PRIORITIZED ROAD INVESTMENT AND MANAGEMENT ENHANCEMENTS (PRIME) PROJECT

Federated States of Micronesia

ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (GENERIC)

FINAL

Prepared by

Department of TRANSPORTATION, COMMUNICATIONS & INFRASTRUCTURE
Government of the Federated States of Micronesia

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ABBREVIATIONS AND GLOSSARY

ARAP	Abbreviated Resettlement Action Plan
CESMP	Contractors Environmental and Social Management Plan
CAH	Cultural, archaeological or historical
CHSP	Community Health and Safety Plan
CIU	DoFA Central Implementation Unit
CO	Carbon monoxide
CoC	Code of Conduct
CRRS	Climate Resilient Road Strategy
DoFA	Department of Finance and Administration
DoPW&T	Yap State Department of Public Works and Transportation
DoT&I	Kosrae Department of Transportation and Infrastructure
DoT&PW	Chuuk State Department of Transport and Public Works
DoTC&I	Department of Transportation, Communications and Infrastructure
EA	Executing Agency
E&S	Environmental and Social
EHS	Environmental Health and Safety
ESA	Environmental and Social Assessment
EMRP	Emergency Management and Response Plan
EPA/KIRMA	Environmental Protection Agency/Kosrae Island Resource Management Authority
ESCP	Erosion and Sediment Control Plan
ESF	World Bank Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework – prepared as per the World Bank ESS1 and contains the screening and scoping of environmental and social risks at the time of PRIME project appraisal and the framework for screening risks for technical advisory studies and road works activities prioritised under the VA and CRRS.
ESMP	Environmental and Social Management Plan – prepared as per the World Bank ESS1 and contains mitigation and management measure to avoid, minimise and treat risks and impacts.
ESS	World Bank Environmental and Social Standards
FSM	Federated States of Micronesia
GBV	Gender Based Violence
Generic ESMP	This document, containing mitigation and management measures based on ‘typical’ or ‘generic’ road works impacts. Will be used for PRIME on

	road works activities where screening has identified no site-specific risks or vulnerabilities.
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GoFSM	Government of FSM
IA	Implementing Agency
IOL	Inventory of Loss
LMP	Labor Management Procedures
NOX	Nitrogen oxides
NO_2	Nitrogen dioxide
OHS	Occupational Health and Safety
PIA	Project Implementation Agreement
PIU	PRIME Project Implementation Unit
PM	Particulate matter
PMU	DoTC&I Project Management Unit
PPE	Personal protective equipment
PRIME	Prioritized Road Investment and Management Enhancements Project
PSC	Project Steering Committee
RF	Resettlement Framework
RSA	Road Safety Audit
SEA	Sexually Exploitation & Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SIP	Social Interaction Plan
Site Specific ESMP	Site Specific Environmental and Social Management Plans will be prepared and implemented for road works activities where there are impacts beyond 'typical' or 'generic' impacts that are covered by this document, the 'Generic ESMP'. Site specific issues may be sensitive environmental or social receptors, or significant scale of works that require specialist mitigation.
SMP	Spill Management Plan
SO_2	Sulphur dioxide
STD	Sexually-transmitted diseases
SWGMP	Surface Water and Groundwater Management Plan
TA	Technical Assistance
T&I	Pohnpei State Office of Transportation and Infrastructure
TMP	Traffic Management Plan

TOR	Terms of Reference
UXO	Unexploded ordinance
VA	Vulnerability Assessment
VLD	Voluntary land donation
VOC	Volatile organic compounds
WB	World Bank (Funding Agency)
WHO	World Health Organization
WMMP	Waste Minimization and Management Plan

1. Introduction

1.1 Overview

The Government of Federated States of Micronesia (GoFSM) has applied for financing from the World Bank (WB) for the *Prioritized Road Investment and Management Enhancements* (PRIME) Project to improve the climate resilience of FSM's Road network.

This document presents the Generic Environmental and Social Management Plan (Generic ESMP) for the PRIME Project. It has been prepared according to the Terms of Reference (TOR) and pursuant to Section 6.1 of the PRIME Project Environmental and Social Management Framework (ESMF)[1], as set out in Appendix A.

