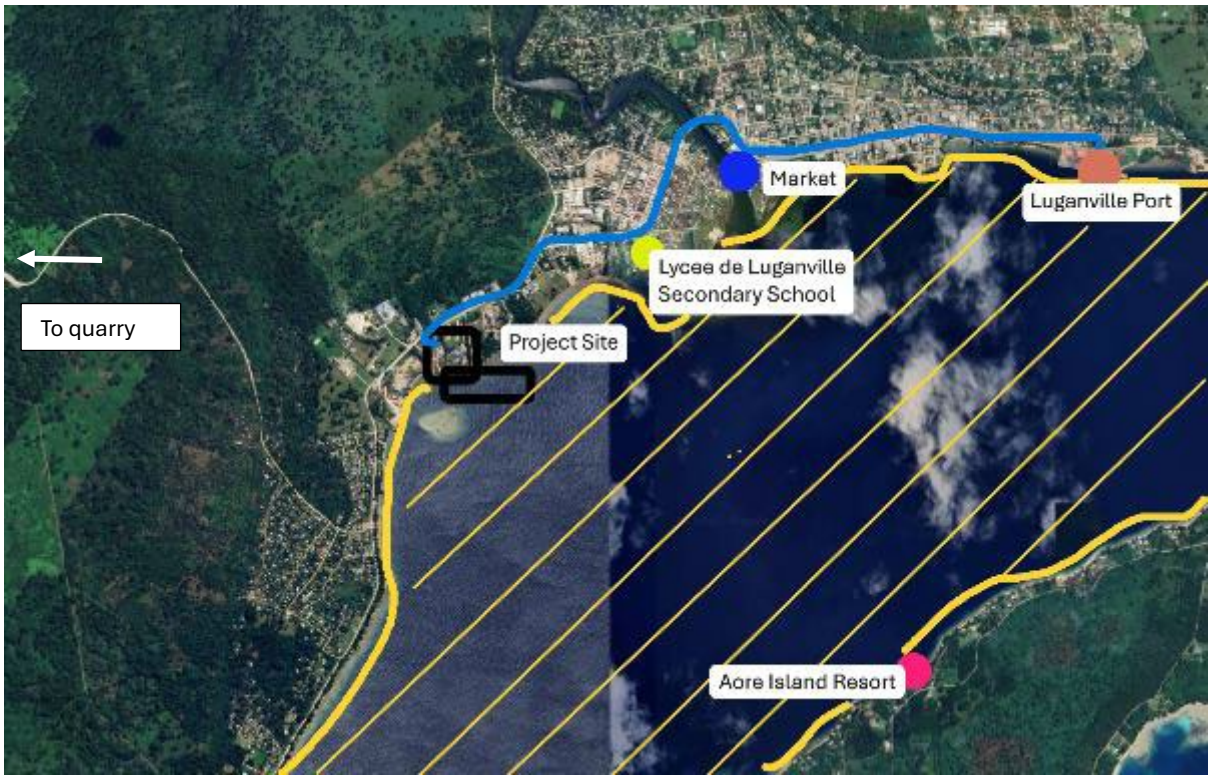
[28] Vanuatu's National Action Plan to Combat Trafficking in Persons. 2022-2028.

such quarry is unknown but will be scoped and assessed for E&S risks as part of the ESIA process.

4.2.9 Scoped Area of Influence

Based on the available information and analysis provided above, the maximum size of the area of influence is illustrated on Figures 10 and 11.

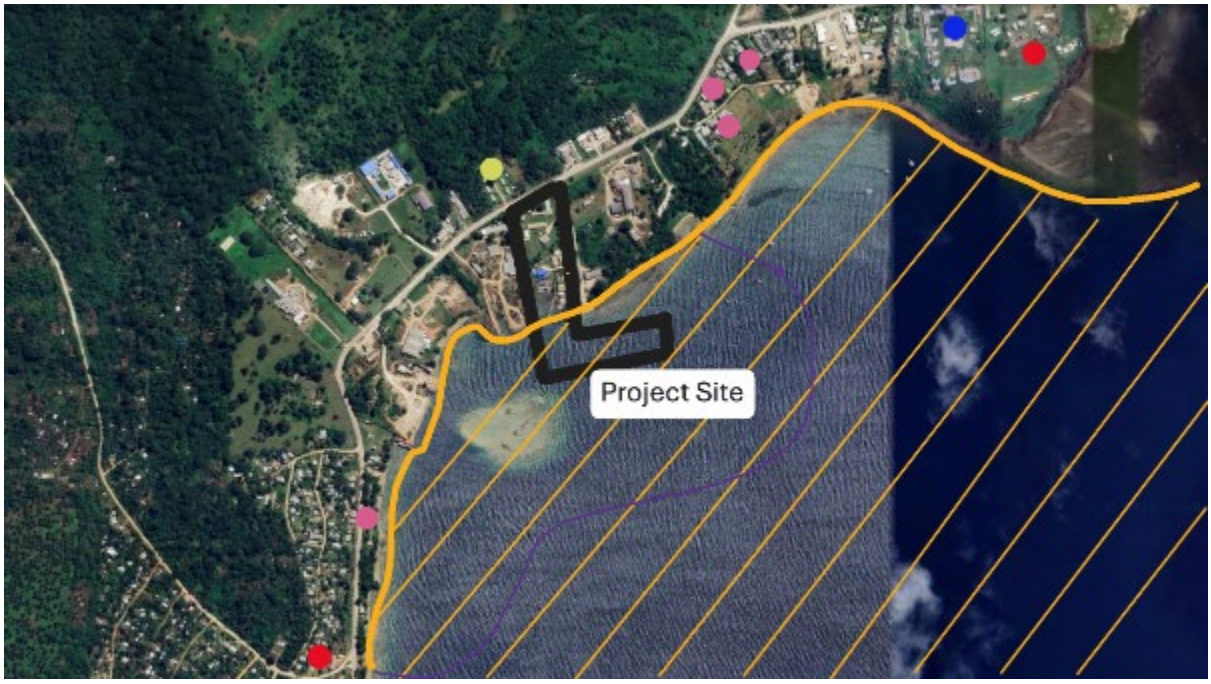
Figure 12 Large Scale Area of Influence – Construction Phase showing port route (blue) and SUMA (yellow hatch) and direction to the nearest quarry (white arrow)



In the broader area, businesses, residents, a school and market are in the area of influence of materials being transported from port to site during the construction period. Aore Island Resort (and island residents) and the St. Michele residents may be affected by visual impacts as the development adds to the commercialisation of the landscape.

The social area of influence is considered the urban and semi-urban areas of Luganville for community health and safety from construction workers coming to town, using services and interacting with community members. It is also considered the area of influence for potential labour force for temporary employment opportunities and risks regarding labour and working conditions.

Figure 13 Near Area of Influence – Construction Phase Showing Site (Black) SUMA (Yellow hatch)



Not to Scale: 100m approximately

Key

	School
	Church
	Accommodation
	Marine college residential compound

Closer to the site, the area of influence is defined primarily by construction traffic, noise and water quality / habitat impacts. The land-based sensitive receptors are mapped above; all are at least 300m from the boundary of works. The extent of noise is not yet known but could be 300m+ from the construction site depending on the activity.

Marine habitat impacts (primarily turbidity and sedimentation) could disburse at least 300m in any direction depending on activities, wind, tide, currents and bathymetry. Turbidity could follow the shoreline to the south and west based on predominant currents, depending on the tides. Avoidance behaviour of marine mammals and turtles could be more widespread depending on the noise and vibration. The purple line gives an indication of the potential scale of water quality and / or avoidance behaviour but this should be redefined in the environmental and social assessment once baseline studies have been completed.

The operational area of influence is expected to be different. Noise from jetty operations will be similar to other commercial operations nearby and may be cumulative to the ambient soundscape, and may have more significant impacts during night time operations. Residential receptors across the road or around the bay may be affected. Stormwater discharges, septic tank seepage and fugitive discharges of pollutants from boat maintenance or vessels using the jetty and moorings may have mixing zones or deposition impacts up to 100m from the site depending on the nature of the discharges. Any plumes are likely to generally flow south along the shoreline with the predominant current, taking into account the diurnal tidal patterns.

The area of influence of vessel movements on maritime safety will include the existing shipping channel in Segond Channel. An estimated increase of up to 25 vessel calls (up to 50 vessel movements) may travel through the channel to the new facility each year which would be the equivalent of approximately two vessels per month. This is a small but noticeable increase compared to the baseline (Figure 10).

The social area of influence during operation is considered the urban and semi-urban areas of Luganville for community health and safety from fishers coming to shore and seeking services and interacting with community members. It is also considered the area of influence for potential employment opportunities.

4.3 Environmental and Social Risk Scoping

4.3.1 Planning and Design Phase

Planning and Design Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
Coastal reclamation – occupation of the foreshore and marine area	Dispute over the land ownership and process of legal access by the government or process is protracted through the legal and cultural systems, causing unacceptable delays.	Major	Likely	High	ESS5 ESS7 ESS10	Iterative discussions and engagement with land owners and chiefs using a Free, Prior and Informed Consent approach. Secure the right to reclaim and occupy land through the process outlined in the Foreshore Development Act and relevant land tenure legislation.
Coastal reclamation – design height of reclamation. Seawall / sheetpile design	Inadequate consideration of future sea level rise and storm surge risk permanent or frequent inundation / flooding and wave overtopping and inadequate drainage, water quality degradation and marine habitat damage from turbidity and sediment plumes from accelerated erosion.	Major	Unlikely	Medium	ESS1 ESS3	Define the engineering investigations and design standards, including the future scenario(s) for climate risk, in the design TOR. Climate risk assessment to include details of the increase in frequency of extreme precipitation events and temperatures as per good international industry practice (i.e. the 'CMIP-5' global circulation models) downscaled to the project location. Require coastal processes modelling (inundation/overtopping and erosion of nearby properties and the VFD land). Retain technical specialists to prepare TOR and review outputs.
	Inadequate consideration of long term effects of longshore and offshore coastal processes leading to inundation or erosion of nearby	Major	Possible	High	ESS3	Define the engineering investigations and design standards, including the future scenario(s) for climate risk, in the design TOR.