1.2 PRIME Safeguards Instrument Architecture

The PRIME Project safeguards instruments are as follows (with hyperlinks to the disclosed documents):

Instrument	Purpose
Environmental and Social Commitment Plan (ESCP)	Legal agreement between FSM and World Bank, outlining the actions, roles, responsibilities and timelines for mitigation, management, monitoring and reporting for all components of the PRIME project.
Environmental and Social Management Framework (ESMF)	Legal framework, risk assessment, screening processes and instructions for preparing management instruments for all components of the PRIME project.
Labor Management Procedures (LMP)	Legal framework and procedures for managing the working conditions of all project workers, including contractors. Contains labor grievance mechanism and Occupational Health and Safety (OHS) requirements for all components of the PRIME project.
Stakeholder Engagement Plan (SEP)	Plan for identifying and engaging with stakeholders for all components of the PRIME project.
Generic ESMP (this document)	Mitigation and monitoring measures and implementation arrangements for 'moderate' risk road works projects prioritized under Component 2. One instrument to be used on many road works sub-projects. Covers all phases of the road works – design, pre-construction, construction and operation.
Site-specific ESMP	Mitigation and monitoring measures and implementation arrangements for 'substantial' and 'high' risk road works under Component 2. Prepared on a case by case basis for individual road works sub-projects. Covers all phases of the road works – design, pre-construction, construction and operation.

[1] Prioritized Road Investment and Management Enhancements (PRIME) Project, FSM: Environmental and Social Management Framework', Report prepared for Department of Transportation, Communication and Infrastructure. December 2020.

Instrument	Purpose
Contractors ESMP (CESMP)	Specific, practical, mitigation measures to prepared and implemented by Contractors to comply with the bid documents, LMP, ESMP and SEP for all road works under Component 2. Covers construction activities only.

Road works activities for PRIME funding under Component 2 will be identified through a prioritization process under the Component 1, Vulnerability Assessment and Climate Resilient Roads Strategy. Once prioritized they will be screened using the checklists and procedures in the ESMF and the appropriate instruments prepared during detailed design, for implementation in the design, pre-construction, construction and operational phase. This process is summarized in Figure 1-1Figure 1-1: E&S screening process. Two rounds of E&S screening (**initial** and **detailed**) are to be undertaken by the CIU Safeguards Team. This Generic ESMP will be implemented on road works where the project has been screened as 'Moderate' risk (as defined by World Bank Environmental and Social Framework (ESF))[2].

Contractors will be required to prepare Contractor's ESMP (CESMP) to provide specific, practical 'on the ground' mitigation and management measures for construction activities to comply with the requirements of the Generic ESMP.

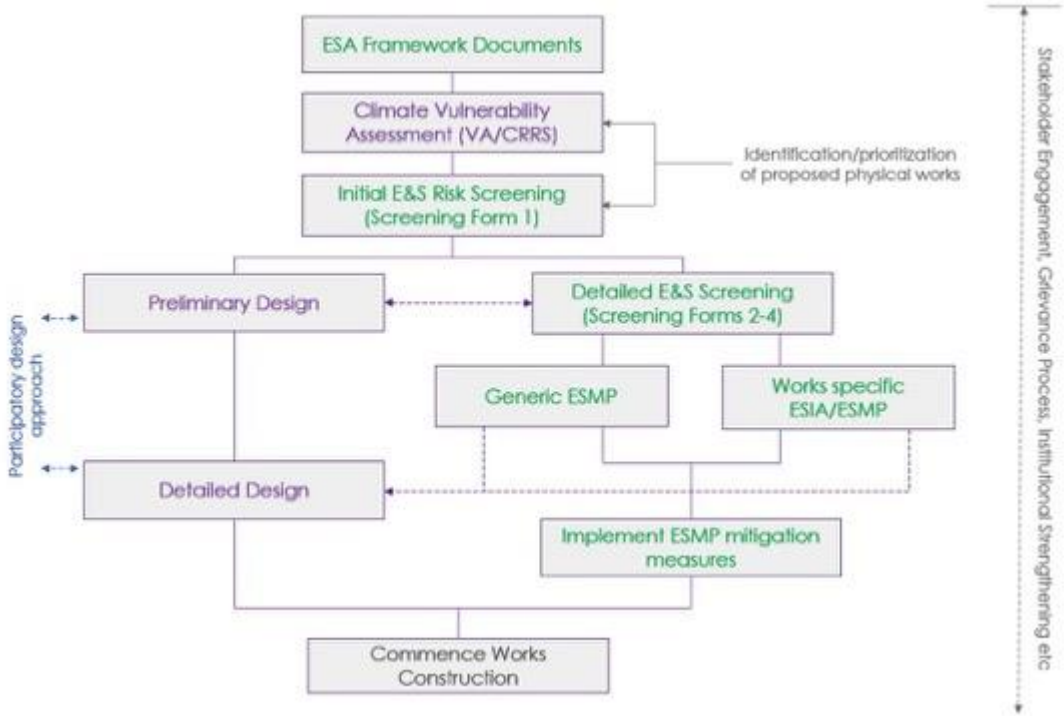

Figure 1-1: E&S screening process.

1.3 Purpose and Scope of the Generic ESMP

The Generic ESMP covers the following:

[2] All other road works will have a site-specific ESMP prepared. Site-specific ESMP will be used to manage the specific sensitive receptors that are unique or substantial or high risk and not sufficiently covered by this Generic ESMP.

1. Methods to minimize the environmental and social impacts of activities associated with 'Moderate' risk PRIME road works as screened under the ESMF process, using World Bank ESF risk ratings.
2. Instructions to the Design Engineer and Contractor on expectations for good environmental and social (E&S) risk management practice to meet the requirements of the World Bank Environmental and Social Framework (ESF), PRIME ESMF, PRIME LMP, PRIME SEP, World Bank Group Environmental, Health and Safety (EHS) Guidelines, Good International Industry Practice (GIIP) and FSM legal frameworks.
3. Limits, procedures, methods, standards, regulations and other aspects to provide assurance that risks will be avoided and minimized.
4. Provides an implementation tool for designers, contractors and clients to understand their limits and enabling actions and outputs to be measured and monitored.
5. 'Typical' / 'generic' impacts from road works that are well known and associated industry-specific mitigation measures that are well-developed and widely used.
6. Defined responsibilities and management structure for E&S control and reporting to ensure that actions taken are in accordance with the primary objective of protecting and conserving the natural and social environment.

1.4 Application of the Generic ESMP

All project workers, staff and contractors (including sub-contractors) involved in the design, preparation, construction and operation of road works are required to implement this Generic ESMP.

This Generic ESMP will be applied as follows:

(i) As a guide to the design consultants in relation to identified likely risks and suitable mitigation required for the road works;

(ii) Supporting document for stakeholder engagement activities;

(iii) Be attached to bidding documents at tendering for Civil Works Contractors;

(iv) Be used as a guidance document for the Contractor to prepare their CESMP to cover all environmental and social risks they are responsible for; and

(v) Provide guidance on emergency preparedness and response procedures.

2. Sensitive Receptors

The following figures set out locations of key sensitive social receptors (key villages, churches, schools, hospitals) along the PRIME Road extent in each state, as well as assets identified during a road corridor surveys (including private dwellings, commercial buildings, grave sites).

- Information for Kosrae is set out in Figure 2-1 and Figure 2-2.
- Information for Pohnpei is set out in Figure 2-3 and Figure 2-4.
- Information for Chuuk is set out in Figure 2-5 and Figure 2-6.
- Information for Yap is set out in Figure 2-7 and Figure 2-8.

Further information on the Project environmental baseline and sensitive receptors are available in Section 4.3 of the ESMF, and in the Baseline Assessment Report in Appendix A of the ESMF.