Planning and Design Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
	properties in the operational phase.					Climate risk assessment to include details of the increase in frequency of extreme precipitation events and temperatures as per good international industry practice (i.e. the 'CMIP-5' global circulation models) downscaled to the project location.Require modelling of coastal processes in the area of influence (beyond site boundary). Retain technical specialists to prepare TOR and review outputs.
Coastal reclamation – selection process for suitable quarry materials	Lack of due diligence and instructions to contractors about sustainable materials sourcing leading to inadequate E&S risks management for quarry operations. Lack of options for sustainable reuse of other waste materials such as concrete or spoil from other projects.	Moderate	Likely	Medium	ESS2 ESS3 ESS6	Provide instructions to the designer in the TOR to evaluate PWD and commercial quarries that meet ESS requirements and develop instructions to Contractors in the bid documents. Instruct the designer in the TOR to identify potential inert waste materials or spoil for fill, where technically suitable.For quarries operated by the Contractor under the project, Quarry Management Plans will be required to manage ESHS and labour and working conditions.
Jetty design	Inadequate consideration of future sea level rise and storm surge risk, leading to inundation, overtopping, structural failure, accelerated degradation in operational phase.	Major	Unlikely	Medium	ESS1 ESS3	Define the engineering investigations and design standards, including the future scenario(s) for climate risk, in the design TOR. Require modelling of coastal processes in the area of influence (beyond site boundary).

Planning and Design Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
	Impacts on tidal flow, erosion, sedimentation and other coastal processes from the structure. Indirect impacts on worker / community safety from overtopping / structural degradation or failure.					Retain technical specialists to prepare TOR and review outputs.
	Inadequate consideration of mitigating safety risks in design, leading to increased hazards or incidents in operation.	Major	Rare	Medium	ESS4	Instruct designers in TOR to apply 'safety in design' for infrastructure users/operations.
Wastewater treatment and disposal	Poor design of onsite facilities leads to no or low treatment and consequential pollution of marine environment and potential health risk from: wharf operations, boat maintenance, fish sorting and processing, stormwater.	Major	Likely	High	ESS3	Instruct designers in TOR to use the mitigation hierarchy in the design of treatment and disposal facilities in accordance with Vanuatu laws and WBG EHS Guidelines (General Guidelines and Ports, Harbours and Terminals). Treatment and disposal systems to avoid and minimise impacts to receiving environment.
Fuel storage and handling	Poor design of containment and handling leads to explosions, spills and leaks, or health risks in operational phase.	Major	Unlikely	Medium	ESS3	Instruct designers in TOR to meet GIIP for fuel storage and handling facilities.
Building design to withstand earthquakes, cyclones / wind strength, rain fall intensity, flood	Site investigations, building design, specified construction methods and / or materials do not meet standards for disaster resilience, climate resilience and fire safety.	Severe	Unlikely	High	ESS4	Include the following requirements in the TOR for the design team: Suitably qualified professional to design for climate change risks and natural hazards. a suitable qualified life and fire safety professional should audit and certify: (i) Life and

Planning and Design Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
risk, sea level rise and ensure safety of occupants, aligned with climate change predictions.	Poor design or construction leads to building failure or personal harm in operational phase.					Fire Safety Master Plan, (ii) fire protection technical design, (iii) final testing and commissioning of fire protection systems, and (iv) final delivery of Life and Fire Safety documentation. The Life and Fire Safety Master Plan must be prepared to demonstrate the building(s) meeting World Bank Group EHS Guidelines and the Vanuatu Building Code.
	Building design, construction materials or methods do not allow for universal access. Restricting employment opportunities or visits from those with special needs during operational phase.	Minor	Unlikely	Low	ESS4	
Construction Supervision	Inadequate resourcing of ESHS supervision leading to low compliance and higher rates of incidents and grievances during construction.	Severe	Possible	High	ESS1	TOR for Supervision firm includes specific roles for ESHS supervision, with sufficient funding.

4.3.2 Construction phase

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
Demolition or partial demolition of existing buildings[29]	Discovery of asbestos leading to health risk.	Moderate	Possible	Medium	ESS2	Asbestos screening to be included in the TOR for the design firm. If asbestos is discovered the ESMP will have a removal protocol to be followed by the Contractor.
Coastal reclamation – filling and compaction in the foreshore and marine area Construction of Jetty Piles and mooring anchors Construction of Boat Gantry	Conversion of modified coastal habitat to land for commercial use.	Moderate	Almost certain	High	ESS6	Detailed benthic and water quality survey of footprint and immediate surrounds, and control locations to confirm quality of habitat and classification as per ESS6. Apply mitigation hierarchy, designers to minimise the reclamation footprint. Prepare a net gain strategy as part of a biodiversity management plan if there will be net loss of natural or critical habitat as defined by ESS6.
	Discharges of sediment to marine environment, increase in turbidity, sedimentation of surrounding benthic environment from dewatering, working in water and from uncontrolled erosion of sediment. Impacts on aquatic species and tourist accommodation business.	Moderate	Almost certain	High	ESS3 ESS6	Silt curtains, sheetpile gabions to keep working areas dry. Avoid heavy machinery in the marine environment. Treatment of dewatering water and other stormwater prior to discharge to the marine area.

[29] Other risks such as waste management and occupational health and safety are the same as construction activities and not repeated here.

Construction Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
	Removal of vegetation, use of temporary sheetpiling and other changes to foreshore leading to local erosion effects, changes of flow,.	Moderate	Possible	Medium	ESS1 ESS3 ESS6	Construction methodology to be based on hydrological assessments and suitable mitigation and monitoring measures.
	Noise and vibration from piling, earthmoving, compaction etc. affecting bird, bat, marine mammal and turtle behaviour	Moderate	Likely	Medium	ESS6	Based on the outcomes of a mammal survey, the construction works may need to work around breeding, migration, calf rearing and other seasonal requirements of species or use specific methods or tools to reduce the impact. Monitoring of animal behaviour using drones or acoustic equipment may be required to trigger mitigation measures.
	Noise and vibration from piling, earthmoving, compaction etc. affecting residential and tourist experiences and structures. Indirect impacts on tourist accommodation business.	Moderate	Possible	Medium	ESS4	Noise modelling will determine the specific area of influence where noise may reach levels above World Bank Group EHS Guidelines for residential receptors. The nature and scale of impacts will determine whether noise attenuation (at source or at receptors) is required such as barriers. General mitigation includes: time of day for noisy activities, alternative tools or methods to reduce emissions, stakeholder

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
						engagement and socialisation to noise, timing noisy works for less sensitive days, seasons, weather conditions.
	Light spill from night works affecting marine animal, bat and bird behaviour related to feeding, grazing, migration and nesting/breeding.	Moderate	Unlikely	Low	ESS6	Based on the outcomes of a mammal and bird surveys, site and / or species specific management plans may be required for night work or work with bright lights. Avoiding works at night and avoiding the use of lights during dawn and dust. Using specific light spectrum, direction and reducing lux of lights may be required.
	Dust and air emissions of transport of materials to site and earthworks during dry and windy conditions. Emissions from concrete batching	Minor	Possible	Low	ESS3 ESS4	Construction methodology to include measures to avoid and reduce emissions of dust and other contaminants to air.
	Visual impacts on tourists using watercraft and from tourist accommodation, reducing the tourism experience. Indirect impacts on tourist accommodation business.	Minor	Likely	Low	ESS4	Stakeholder engagement and awareness raising.
	Construction-related waste and potentially hazardous waste, requiring appropriate management and disposal, with limited options on island. Spoil disposal from piling.	Moderate	Almost Certain	High	ESS3	Audit of existing waste management facilities for the appropriate disposal of expected wastes, including benthic sediments from jetty piling. Where systems are not in place for recycling, reuse or safe disposal, require the removal of wastes off island / out of country for safe recycling or disposal, in accordance

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
						with Waigani convention and end country laws and regulations.
	Occupational hazards leading to injury or death: working near water, exposure to hazardous materials, working at height, working with electricity, falls, trips, slips, lifting, exposure to heat/sun, exposure to heavy machinery, traffic accidents, fatigue, repetitive actions, lack of sanitation	Severe	Likely	Very High	ESS2	OSH hazards and risks to be identified in the ESIA and ESMP. Detailed work methods and OSH management systems required in the CESMP. Detailed supervision, monitoring, corrective actions, adaptive management and reporting to be implemented.
	Chance find of cultural heritage results in damage, destruction or desecration.	Minor	Rare	Low	ESS8	Chance find procedures.
Purchase of quarry material from third party operator	Primary Supplier Workers - significant OSH risks	Severe	Possible	High	ESS2	Audit of any third party quarry that will supply materials. Audit to focus on the significant OSH risks. Refer LMP for proposed mitigation measures.
	Primary Suppliers – destruction of critical habitat	Minor	Unlikely	Low	ESS6	Audit of any third party quarry that will supply materials. If critical habitat is at significant risk from quarrying, then the borrower may not authorise it's use under the project.
	Illegal operator under Vanuatu laws	Moderate	Unlikely	Low	ESS1 ESS2	Audit of any third party quarry that will supply materials. If the quarry is not licensed, the borrower may not authorise it's use under the project.