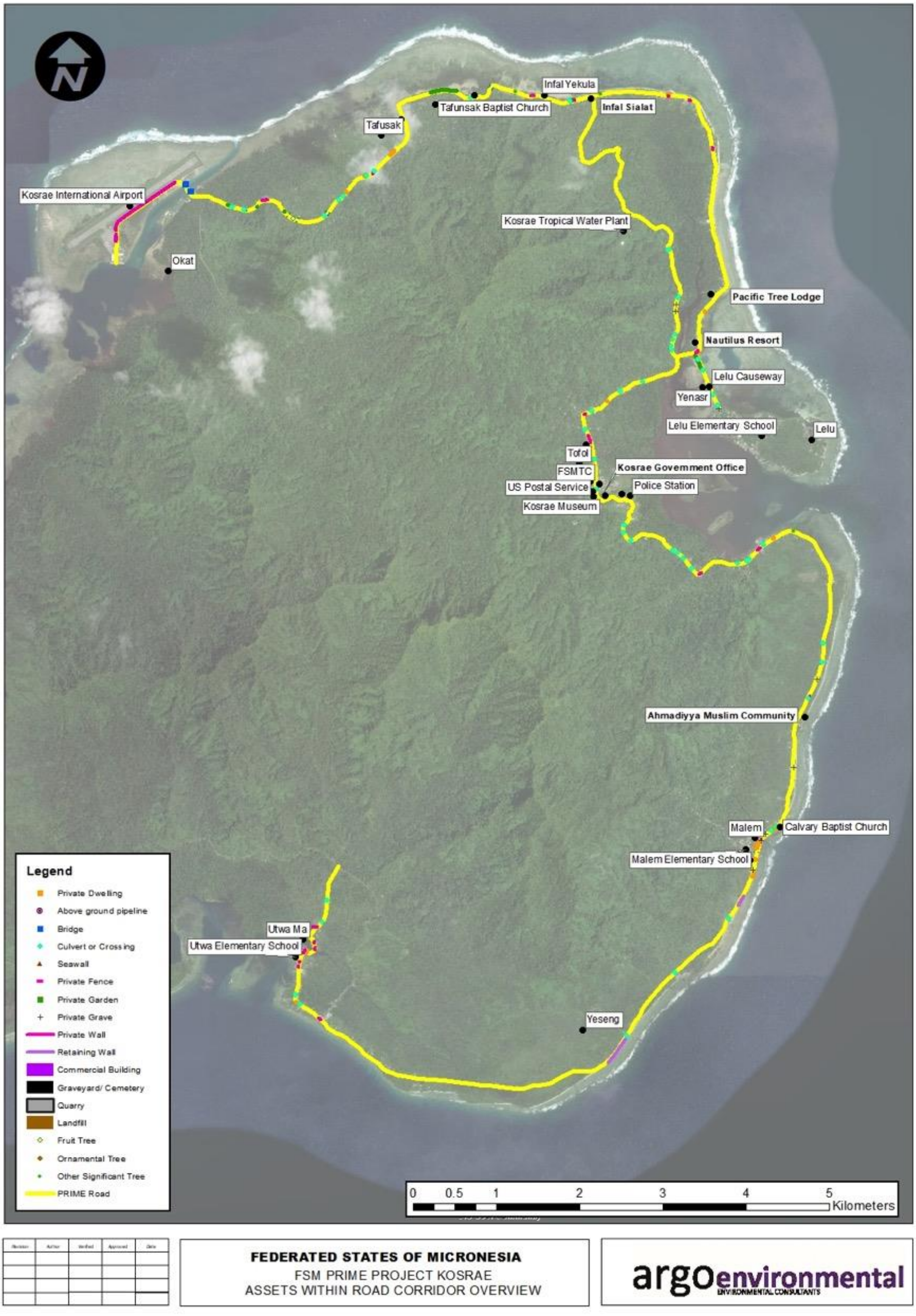

Figure 2-1: Key assets and sensitive social receptors identified during the road corridor inspection – Kosrae.

Figure 2-2: Images showing key assets and sensitive receptors located in close proximity to the road on Kosrae including walls (top left & right) private residences, garden and power poles (middle left & right), and one lane bridge on Lelu causeway and coastal protection works (bottom left & right).