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
	Truck movements increasing the chances of road safety incidents	Major	Possible	High	ESS4	Traffic management plans prepared and implemented by Contractor. Trained and licenced operators. Heavy vehicles well maintained, with daily checks prior to use. Drivers must keep to road speed limits at all times. Signs, flag-people and other measures to warn motorists of unusual vehicle movements (such as entering and existing sites). Community awareness raising, especially at sensitive receptors such as schools on haul routes.
Contractor-operated quarry	Land owners are not adequately compensated or conflict between landowners is caused by the Project.	Major	Possible	High	ESS5 ESS7	Land due diligence shall be completed on each site, identifying the land owners and legal land status. Land acquisition shall be completed and entitlements provided based on ESS5 and Vanuatu laws and customary processes. Consultation will be completed based on ESS7 and Vanuatu customary processes. No work to begin at the quarry until land access agreements are in place.
	Impacts to native birds, bats and reptiles from noise, dust and heavy machinery collisions. Impacts to secondary forest and the fauna that relies on it for the	Major	Possible	High	ESS6	Biodiversity baseline surveys required as part of ESIA process if identified in the design phase, or as part of the CESMP if identified in the construction phase. Quarry Management Plan to include biodiversity

Construction Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
	(re)opening of a quarry or expansion of quarry footprint.					risk management measures to meet ESS6 requirements.
	OSH risks relating to operating machinery and working on steep and /or unstable land.	Severe	Possible	High	ESS2	Supervision engineer to review the land stability risks prior to works starting. Quarry Management Plan to demonstrate how materials will be excavated and risk management for working on and near slopes and unstable rock materials. Trained and licensed machinery operators. Use of spotters and protocols for not working alone. OSH person on site during working hours.
	River pollution from unmanaged stormwater and sediment discharges and unmanaged stormwater and resultant impacts on aquatic ecosystems.	Moderate	Possible	Medium	ESS3	Quarry operations to be included in the ESIA, ESMP and Contractor's ESMP. Water to be diverted around work areas. Runoff to be treated prior to discharge. Discharge to soak pits or land prioritised over direct discharges to streams/surface water.
	Community risks from landslides from steep and unstable land.	Major	Rare	Medium	ESS4	Quarry sites that may endanger community members or property will be avoided.
	Truck movements increasing the chances of road safety incidents	Major	Possible	High	ESS4	Traffic management plans prepared and implemented by Contractor. Trained and licenced operators. Heavy vehicles well maintained, with daily checks prior to use. Drivers must keep to road speed limits at all times.

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
						Signs, flagpeople and other measures to warn motorists of unusual vehicle movements (such as entering and existing sites). Community awareness raising, especially at sensitive receptors such as schools on haul routes.
	Chance find of cultural heritage results in damage, destruction or desecration.	Minor	Rare	Low	ESS8	Chance find procedures.
Building construction	Construction methods do not comply with design requirements for life and fire safety, building code or other design specifications, leading to operational phase risks.	Moderate	Unlikely	Low	ESS4	Supervision team to include engineers, project managers and life and fire safety professional who will certify the work has been completed satisfactorily.
	Occupational health and safety hazards from working with power tools, welding, working with cement and other hazardous materials, and other building site hazards.	Severe	Possible	High	ESS2	OSH hazards and risks to be identified in the ESIA and ESMP. Detailed work methods and OSH management systems required in the CESMP. Detailed supervision, monitoring, corrective actions, adaptive management and reporting to be implemented.
	Construction-related waste and potentially hazardous waste, requiring appropriate management and disposal, with limited options on island.	Moderate	Almost Certain	High	ESS3	Audit of existing waste management facilities for the appropriate disposal of expected wastes. Where systems are not in place for safe disposal, require the removal of wastes off island / out of country for safe recycling or disposal, in accordance with Waigani

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
						convention and end country laws and regulations.
All activities	Grievances from lack of information or inadequate stakeholder engagement, personal or financial harm, loss of income or livelihood, land grievance, environmental harm (including impact on recreational values)	Major	Possible	High	ESS5 ESS7 ESS10	Stakeholder engagement plan and grievance redress mechanism prepared and implemented to meet World Bank ESF and cultural norms of Santo.
	Sexual exploitation, abuse or harassment by Project Workers.	Major	Unlikely	Medium	ESS4	Awareness raising for workers and communities at risk. Screening processes during hiring practices. Code of Conduct for all Project Workers with repercussions for breaches. SEA/SH Grievance Mechanism and support network for survivors.
	Workers accommodation and / or unfair working conditions cause harm to workers	Moderate	Unlikely	Low	ESS2	ESMP must require minimum standards for sleeping, food service, hygiene, gendered spaces, drinking water, recreational facilities, days off and shift rotations (including trips back to home countries), control of alcohol (including kava) and recreational drugs. Contractors must demonstrate the accommodation facilities and leave arrangements in the CESMP. LMP is followed for all hiring and management of Project Workers.

Construction Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
	Inadequate deployment of ESHS resources by Contractor and supervision engineer, leading to increased incidents, harm and grievances	Severe	Possible	High	ESS1	Terms of Reference for Supervision Engineer and Bid Documents for Contractors must follow World Bank standard procurement documents for the ESHS clauses and follow ESMP requirements and be reviewed by PST E&S Officer to ensure sufficient time and resources are allocated to ESHS training and supervision. PST to provide sufficient time and resources for compliance oversight.

4.3.3 Operational phase

Operational Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
Jetty and transhipment operations	Operations after 7pm and before 7am daily and throughout weekends creates long term harm from noise on residents and tourist accommodation.	Moderate	Possible	Medium	ESS4	Stakeholder engagement to include operational phase issues and include feedback into the facility design. Operational procedures to include ESHS practices.
	Increased traffic risks, including trucks, on road users	Moderate	Likely	Medium	ESS4	Design of entranceway to consider increases in traffic. Install signage indicating turning traffic and heavy traffic movements on the road.

Operational Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
						Any road safety features on the main road (lane markings, speed limits) to be discussed with PWD.
	OSH hazards from working with machinery, working near water, large vessels, near water, night / shiftwork, heavy lifting, trip hazards etc. OSH from fish processing – repetitive strains and manual labour risks, working with knives, slips, trips, shift work, heavy lifting, exposure to cold / freezing temperatures, exposure to cleaning chemicals.	Severe	Likely	High	ESS4	Terms of Reference for Design Team to include safety in design to consider designing out significant OSH risks. Operational procedures to include ESHS practices. Integrate WBG EHS Guidelines for Fish Processing and General EHS Guidelines into operational procedures.
	Increased skilled and unskilled job opportunities.	Minor Positive	Almost Certain	Medium Positive	ESS1	
	Food safety risks from unsanitary handling and processing of fish	Moderate	Possible	Medium	ESS4	Integrate WBG EHS Guidelines for Fish Processing into operational procedures.
	Increased number of seafarers and fishers create increased demand for sex workers, affecting vulnerable people (most likely women, but potentially also men and other genders). Increased incidences of SEA/SH, STIs and / or unwanted pregnancies.	Major	Unlikely	Medium	ESS4	Nature and scale of risk to be determined in the ESIA and mitigation to be included in ESMP. Training and awareness raising of port workers to recognise and influence behaviour of seafarers/fishers. Stakeholder engagement during the project with NGOs and relevant Ministries to determine suitable longer term community-based awareness raising and mitigation

Operational Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
						measures, reporting protocols and survivor support. Support existing systems or develop new ones based on risk.
	Potential for local men to be trafficked into fishing and risk of trafficked fishers landing in Santo needing support.	Major	Rare	Medium	ESS4	Nature and scale of risk to be determined in the ESIA and mitigation to be included in ESMP. Training and awareness raising of port workers to recognise human trafficking risks and how to report suspicious activities. Stakeholder engagement during the project with NGOs and relevant Ministries to determine suitable longer term community-based awareness raising and mitigation measures, reporting protocols and survivor support. Support existing systems or develop new ones based on risk.
	Routine discharges of liquid waste (oils, fuel, cleaning wastewater, bilge water, fish handling and processing) and solid waste directly into the marine environment.	Major	Likely	High	ESS3	Design phase mitigation measures will reduce the operational risk. Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring. Integrate WBG EHS Guidelines for Fish Processing and General EHS Guidelines into operational procedures.
	Permanent occupation of marine environment and port security measures prevent locals from using the location for boat	Moderate	Almost Certain	High	ESS1 ESS4 ESS10	Stakeholder engagement to determine the current use of the marine environment and the scale of impact.

Operational Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
	launching and swimming. This may also create issues of access to neighbouring boat slip.					Mitigation may include providing alternative facilities nearby or other form of compensation.
	Intensification of commercial activities in the foreshore environment, changing the visual amenity of the area for tourists and residents, including those on the water and on Aore Island.	Minor	Almost Certain	Medium	ESS1	Terms of Reference for Design Team to include consideration of visual impact on key design elements, including size and scale of buildings and infrastructure and the lux, direction and spectrum of lighting.
	Untreated stormwater discharging sediment and pollutants directly into the marine environment	Minor	Almost Certain	Medium	ESS3 ESS6	Terms of Reference for Design Team to include avoiding and then treating stormwater prior to discharge. Discharge to land / soak pits should be prioritised, along with rainwater capture and reuse. Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring.
	Permanent occupation of foreshore environment and permanent changes to coastal processes, leading to changes in benthic habitat and potential for erosion near adjacent sites.	Moderate	Almost Certain	High	ESS1 ESS3 ESS6	Define the engineering investigations and design standards, including the future scenario(s) for climate risk, in the design TOR. Require coastal processes modelling (inundation/overtopping and erosion of nearby properties and the VFD land). Retain technical specialists to prepare TOR and review outputs. ESIA will conclude on the nature and scale of impact on benthic habitat and whether the loss requires offsets. If offsets are

Operational Activity	*Risk / Unmitigated Potential impact*	*Magnitude*	*Likelihood*	*Risk Rating*	*Relevant ESS*	*Key Mitigation Actions*
						required, a biodiversity offset plan will be prepared and implemented.
Fuel storage and handling	Explosions, fire, spills and leaks, health and safety risks.	Major	Unlikely	Medium	ESS3 ESS4	Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring. Integrate WBG EHS Guidelines for Ports, Harbors and Terminals and General EHS Guidelines into operational procedures.
Boat Gantry and Maintenance operations	Routine discharges of liquid waste (oils, grease, antifouling, paint etc.) and solid waste directly into the marine environment from boat cleaning and maintenance.	Moderate	Likely	Medium	ESS3 ESS6	Terms of Reference for Design Team to include avoiding and then treating all liquid discharges (e.g. wash water) and solid waste (sanding dust, containers, trash). Trade waste connections should be prioritised. No direct discharges of solid or liquid wastes to water. Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring. Integrate WBG EHS Guidelines for Ports, Harbors and Terminals and General EHS Guidelines into operational procedures.
	OSH hazards from working at height, around machinery, hot work, electrical work, use of power tools, use of hazardous materials etc	Severe	Likely	High	ESS4	Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring. Integrate WBG EHS Guidelines for Ports, Harbors and Terminals and General EHS Guidelines into operational procedures.
Increased vessel movements and	Increased maritime movements of medium and large vessels,	Severe	Rare	High	ESS3 ESS4	ESIA to document the institutional capacity and legal framework for port authorities and

Operational Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
visitation to Segond Channel.	increasing the risk of collision, spills, grounding or other incident.					maritime safety authority, and to calculate the likely increase in vessel movements compared to baseline. Mitigation measures will be within the country systems for maritime safety under the Vanuatu Maritime Authority.
	Cumulative impacts of development and shipping traffic along the foreshore and coastal marine area may increase the likelihood of marine mammals and turtles avoiding the area compared to baseline.	Minor	Possible	Low	ESS6	ESIA to calculate the likely increase in vessel movements compared to baseline. ESIA to identify vulnerable species and determine the increase in risk compared to baseline. If there are likely to be significant measurable changes in risk, then mitigation may be required such as awareness raising or habitat offset activities.

4.4 Conclusions and Recommendations

The reclamation of coastal land and the construction and operation of a jetty, moorings and supporting facilities is considered a significant development on the foreshore of Velit Bay. The location is modified by a long history of coastal development for shipping and other commercial operations. The site is vulnerable to natural hazards and it is recommended that the design phase undertakes the appropriate investigations, design criteria and construction methodology to mitigate risk to operations and occupants.

- Activities with potentially **high** unmitigated risk or impact have been scoped as:
    - Occupation of seabed and foreshore – land lease required under Foreshore Reclamation Act
    - Occupation of sea bed and foreshore – permanent conversion of modified and natural habitat.
    - Poor design or construction leads to building failure or personal harm in operational phase from natural disasters or fire.
    - Discharges of sediment to the environment during construction affecting water quality and benthic sedimentation.
    - Erosion and sediment discharges, land instability, OSH and other risks from quarrying on unstable land or using poor quarrying practices.
    - Inadequate resourcing of ESHS during construction leading to increased incidents and accidents.
    - Community grievances.
    - Changes to coastal processes at the site and along the adjacent coastline.
    - Labour from other islands and abroad, creating SEA/SH risks during construction.
    - Occupational health and safety risks from port operations.
    - Environmental waste and wastewater discharges from port operations, including vessel discharges while in port.
    - Increased risk of vessel collision in Segond Channel – other vessels and marine animals.

The recommendations are:

- Secure **land tenure**
    - Due diligence of land tenure documentation for the VFD compound and of the land tenure status of the adjacent foreshore and seabed.
    - If custom land owners have tenure, develop and implement a consultation process using Free, Prior and Informed Consent approaches (as per ESS7) and obtain approvals to reclaim foreshore and seabed, occupy the reclamation and to occupy the seabed with the jetty and moorings.
    - Obtain a Foreshore Development Permit.
- The **design brief** should include specific instructions for 1) engineering and environmental investigations and analysis and 2) design standards to mitigate harm to the extent possible . Such as:
    - Sea level rise predictions, including risk of storm surges
    - Coastal processes modelling
    - Seismic risk, including site specific geotechnical conditions
    - Cyclonic winds
    - Life and fire safety for all buildings that will occupy people (i.e. admin building)
    - Stormwater treatment and discharges
    - Wastewater treatment and discharges

    - Technical review of potential quarries on island for quantity and quality for reclamation and E&S due diligence for ESHS risks
    - Traffic and road safety analysis for haul routes
- Investigation outputs and building design concepts and detailed design is reviewed by an **independent technical specialist**, and recommendations adopted, prior to clearance by the PST and World Bank.
- **Construction is supervised** by a technical specialist to ensure design specifications are met.
- A terms of reference is required to undertake a site specific environmental and social assessment and preparation of an **ESIA and ESMP** during the design period, covering all aspects of design, construction and operation. Specialised studies shall include:
    - Construction and operational noise impact modelling, including submarine noise.
    - Coastal marine water quality and habitat assessment including modelling of coastal processes, erosion, sediment movement and deposition (unless covered in the design TOR).
    - Marine and avifauna biodiversity assessments, with a focus on the presence, range and significant habitat requirements of dugongs, turtles and any other species that may trigger the classification of critical habitat (endangered or critically endangered species according to the IUCN redlist, endemic, restricted range, migratory species).
    - Visual impact assessment from sensitive receptors such as tourist accommodation and tourism locations (construction and operation).
    - Institutional analysis of the capacity of government authorities to manage the environmental risks of vessels (biosecurity, bilge water, ballast, solid waste, marine animal collisions), maritime safety, human trafficking and other risks associated with fishing vessel docking and servicing based on the country systems.
- Prepare a net gain strategy as part of a **biodiversity management plan** if there will be net loss of natural or critical habitat as defined by ESS6.
- **Stakeholder engagement** as per the VU PROP Stakeholder Engagement Plan.
- Preparation and implementation of a Construction ESMP (CESMP) by the Contractor.
- Preparation and implementation of operational phase ESHS systems.
- A **permit** is obtained for any / all discharges of treated wastewater to the marine environment during operation.
- Adoption and implementation of the **SEA/SH Action Plan**. Recommend to support the implementation of Vanuatu's National Action Plan on Human Trafficking by:
    - Including human trafficking detection in the training of observers.
    - Developing standard operating procedures for maritime facilities on human trafficking prevention and detection.
- Implementation of the Project **Labour Management Procedures.**

5 Fisheries Technology Centre – VFD Compound, Luganville

5.1 Key Features

Project Component: 1.2

Proposed facilities and activities:

- Construction and operation of a HACCP compliant facility with laboratories, ice maker, chiller and freezer room, small scale canning operation, test kitchen and other workspaces for training and commercialisation.

Temporary facilities:

- Construction contractors yard and lay down area(s).

Ancillary facilities, resources or services required:

- Assume that local guesthouses and accommodation providers will be used for any workforce that comes from other islands and abroad.
- Contractor-operated quarry or imported aggregates for concrete making purposes (if PWD or commercially operated quarries are not available or suitable).
- Wastewater collection, treatment and facilities for operational purposes .
- Landfill for construction waste disposal purposes.
- Organic fish waste treatment, processing and / or disposal.
- Stormwater disposal.

5.2 Location and Baseline Context

The new facilities will be located entirely within the existing VFD compound in Luganville, as described in Section 4.2.1. The proposed site is currently a derelict structure.

Figure 14 Site of the Proposed Fisheries Technology Centre

5.3 Environmental and Social Risk Scoping

5.3.1 Planning and Design Phase

Planning and Design Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
Land access	Unclear or protracted process of ownership and approvals for building to occupy the site. Conflict between land owners and Ministry. Project delays.	Moderate	Rare	Low	ESS5 ESS7	Due diligence of legal land tenure status.
Building design to withstand earthquakes, cyclones / wind strength, rain fall intensity, flood risk, sea level rise and ensure safety of occupants, aligned with climate change predictions.	Site investigations, building design, specified construction methods and / or materials do not meet standards for disaster resilience, climate resilience and fire safety. Poor design or construction leads to building failure or personal harm in operational phase.	Severe	Unlikely	High	ESS4	Include the following requirements in the TOR for the design team: Suitably qualified professional to design for climate change risks and natural hazards. a suitable qualified life and fire safety professional should audit and certify: (i) Life and Fire Safety Master Plan, (ii) fire protection technical design, (iii) final testing and commissioning of fire protection systems, and (iv) final delivery of Life and Fire Safety documentation. The Life and Fire Safety Master Plan, must be prepared to demonstrate the building(s) meeting World Bank Group EHS Guidelines and the Vanuatu Building Code.
	Building design, construction materials or methods do not	Minor	Unlikely	Low	ESS4	Include relevant requirements in the TOR for the design team to meet Vanuatu Building

Planning and Design Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
	allow for universal access. Restricting employment opportunities or visits from those with special needs during operational phase.					Code, Disability and Access Policies and World Bank Group EHS Guidelines.
Building energy demand	Design does not consider energy efficiency, leading to higher energy use and energy costs during operation.	Minor	Possible	Low	ESS3	Design TOR to include energy demand targets / guidelines based on Good International Industry Practice for laboratories / technology centres.
Solid waste management	Design does not consider the operational waste management requirements, leading to improper treatment and / or disposal of fish waste and other difficult waste streams.	Moderate	Likely	Medium	ESS3	Design TOR to include operational facilities and procedures for key wastes, following the waste hierarchy and ensuring reuse and recycling where possible.
Wastewater management	Design does not consider the operational wastewater volumes and treatment, overloading the sewer network.	Moderate	Likely	Medium	ESS3	Design TOR to include operational facilities and procedures for wastewater streams, following the waste hierarchy and minimising wastewater and pre-treating on site where possible.