Figure 2-3: Key assets and sensitive social receptors identified during a road corridor inspection – Pohnpei.

Figure 2-4: Images showing examples of assets and sensitive receptors located in close proximity to the road on Pohnpei including private residences and churches (top left & right), telecommunications tower and water pipeline (bottom left & right).

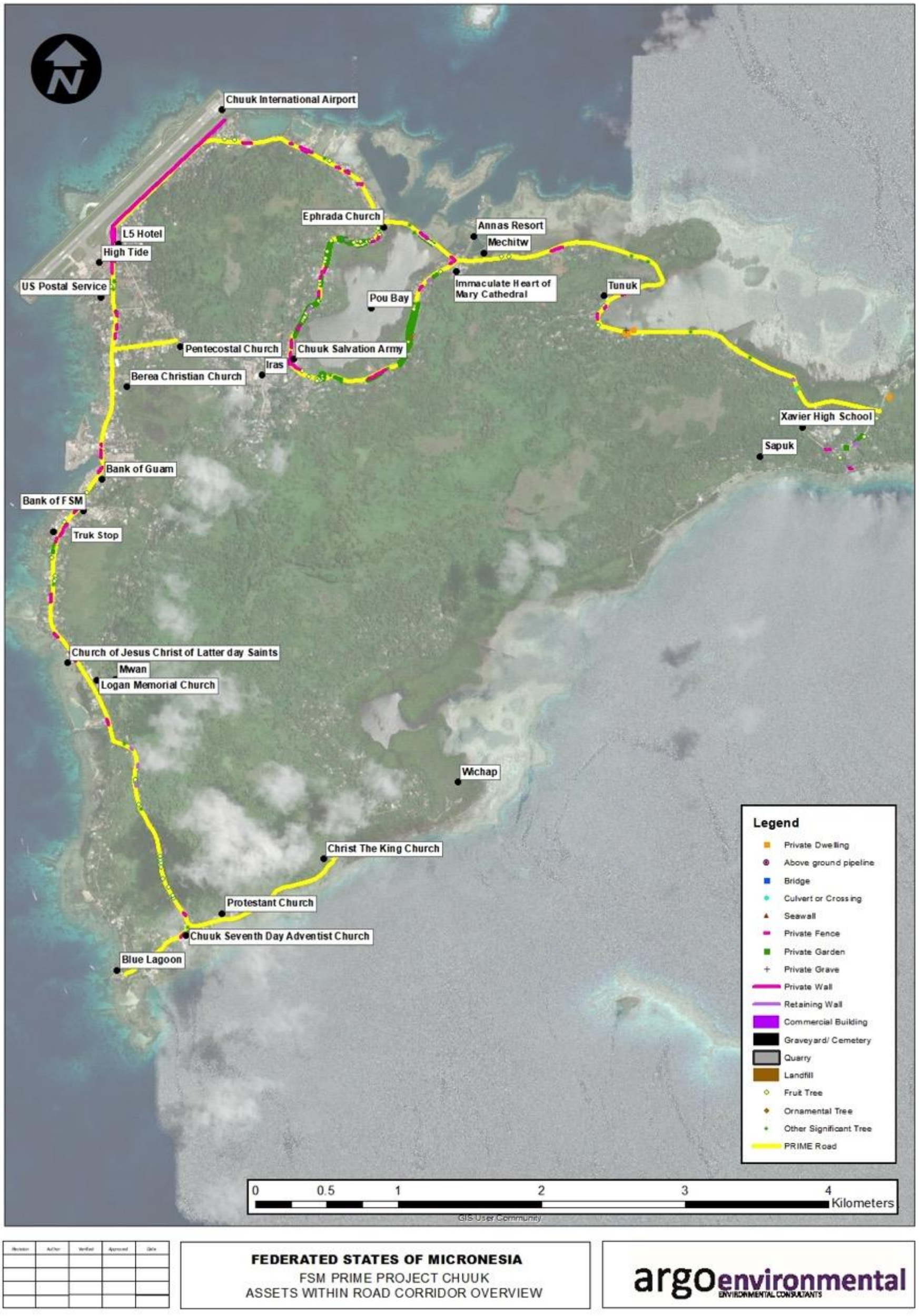

Figure 2-5: Key assets and sensitive social receptors identified during a road corridor inspection – Chuuk.