5.3.2 Construction phase

Construction Activity	***Risk / Unmitigated Potential impact***	***Magnitude***	***Likelihood***	***Risk Rating***	***Relevant ESS***	***Key Mitigation Actions***
Construction activities	Discharges of untreated stormwater directly to marine environment.	Minor	Almost certain	Medium	ESS3 ESS6	Water to be diverted around construction sites. Stormwater to be captured and treated prior to discharge. Details prescribed in the CESMP.
	Noise and vibration from construction affecting neighbouring workers. Cumulative with other site developments.	Minor	Likely	Low	ESS4	CESMP to document hours of operation that do not affect neighbouring workers. Awareness raising to prepare neighbouring workers for noise disturbances.
	Occupational health and safety hazards from working with power tools, welding, working with cement and other hazardous materials, and other building site hazards.	Severe	Possible	High	ESS2	CESMP to document hazard and risk identification and controls, including equipment, PPE and methods to keep workers safe.
Building construction	Sexual exploitation, abuse or harassment by Project Workers.	Major	Unlikely	High	ESS4	Awareness raising for workers and communities at risk. Screening processes during hiring practices. Code of Conduct for all Project Workers with repercussions for breaches. SEA/SH Grievance Mechanism and support network for survivors
Building construction	Construction methods do not comply with design requirements for life and fire	Moderate	Unlikely	Low	ESS4	Supervision team to include life and fire safety professional who will certify the work has been completed satisfactorily.

	safety, leading to operational phase risks.					

5.3.3 Operational phase

Operational Activity	Risk / Unmitigated Potential impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Waste management	Fish waste and other organic, hazardous or difficult wastes are not well managed, illegally dumped at sea or on land, or overwhelm the local landfill. Open disposal of organic waste streams can cause odour, toxic and nutrient rich leachate, increase pests and disease vectors. If disposed in slow moving water, this waste can create anaerobic conditions reducing oxygen availability for marine life.	Moderate	Likely	Medium	ESS3	Operational procedures to follow the waste hierarchy within the facility. Landfill is the last resort. Support to Provincial Council for any composting facilities or additional treatment required prior to landfilling. Integrate WBG EHS Guidelines for Fish Processing and General EHS Guidelines into operational procedures.
Wastewater disposal	Wastewater with high pollution load with has high Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Total Suspended Solids (TSS) and chemicals from cleaning / sanitizing not adequately treated in the	Moderate	Likely	Medium	ESS3	Operational procedures to maintain and monitor onsite treatment and overall loads to sewer. Follow the waste hierarchy and avoid creating waste water where possible. Integrate WBG General EHS Guidelines and EHS Guidelines for Fish Processing into operational procedures.

Operational Activity	Risk / Unmitigated Potential impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
	sewerage system, leading to higher pollutant load.					
Energy use	Solar power reduces cost and emissions associated with grid-connected power supply.	Minor benefit	Likely	Low Benefit	ESS3	
Stormwater	Discharges of untreated stormwater directly to marine environment.	Minor	Almost certain	Medium	ESS3 ESS6	Roof rainwater is captured for reuse. Roof rainwater is retained in pipes and discharged directly to sea. Stormwater from open ground is discharged to land / soak pits where possible. Operational procedures to include ESHS practices, regular maintenance and marine environment monitoring.

5.4 Conclusions and Recommendations

The construction of a fisheries technology and commercialisation facility on the VFD compound is considered an appropriate use of land and no significant impacts on the neighbouring properties are anticipated during construction or operation. The location is vulnerable to natural hazards and it is recommended that the design phase undertakes the appropriate investigations, design criteria and construction methodology to mitigate risk to occupants.

It is assumed that the geotechnical conditions and exposure risk to natural hazards and climate change will be carried out with the larger scope of work for the reclamation, jetty etc.

The recommendations for this activity are:

- The **building design brief** includes specific instructions for design standards to mitigate harm to the extent possible from the following:
    - Cyclonic winds
    - Life and fire safety
    - Stormwater management and flood risk
- The **building design brief** includes specific instructions to mitigate operational impacts from:
    - Fish waste and other organic or hazardous waste treatment and disposal
    - Stormwater and wastewater treatment and disposal
    - Energy use
- Investigation outputs and building design concepts and detailed design is reviewed by an **independent technical specialist**, and recommendations adopted, prior to clearance by the PST and World Bank.
- **Construction is supervised** by a technical specialist to ensure design specifications are met.
- An **ESMP** is prepared for the facility, with a specific focus on:
    - Impact assessment from stormwater and wastewater disposalConstruction ESHS risk mitigation
    - Operational ESHS management
- A CESMP is prepared and implemented to manage ESHS risks during construction.
- A **permit** is required for any / all discharges of treated wastewater to the marine environment.
- Implementation of the **SEA/SH Action Plan**.
- Implementation of the Project **Labour Management Procedures.**

6 Luganville Provincial Fish Market

6.1 Key Features

Project Component: 2.1

Proposed facilities and activities:

- Smale scale renovations of market buildings / structures
- Purchase, installation and use of cool storage facilities such as fridges or freezers.
- Purchase, installation and use of solar panels to generate electricity for the cool storage (battery storage to be considered).

- Assume work will be done by local (Luganville-based) or Vanuatu-based contractors.

Temporary facilities:

- Construction contractors yard and lay down area may be required.

Ancillary facilities, resources or services required:

- Assume out-of-town workers will be accommodated in local guest houses and accommodation.
- Landfill for construction waste disposal purposes.

6.2 Location and Baseline Context

6.2.1 Site Description

The Provincial Fish Market is part of the Luganville Local Market, located on Main Street, in the central business district of Luganville township. The market is adjacent the Sarakata River mouth and there is space for fishers to berth small boats at the rear of the market to transfer their catch. The location is shown below.

Figure 15 Location of Luganville Provincial Fish Market, Main Street

6.2.2 Market Operations

Presently, there are limited facilities for keeping fish and seafood chilled. Fishers are limited to supplying local consumers due to the limited shelf life. Fishers operate their own stalls within the market or sell to third parties to on-sell to consumers.

Figure 16 Back of market showing fishing boats in the Sarakata River

6.2.3 Scoped Area of Influence

The area of influence is constrained to the market and immediate neighbours. The Sarakata Rive may be part of the area of influence if drainage upgrades are required or if any modifications or investments are proposed for the riparian area or within the river.

6.3 Environmental and Social Risk Scoping

6.3.1 Planning and Design Phase

Planning and Design Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Approvals to carry out works	Unclear or protracted process of ownership and approvals for renovation work to be completed. Conflict between land owners and Provincial Council / VFD. Project delays	Minor	Unlikely	Low	ESS5 ESS7	Due diligence of land tenure status.
Cool storage equipment design / procurement / installation Structural renovations	Selection of low efficiency equipment, leading to higher costs and higher energy use during operations.	Minor	Unlikely	Low	ESS3	Terms of reference to include energy demand requirements.
	Women are not adequately consulted, leading to equipment, layout or design features that do not meet their needs for safety or equal opportunity, such as lighting, WASH facilities, equal opportunity for cool storage space etc.	Moderate	Unlikely	Low	ESS1 ESS4	Stakeholder engagement to include all beneficiaries and affected people, and feedback is incorporated into design and procurement.
	Materials, location and layout of equipment and renovations does not optimise life and fire	Moderate	Unlikely	Low	ESS4	If renovations are going to be more than minor, include the following requirements in the TOR for the design team:

Planning and Design Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
	safety during operation, leading to higher risk of personal harm.					a suitable qualified life and fire safety professional should audit and certify: (i) Life and Fire Safety Master Plan, (ii) fire protection technical design, (iii) final testing and commissioning of fire protection systems, and (iv) final delivery of Life and Fire Safety documentation. The Life and Fire Safety Master Plan must be prepared to demonstrate the building(s) meeting World Bank Group EHS Guidelines and the Vanuatu Building Code.

6.3.2 Construction / Installation Phase

Construction / Installation Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Installation of equipment and renovations	Occupational health and safety hazards from working at height, with power tools, with electricity, heavy equipment/lifting, trip hazards and other workplace risks.	Moderate	Unlikely	Low	ESS4	ESCOP includes hazard and risk identification avoidance and mitigation procedures and equipment, including PPE.
	Construction-related waste, packaging waste and potentially	Minor	Almost Certain	Medium	ESS3	ESCOP includes a waste management plan based on best available services.

Construction / Installation Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
	hazardous waste, requiring appropriate management and disposal, with limited options on island.					
	Disruptions to stall operators leading to loss of income.	Moderate	Unlikely	Low	ESS1	Stakeholder engagement to inform beneficiaries and affected people. ESCOP to include awareness raising / information sharing tasks.
	Sexual exploitation, abuse or harassment by Project Workers.	Major	Rare	Medium	ESS4	ESCOP to include actions from SEA/SH including COC for workers.
Rooftop solar	Structural instability leading to safety risks for building occupants. Electrical hazards due to poor maintenance or faulty equipment.	Major	Unlikely	Medium	ESS4	Structural integrity and equipment integrity required as part of project design. Maintenance procedures to include ESHS risk management.

6.3.3 Operation Phase

Operation Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Maintenance	Unmaintained equipment, lack of accountability for maintenance, leads to inefficient use, reduced lifespan of equipment and creation of	Minor	Possible	Medium	ESS3	Design to consider ease and cost of maintenance, parts etc. Operations and maintenance roles, responsibilities and budgets to be assigned before project close.

Operation Activity	Risk / Unmitigated Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
	waste with limited options for disposal on island.					
Energy use	Solar power reduces cost and emissions associated with grid-connected power supply.	Minor benefit	Likely	Low Benefit	ESS3	

6.4 Conclusions and Recommendations

The upgrades to the Luganville Provincial Fish Market are proposed to improve the livelihoods of fishers and improve the quality of product to consumers in Luganville and further afield. The scale of proposed upgrades are small and the assumption is that local (ni-Van) contractors will be employed to complete the works. Risks relate mostly to waste and occupational health and safety hazards during construction, and poor design leading to higher energy demands during operation or leading to higher likelihood of incidents and harm to stall holders and visitors.