Figure 2-6: Images of Chuuk showing examples of assets and sensitive receptors identified during the road corridor on Chuuk inspection including walls and private fences (top and middle left and right), pig pen (bottom left) and power poles (bottom right).

Figure 2-7: Key assets and sensitive social receptors identified during a road corridor inspection – Yap.

Figure 2-8: Images showing examples of assets and sensitive receptors located in close proximity to the road on Yap including private residences and commercial properties walls (top left & right) fences and walls (middle left & right, bottom left), and public utilities (bottom right).

3. PRIME Project Road Works Overview

The *Prioritized Road Investment and Management Enhancements (PRIME) Project* Component 2 will provide funds for the feasibility, design and construction of physical works on priority road assets to improve resilience to climate-related hazards or events.

The extent of the roads considered for improvement under the PRIME Project are outlined in Figure 2-1 (Kosrae), Figure 2-3 (Pohnpei), Figure 2-5 (Chuuk) and Figure 2-7 (Yap).

3.1 Climate Resilient Infrastructure Solutions

This Generic ESMP is to be used for activities identified for funding under Component 2 which have been screened as having 'moderate risk' of E&S impacts under the screening process set out in the ESMF[3] and has typical impacts readily mitigated by industry standard measures.

Interventions that the Generic ESMP may be applied to could include:

(i) **Pavement and surface strengthening** – periodic maintenance, repairs, rehabilitation or reconstruction of existing road pavement layers and/or surfacing, including provision of sealed shoulders and raising road levels;

(ii) **Drainage improvements** – provision, reinstatement and/or lining of longitudinal drainage, replacement and/or increasing capacity of cross drainage culverts, improving open or covered outfalls, provision of subsoil drainage and cut-off drains;

(iii) **Spot slope stabilization** – widening and/or reducing slope of cuttings and fill embankments to reduce landslip risk, soil bioengineering and biotechnical stabilization techniques, and anchoring of unstable rock slopes;

(iv) **Rock wall revetment strengthening** – for protection of coastal road sections;

(v) **Improvements to causeways and bridges** – repairs or reconstruction of existing crossings and/or provision of new crossings to provide safe, all weather access for vehicles and pedestrians; and

(vi) **Road safety improvements** – traffic calming measures, provision of guardrails, line marking and minor realignments to improve sight distance.

3.2 Generic Construction Methodology

Generic Construction activities potentially required as part of Component 2 works to strengthen road network resilience in FSM (as listed in Section 3.1 above), are outlined in Table 3-1.

Not all activities will be necessary for all Component 2 works, however this list includes typical Generic Construction activities to be expected for these works. Construction methodology for each site will be determined by the design engineer.

Table 3-1: Construction-related activities for road works and generic mitigation methodology.

[3] Using the World Bank ESF risk rating definitions.

Construction-related Activities	Types of Component 2 works	Generic Methodology
Secure land for temporary works, required by the Contractor only (will be returned to the land owner at the end of the construction phase).	All works	• Identify land requirements for associated Project activities, not already secured (e.g. laydown areas, stockpile sites, temporary crossings etc) contractor. • Identify ownership and negotiate use of land (contractor with support and oversight from CIU Safeguards Team), in accordance with Resettlement Framework (RF). • Establish baseline condition of site, including nearby sensitive receptors (e.g. nearby structures that could be prone to vibration impacts). Include photographs and written description of site and sensitive receptors (contractor with support from CIU Safeguards Team or Design and Supervision consultant). • Reach willing buyer and/or willing seller agreement with landowner as to the expected condition of reinstatement of site (contractor with support from CIU Safeguards Team).
Management of small-scale encroachment into the road easement area by secondary structures (such as fences and crops etc).	All works	• Participatory design approach by Design and Supervision consultant to be applied with the respective asset owners, occupiers and communities where encroachment occurs, in accordance with the RF. • Stakeholder engagement, consultation and participation, to be undertaken as set out in the RF and SEP, and to include clear consultation, participatory Inventory Of Loss (IOL) survey, documentation of agreements and monitoring procedures, and ensure any impacts are minimal and mitigation/restorative measures are acceptable to affected people (Design and Supervision consultant).
Mobilise to site. Site and workforce management.	All works	• Prepare CESMP and submit for clearance. Implement CESMP throughout. • Mobilise all equipment and personnel to site. • Workforce accommodated in existing market rentals or guesthouses. No purpose-built workers camps. • Workforce inductions. • Signing of Code of Conduct (CoC) by workforce. • Training of workforce, including specific technical and skills based training for works induction and throughout the works, as required. • Establish a laydown area as appropriate.