The following is recommended:

- **Land** tenure status is confirmed via due diligence and land owner and / or leaseholder provides approval for works prior to works starting.
- **Stakeholder engagement** with beneficiaries (fishers) and directly affected parties such as stall holders, are consulted and involved in the design, procurement specifications and other aspects of the works. Stakeholder engagement requirements are included in the SEP.
- **Environmental and Social Code of Practice** (ESCOP) prepared for design and construction / installation activities, covering ESHS and labour and working conditions requirements and the actions from the SEA/SH Action Plan. Alternatively an ESMP/EMMP may be prepared if this is required by DEPC permit processes. The instrument is to be included in design TOR and construction procurement documents. Compliance checks shall be carried out on the design prior to finalisation, and during all construction and installation activities.
- **Procurement standards** are provided for energy efficiency ratings of cold storage equipment.
- **Building permits** are applied for and granted for any renovations that are more than minor.
- PEA application is submitted for DEPC review and confirmation of environmental instruments (i.e. EMMP) and **environmental permit** requirements for works.
- Where any physical works will occur in the riparian area of the Sarakata River, or within the river, such as embankments, docks, dredging etc., or any changes to drainage are required, an environmental and social screening is recommended to determine the type of instrument(s) and permit(s) that may be required.
- **Training** is provided to contractors to ensure compliance with the ESCOP and permits.
- Implementation of the **SEA/SH Action Plan**.
- Implementation of the Project **Labour Management Procedures.**

7 VFD Headquarters – Port Vila

7.1 Key Features

Project Component: 3.1

Proposed facility:

- Design, construction and operation of new, multi-story building for the VFD headquarters in Port Vila.
- Design and / or construction may be carried out by locally-based contractors.

Temporary facilities:

- Construction contractors yard and lay down area(s).

Ancillary facilities, resources or services required:

- Landfill for construction and operational waste disposal purposes.
- Quarry material for concrete mixing, sourced from PWD or commercial operator on Efate.
- Port for imported materials (if any).

7.2 Location and Baseline Context

7.2.1 Headquarters Location

The site for the proposed VFD Headquarters building is still under consideration but will be on Government land in the municipality of Port Vila. The most recent proposal is a south western corner site on the intersection of Ave Edmond Colordeau and an unnamed road that leads to Independence Park. Temporary land use for construction storage / lay down / concrete mixing is not yet known but likely to be on the same site.

The site is gently sloping to the west from Ave Edmond Colordeau. It was formerly police staff housing but the current house is derelict with no occupiers. The garden is overgrown. There are several mature trees.

The surrounding environment is a mix of residential housing, open space, small businesses and government buildings. Immediate neighbours are residential housing for government staff with a Minister's housing compound and government buildings across the road. Independence Park is within 100m to the west. Vila East Primary School is located on an adjacent road.

Figure 17 Proposed location of VFD Headquarters, Ave Edmond Colordeau, Port Vila (red box)

Figure 18 Photos of the site

Looking south from side road

Looking west from Ave Edmond Colordeau

7.2.2 Building Concept

The building concept is for two stories and constructed using technology / materials familiar to local contractors. The purpose of the building is for office-related activities including work spaces, meeting rooms, kitchenettes, toilets, and storage, with some disaster response equipment storage and boat storage etc. The design concept includes onsite (likely rooftop) solar panels to reduce the use of grid-supplied electricity.

The brief for the building is to be resilient to earthquakes, cyclones and flooding. The nature and scale of the design resilience (e.g. scale of seismic risk, wind strength, depth of flooding etc.) has not yet been confirmed and will be managed by the PST through the design process using technical specialists to prepare the TOR and review designs.

Site works will include house demolition, vegetation clearance and minor slope cut and fill.

7.2.3 Infrastructure and Services

The site is connected to the Port Vila potable water supply network operated by PWD and connected to the Port Vila wastewater network operated by PWD. The headquarters will not draw water directly from a natural source and will not discharge sewage effluent onsite. Stormwater will discharge to the reticulated stormwater network. The site is connected to the UNELCO electricity network.

Efate has a municipal landfill operated by the Provincial Council.

Operational traffic will be road passenger vehicles only, mostly during office hours, Monday to Friday. There is no regular heavy vehicle movements associated with the operation of the building.

7.2.4 Natural Hazards

Port Vila / Efate is at risk from cyclones, earthquakes and tsunami. A 7.3 magnitude earthquake struck in December 2024, causing 14 deaths and at least 10 buildings to collapse in Port Vila's central business district[30]. Cyclones are common; most recently Cyclones Pam (2015), Harold (2022), Kevin (2023) and Judy (2023) all caused damage to buildings, trees and infrastructure the capital city.

7.2.5 Scoped Area of Influence

The area of influence is the urban neighbourhood with a mix of businesses, school and residential. Residential dwellings and schools are sensitive to construction activities such as workforce harassment, noise and vehicle movements. They are not sensitive to the operation of an office block except where the building design may affect sunlight, breeze or outlook of residential neighbours.

[30] https://en.wikipedia.org/wiki/2024_Port_Vila_earthquake accessed January 2025.

7.3 Environmental and Social Risk Scoping

7.3.1 Planning and Design Phase

Planning and Design Activity	Unmitigated Risk / Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Land access - Ave Edmond Colordeau	Unclear or protracted process of ownership and approvals for transferring the Ave Edmond Colordeau site to MFOMA, leading to project delays.	Moderate	Rare	Low	ESS5	Due diligence of land documents and confirmation of current occupancy. MFOMA to follow government processes by submitting a policy paper to the Council of Ministers. Minstry of Lands to provide Council of Minister's Decision to the Office of Attorney General to confirm transfer of site to MFOMA.
Land access – new site	If the above site is unsuitable or a better site is identified, the site may have unclear ownership which could create conflicts if not well-managed.	Moderate	Unlikely	Low	ESS5 ESS7	Land due diligence for any new site during project implementation.,
Building design to withstand earthquakes, cyclones / wind strength, rain fall intensity, flood risk, and ensure safety of occupants,	Site investigations, building design, specified construction methods and / or materials do not meet standards for disaster resilience, climate resilience and fire safety. Poor design or construction leads to building failure or	Severe	Unlikely	High	ESS4	Include the following requirements in the TOR for the design team: Suitably qualified professional to design for climate change risks and natural hazards. a suitable qualified life and fire safety professional should audit and certify: (i) Life and Fire Safety Master Plan, (ii) fire protection technical design, (iii) final

Planning and Design Activity	Unmitigated Risk / Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
aligned with climate change predictions.	personal harm in operational phase.					testing and commissioning of fire protection systems, and (iv) final delivery of Life and Fire Safety documentation. The Life and Fire Safety Master Plan must be prepared to demonstrate the building(s) meeting World Bank Group EHS Guidelines and the Vanuatu Building Code.
	Building design, construction materials or methods do not allow for universal access. Restricting employment opportunities or visits from those with special needs during operational phase.	Minor	Unlikely	Low	ESS4	Include relevant requirements in the TOR for the design team to meet Vanuatu Building Code, Disability and Access Policies and World Bank Group EHS Guidelines.
	Design does not take into account safe entry and exit of vehicles to and from site, leading to accidents or congestion during operation.	Minor	Possible	Low	ESS4	Include relevant requirements in the TOR for the design team for safe entry and egress of the site.
	Design does not consider energy efficiency, leading to higher energy use and energy costs during operation.	Minor	Possible	Low	ESS3	Include relevant requirements in the TOR for the design team to address energy efficiency and integration of solar panels into the design.

7.3.2 Construction Phase

Construction Activity	Unmitigated Risk / Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Construction activities	Noise and vibration from construction affecting residents and bystanders.	Moderate	Likely	Medium	ESS4	Stakeholder engagement to raise awareness and identify any sensitive times of day or week. Restrict hours of operation to normal work hours. Keep pedestrians well clear of the work space using fencing, signage and personnel.
	Heavy vehicles entering and exiting the site and parking on public roads in a busy urban environment, causing risks to drivers and pedestrians, including school children from Vila East Primary School and people using Independence Park.	Moderate	Likely	Medium	ESS4	ESMP to assess pedestrian risks at site access points. CESMP to include a traffic management plan.
	Earthworks on a sloping site causing sediment-laden stormwater off site	Moderate	Likely	Medium	ESS3	ESMP to identify potential hazards and mitigation measures based on good international industry practice and World Bank Group EHS Guidelines. CESMP to provide details on avoiding and managing erosion and sediment-laden run off.

Construction Activity	Unmitigated Risk / Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
	Occupational health and safety hazards from working near water, at heights, with power tools, welding, working with cement and other hazardous materials, and other building site hazards.	Severe	Possible	High	ESS2	ESMP to identify potential hazards and mitigation measures based on good international industry practice and World Bank Group EHS Guidelines. CESMP to provide details on hazard and risk identification, avoidance, mitigation and management for all OSH risks. Methods to follow World Bank Group EHS Guidelines and good international industry practice and Health and Safety at Work Act.
	Sexual exploitation, abuse or harassment by Project Workers.	Major	Unlikely	Medium	ESS4	Follow the SEA/SH Action Plan and ensure all Project Workers sign and comply with the Code of Conduct.
	Construction methods do not comply with design requirements for life and fire safety, leading to operational phase risks.	Moderate	Unlikely	Low	ESS4	Supervision team to include life and fire safety professional who will certify the work has been completed satisfactorily.

7.3.3 Operational Phase

Construction Activity	Unmitigated Risk / Potential Impact	Magnitude	Likelihood	Risk Rating	Relevant ESS	Key Mitigation Actions
Energy use	Solar power reduces cost and emissions associated with grid-connected power supply.	Minor benefit	Likely	Low Benefit	ESS3	

7.4 Conclusions and Recommendations

The construction of a multi-story building on government land in an urban mixed use area in Port Vila is considered an appropriate use of land and no significant impacts on the neighbouring properties are anticipated. The location is vulnerable to natural hazards and it is recommended that the design phase undertakes the appropriate investigations, design criteria and construction methodology to mitigate risk to occupants.

The recommendations are:

- The building **design brief** includes specific instructions for 1) engineering and environmental investigations and 2) design standards to mitigate harm to the extent possible (and maximise benefits) from the following:
    - Seismic risk, including site specific geotechnical conditions
    - Cyclonic winds and rainfall
    - Life and fire safety
    - Universal access
    - Energy efficiency
- Investigation outputs and building design concepts and detailed design is reviewed by an **independent technical specialist**, and recommendations adopted, prior to clearance by the PST and World Bank.
- **Construction is supervised** by a technical specialist to ensure design specifications are met.
- An **ESMP** is prepared by the PST E&S Officer or an independent consultant / consultancy procured by the PST at the detailed design phase to assess and manage the environmental, social, health and safety risks of construction and operation.
- A CESMP is prepared by the design and construction contractor to respond to the ESMP requirements throughout the construction period.
- Implementation of the **SEA/SH Action Plan**.
- Implementation of the Project **Labour Management Procedures.**

8 Technical Assistance

Project Components: 1.2, 2.1, 2.2, 3.2, 3.3

Proposed activities:

- Engagement of technical consultants.
- Development and delivery of training curriculum through the National Maritime and Fisheries Training Institute.
- Review of policies and institutional capacity for the fisheries sector.
- Stakeholder outreach and public information campaigns for fisheries management.
- Development of data capture and analysis for fisheries management.
- Demonstration tours and training of fishers in new techniques and technologies.

8.1 Environmental and Social Risk Scoping

All technical assistance activities and the foreseeable downstream / future impacts of implementation are subject to the World Bank ESS. Policy review and development is subject to many of the statutes of Vanuatu (e.g. Fisheries Act).

The detail of the objectives, methods and anticipated outputs of the above activities are not known at this stage, however general risks during the project are scoped as:

- Vulnerable members, such as small operators, women, rural / remote, young, poor and otherwise marginalised are not able to participate and derive benefit from studies, training etc.
- Outputs and recommendations do not consider the wide range of needs across the sector, community etc., and may benefit the majority or mainstream at the expense of the vulnerable or marginalised.
- Dominating materials and communications in English, and not enabling local dialects and languages to be used in relevant situations, can marginalise those whose first languages are Bislama, French or local dialect.
- Ignoring or undermining cultural norms and knowledge associated with resource management may lead to ineffective downstream / future implementation of policies or could alienate customary owners from their own resources.
- Avoiding or diminishing the environmental and social risks of sectoral reviews, training and other technical assistance can lead to downstream / future risks that would create environmental or social harm. This approach may miss opportunities to avoid or reduce impacts in the design of outputs and recommendations. Some examples are:
  - Policies and institutional reform recommendations for fisheries have the potential to:
    - create or exacerbate social inequities and access to income and livelihoods.
    - do not adequately involve indigenous peoples in the management of resources under their customary tenure.
    - unintentionally create or exacerbate unsustainable harvesting or habitat degradation.
    - introduce or exacerbate invasive alien freshwater or marine species.
  - Training, outreach, fishery demonstrations etc:
    - do not adequately address health and safety risk management, or create new or novel health and safety risks.
- Sexual exploitation, abuse or harassment by Project Workers during technical assistance activities and training.

8.2 Recommendations

The recommendations are:

- **Terms of reference** for all technical assistance are screened for environmental and social risk and instructions are included to incorporate ESS requirements into the planning, delivery and outputs, including avoiding and mitigating significant potential risks and impacts. Terms of reference, work plans defining the scope of the studies and outputs to be reviewed and cleared by the World Bank.
- Where necessary, **specific expertise (ecology, stakeholder engagement, cultural / customary, legal, occupational health and safety, employment)** should be included in the team.
- Technical assistance activities are aligned with the stakeholder analysis and engagement techniques in the **Stakeholder Engagement Plan**.
- Implementation of the Project **Labour Management Procedures.**
- Implementation of the Project **SEA/SH Action Plan**. Support the implementation of Vanuatu's National Action Plan to Combat Human Trafficking:
  - Including human trafficking detection and reporting in the training of fisheries observers.

- Developing standard operating procedures for maritime facilities on human trafficking prevention, detection and reporting.

9 Beneficiaries and Stakeholders

9.1 Beneficiaries

The Project Appraisal Document has identified primary and indirect beneficiaries. Primary beneficiaries are (i) fish workers associated with the tuna value chain, including those who may participate in fishing activities, vessel operation and servicing, vessel repairs and maintenance, as well as fish handling, storage, transportation, processing, and commercialization, who receive improved training, infrastructure, equipment, and enabling regulations to improve their job opportunities and enhance their work performance; (ii) coastal fishers that receive training, improved equipment and/or vessels, and/or extension services to enhance their activities, (iii) members of fisheries associations receiving support from the project to formalize their activities, and (iii) government officials receiving training, infrastructure, and equipment to contribute and enhance the execution of their jobs.

Indirect beneficiaries include extended communities associated with fisheries, and, ultimately, all the population of Vanuatu as government revenues are expected to increase, likely leading to more public investment; additional sources of accessible fish products will be available in the local market; and national marine ecosystems will be healthier, leading to enhanced ecosystem services, improved conditions for tourism and ecotourism development, and enhanced resilience of coastal communities.

9.2 Preliminary Stakeholder Identification

Beyond the beneficiaries, the following groups have been identified through a preliminary stakeholder mapping exercise:

Location / Activity	***Stakeholder***	***Interest / Participation***
Port Vila VFD Headquarters	Ministry of Lands (Department of Lands – Vila)	for landowner and land claimant consultations as needed – confirm with land record documents
	Ministry of Justice and Communities Services (Disability)	Interest in buildings that are accessible and comply with the Building Code and GIIP. May be able to provide input into building design.
	Commercial neighbours	Access, parking, views, and other aspects may be affected by the building. Occupants may be affected by construction noise and other nuisances.
Luganville Provincial Fish Market upgradesC	Traditional Leaders (Provincial Council of Chiefs – Tavuemasana Council fo Chiefs) and Chiefs from the area councils which have fishers' groups	General interest. Insights into the needs of fishers / market salespeople who may benefit from the Project. Insights into potentially vulnerable people / groups.

Location / Activity	***Stakeholder***	***Interest / Participation***
	Fisher group representatives	Potential beneficiaries. Insights into the needs of fishers / market salespeople. Insights into potentially vulnerable people / groups.
	Ministry of Lands (Department of Lands – Santo)	For landowner and land claimant consultations as needed – confirm with land record documents
	Ministry of Internal Affairs (Foreshore)	Foreshore development consent process.
	SANMA Provincial Council Secretary General and President	General interest Alignment with provincial priorities
	Luganville Municipal Council (including Mayor)	General interest Compliance with local regulations Alignment with municipal priorities
	Sanma Provincial Council Office,	General interest Compliance with local regulations Alignment with provincial priorities
	Vanuatu Council of Women (Department of Women) – Santo Office	General interest. Identification of potentially vulnerable people or groups. Gendered insights into project design and implementation.
	Northern Island Market Vendors Association	May benefit from improved facilities. May be affected by construction / installation nuisance or workforce. Insights into potentially vulnerable groups or people.
	Neighbours	May be affected temporarily during construction from traffic, parking, noise nuisance etc.
Luganville VFD Facilities, Fisheries Technology Centre and Multipurpose Jetty and Moorings	Customary land owners	Impacted by reclamation on foreshore and seabed under customary ownership. Engagement regarding foreshore development approvals.
	Communities of la Rosiere, St. Michelle, Velit Bay.	May be impacted by traffic, noise and other nuisance during construction or operation. May be affected by visual changes to the waterfront. May benefit from, or be affected by, imported workforce presence.
	Tourism accommodation, tourist operators, commercial operators	May be impacted by traffic, noise and other nuisance during construction or operation. Water based tourism experiences impacted by changes in foreshore / vessel movements etc. May be affected by visual changes to the waterfront.

Location / Activity	***Stakeholder***	***Interest / Participation***
		May benefit from boat pen / gantry / boat services. May benefit from workforce accommodation needs and other services.
	Aore Island Resort and coastal residents	May be affected by intermittent construction noise and / or visual changes to the waterfront.
	Lycee de Luganville Secondary School	Is on the route from the port to the site and may experience heavy traffic movements. May have pedestrians walking near the site before and after school who may be vulnerable to SEA/SH or road safety risks.
	Traditional Leaders (Provincial Council of Chiefs – Tavuemasana Council of Chiefs) and Chiefs from the area councils which have fishers' groups	General interest and influence on design and operation of facilities.
	Fisher group representatives	General interest and influence on design and operation of facilities. May be affected by loss of boat ramp. Beneficiaries of increased services / facilities.
	Maritime Authority	Alignment with regulations, policies, procedures, capabilities etc. Contribution to design, layout, security, waste management, fuel storage, vessel movements and dock operations
	Sanma Provincial Council Office,	General interest Compliance with local regulations Alignment with provincial priorities
	Sanma Provincial Council including Secretary General and President	General interest Alignment with provincial priorities
	Sanma Tourism Committee	Potential temporary impacts during construction (traffic, noise). Cumulative impacts (noise, visual) with neighbouring commercial operators once operational. Opportunities to benefit from worker accommodation and other services.
	Luganville Municipal Council (including Mayor)	General interest Compliance with local regulations Alignment with municipal priorities
	Department of Ports and Harbors, Ministry of Infrastructure and Public Utilities (MIPU)	Alignment with regulatory context and Ministry priorities.
	Geology and Mines (Water Department)	Sea water use rights process.

Location / Activity	***Stakeholder***	***Interest / Participation***
	Vanuatu Council of Women (Department of Women) – Santo Office	Interest in the equality of opportunity for women to participate in and benefit from the project. Identification of potentially vulnerable people or groups. May assist in understanding risks of SEA/SH and increased demand for sex workers and suitable mitigation and grievance mechanisms.
	Ministry of Justice and Communities Services (Disability)	Interest in buildings that are accessible and comply with the Building Code and GIIP. May be able to provide input into building design.
	PWD and commercial quarry operators	Potential supply of fill materials for reclamation.
	Traffic police	Interest in road safety hazards, especially heavy vehicle traffic, during construction.
	DEPC	Environmental permit process. Information on biodiversity values, environmental value etc. Information on public consultation approaches.
	Melcoffee Wharf / Mr. Wong Sisi	Neighbour, Commercial operator of a nearby wharf May be affected by changes in the foreshore or maritime activities.
	Silent World	Neighbour, commercial operator of shipping services May be affected by changes in the foreshore or maritime activities, especially the operation of the jetty and moorings in front of the property.
	Ministry of Trades and Commerce	Currently building a 'back house' on Silent World property so will be a neighbour.
	Coconut Oil Palm	Neighbour.
	Abbatoir	Neighbour
	Residential compound	Closest residential properties. Most at risk from road safety hazards, noise and other nuisances from construction and operation.
	Religious Organizations (Churches, Sanma Catholic Churches and Anglicans	May have interest in crew counselling services. May be able to reach through the churches to community members for project engagement purposes. May provide insights into vulnerable groups and people.
	Custom Management Office – Santo	Inputs into layout, security measures and operations. Discussion on interface between fisheries and customs responsibilities.

Location / Activity	***Stakeholder***	***Interest / Participation***
	Northern Island Market Vendors Association Fish processers or market vendors.	Once the jetty infrastructure is built, they may benefit from vendor services (e.g., for crew support and related needs).
	Commercial and recreational boat owners	Potential use of multiuse jetty, boat pen and gantry, fueling etc. Potentially affected by removal of boat ramp.
	Area Council Officers	General interest, alignment with work programs, impacts on infrastructure and services etc.
	Shipping sector, including interisland shipping companies	Interest in opportunities to benefit from the multipurpose jetty, boat pen and gantry, maritime safety from changes in vessel movements.
	Vanuatu Environmental Science Society	Members have information on threatened marine species. May be interested in the environmental assessment and mitigation measures for dugongs, mammals, turtles etc.
Technical advisory.	Traditional Leaders (Provincial Council of Chiefs – Tavuemasana Council fo Chiefs) and Chiefs from the area councils which have fishers' groups	Represent project beneficiaries. May provide access to customary knowledge and traditions
	Fisher group representatives	Project beneficiaries.
	Commercial, recreational and subsistence fishers	Project beneficiaries.
	Vanuatu Council of Women (Department of Women) – Santo Office	Interest in the equality of opportunity for women to participate in and benefit from the project and from downstream / future implementation of technical assistance outputs.
	Vanuatu National University	Interest in training opportunities, curriculum development, policy review
	Vanuatu Maritime College	Interest in training opportunities, curriculum development, policy review
	International Organisation for Migration	Interest and knowledge of human trafficking risks in fisheries sector and how to raise awareness with communities.

9.3 Recommendations

- All stakeholder analysis, methods and progammes to be documented in the **Stakeholder Engagement Plan** for implementation throughout the Project.

- **Grievance mechanism** in the Stakeholder Engagement Plan to meet the needs of the various stakeholders.

10 Summary of E&S Instruments and Permits

For all Components of the VU PROP Project:

- Environmental and Social Commitment Plan
- Stakeholder Engagement Plan including Grievance Mechanism
- Labour Management Procedures including Labor Grievance Mechanism
- SEA/SH Action Plan
- E&S Scoping Report (this report)

Component 1.1 Reclamation, Jetty, Moorings, Admin Building, Boat Gantry, Luganville

- Land Due Diligence Report.
- ESIA (including technical biodiversity studies and maritime institutional analysis) and ESMP (including subplans). Assume these documents will also satisfy the EIA and EMMP requirements of DEPC Environmental Permit process.
- If necessary, a component-specific Stakeholder Engagement Plan.
- Land access plan (scope to be determined based on Land Due Diligence Report).
- CESMP.
- Quarry Management Plan (if the Contractor will operate the quarry).
- Primary Supplier ESF Due Diligence Report (if the Contractor will purchase quarry material from third party supplier).
- Operational ESHS Management Plan / Procedures.
- Environmental Permit (DEPC).
- Foreshore Development Permit (DUAP).
- Building Permit (Luganville Municipal Council).
- Quarry Permit (if the Contractor will operate the quarry).
- Pollution Permit for direct discharges to the marine environment (DEPC).

Component 1.2 Fisheries Technology Centre, Luganville

- Land Due Diligence Report.
- ESMP, unless it is included in the TOR for Component 1 ESIA and ESMP, depending on the scope of the design TOR and the timing of works. Assume this document will also satisfy the EMMP requirements of DEPC Environmental Permit process.
- CESMP.
- Operational ESHS Management Plan / Procedures.
- Environmental Permit (DEPC) unless already included in Component 1.1 permit.
- Building Permit (Luganville Municipal Council).
- Pollution Permit for direct discharges to the marine environment (DEPC).

Component 2.1 Luganville Fish Market Upgrades and other minor works

- Land Due Diligence Report.
- E&S Screening.
- ESCOP.
- Environmental Permit.
- Building Permit (for major renovation works or new structures).

Component 3.1 VFD Headquarters

- Land Due Diligence Report.
- E&S Screening.
- ESMP. Assume this will also satisfy the EMMP requirement of DEPC for Environmental Permit.
- CESMP.
- Environmental Permit (DEPC).
- Building Permit (Port Vila Municipal Council).

Components 1.2, 2.1, 2.2, 3.2, 3.3 Technical Advisory

- E&S Screening
- Instruments will depend on the outputs of screening and may include task-specific OSH plans, Community Health and Safety Plans, Waste Management Plans etc.

11 Budget Estimate

The following is an estimate of the costs to implement the recommendations of the Scoping Study.

Component	***Action or Aspect***	***No. Units***	***Unit Cost Estimate (VUT)***	***Total Cost Estimate (VUT)***
Component 1.1	Preparation of Biodiversity technical Studies, maritime institutional analysis and ESIA and ESMP	1	30,000,000	30,000,000
	Land Due Diligence* (Land Specialist)	1	0	0
Component 1.2	Fisheries Technology Centre Preparation of ESMP#	1	2,000,000	2,000,000
Component 2.1	Preparation of ESCOP* for small scale works including Luganville Fish Market upgrades (E&S Officer)	1	0	0
	Review of Design TOR and outputs for E&S risk management* (E&S Officer)	`1	0	0
Component 3.1	Preparation of ESMP for Headquarters (consultancy)	1	2,500,000	2,500,000
	Review of Design TOR and outputs for E&S risk management* (E&S Officer)	`1	0	0
Components 1.2, 2.1, 2.2, 3.2, 3.3	Review of Technical Advisory TOR and Outputs* (E&S Officer) Preparation of ESCOP or small scale guidelines or instruments.	multiple	0	0
All	E&S Officer full time	6yr	12,000,000	72,000,000
	E&S Specialist intermittent	6yr	10,000,000	60,000,000
	Land Specialist intermittent	3yr	6,000,000	18,000,000

Component	***Action or Aspect***	***No. Units***	***Unit Cost Estimate (VUT)***	***Total Cost Estimate (VUT)***
	Other technical support Ad hoc contingency	1	12,000,000	12,000,000
	Stakeholder Engagement Plan and Grievance Mechanism (as provided for in the SEP)	1	1	10,500,000
Total				207,000,000

*Included in officer or specialist budgets
#May be included the ESIA and ESMP for Component 1.1 depending on the design contract and timing of works.

Not included in the budget is:

- Preparation of the instruments required for appraisal (included in separate budget):
  - Stakeholder Engagement Plan
  - Labour Management Procedures
  - Environmental and Social Commitment Plan
- Preparation of the TOR for the ESIA and ESMP for Component 1.1 (included in separate budget)
- Contractor's expenses to prepare and implement the CESMP (to be considered in the ESMP, bid document preparation (including BOQ) and the Contractor's proposal.
- Land access costs and entitlements etc.
- Permit application fees.

12Next Steps

1) Finalisation of the priority instruments for Project Appraisal including this report and:
   a) Vanuatu PROP Stakeholder Engagement Plan
   b) Vanuatu PROP Labor Management Procedures
   c) Vanuatu PROP SEA/SH Action Plan
   d) Vanuatu PROP Environmental and Social Commitment Plan
2) Recruit E&S resources for the PST:
   a) E&S Officer – full time, Port Vila based
   b) E&S Specialist – part time / intermittent, Port Vila or remote
   c) Land Specialist – part time / intermittent, Port Vila or remote
3) Stakeholder engagement regarding the project objectives, components, outcomes and the potential environmental and social risks.
4) Land due diligence of all sites, including current legal status of land and the processes to acquire the rights to occupy and use all sites for the project.
5) Land transfer processes to be completed for the VFD Headquarters site in Port Vila.
6) Preparation of a Terms of Reference for the ESIA and ESMP for the reclamation, jetty and moorings, new office block and fisheries technology centre at the VFD compound, Luganville.
7) Preparation of the natural hazards and environmental and social aspects of the design TOR for the reclamation, jetty and moorings, new office block and fisheries technology centre at the VFD compound, Luganville.
8) Preparation of the natural hazards and environmental and social aspects of the design TOR for the VFD Headquarters in Port Vila.