Construction-related Activities	Types of Component 2 works	Generic Methodology
		• Install appropriate signage and traffic management procedures in accordance with Annex 5 of the WB Good Practice Note on Road Safety at each approach to ensure the safety of the public and the Contractor (ongoing throughout Construction phase, as traffic management requirements change depending on the nature of the risks at that time). • Construction works shall only be undertaken between the hours of 0700 and 1800, Monday to Saturday on days which are not public holidays, unless authorized as follows. • No work shall be carried out on Sunday or public holidays, or outside the hours prescribed above, without prior approval of the Contractor and the PIU, and following consultation with the State Government, traditional leaders and local Municipality and community.
Clearance of vegetation and debris.	All works	• Clearance of grasses, shrubs and trees within or adjacent to the footprint of the works area to allow for site establishment and repairs to occur. • Clear loose material, excavate and remove unstable material and remove off site. • Clear flood debris blocking flow of water under the bridge. • Clear debris and any vegetation growing in drainage ducts. • Stockpile topsoil and compost mulch for site reinstatement.
Clearance of road seal.	All works	• Removal of old road seal material, and either storage and reuse, or disposal of material in a suitable facility permitted by EPA/KIRMA.
Aggregate sources.	All works	• Identification source of aggregate material required. • Purchase of aggregates to follow LMP requirements for Primary Suppliers. • Source aggregate from either a local licensed quarry site, or import from another State or international source. • All quarries to be screened by CIU safeguard team and need to be permitted by state agencies and compliant with standard WB E&S requirements.
Temporary works.	Temporary crossing works for	• Creating temporary river / stream crossing to avoid risks associated with flowing water and

Construction-related Activities	Types of Component 2 works	Generic Methodology
	public access across river/stream during the duration of the works (e.g. bridges, culverts and causeways).	ensure water passage by resources (e.g. fin fish).
Excavation and scour protection works in and near waterways – drainage management.	Crossings (e.g. bridges, culverts and roads), slope stabilization and rock wall revetment works.	• Provide abutments scour protection where necessary by installing rock protection to appropriate grades and batters. Rock to be sourced from licensed and approved quarries. • Excavate and clear loose and unstable material before installing fill material to the appropriate grades and batters, benching and preparing a base for rock rip rap or gabion protection. • Cutting an access track to get equipment to the site (e.g. to the stream for crossing works). • Excavate around site, and where appropriate waterways, to divert water and allow construction of any works (e.g. bridge repairs). • Excavate to form suitable foundation, install rock protection, and replace damaged sections. • Stockpile soil and rock for reuse, or disposal to agreed disposal area.
Excavation works on slopes and away from waterways.	Driveway, road and access crossings, slope stabilization and rock wall revetment works.	• Excavate and clear loose and unstable material before installing fill material to the appropriate grades and batters, benching and preparing a base for rock rip rap or gabion protection. • Cutting an access track to get equipment to the site. • Excavate around site to allow construction of any works. • Excavate to form suitable foundation, install rock protection, and replace damaged sections. • Stockpile soil and rock for reuse, or disposal to agreed disposal area.
Strengthening of piles or re-piling, concrete works and installation of new	Crossings (e.g. bridges, culverts and causeways), slope	• Clean and break out damaged sections of concrete, replace/repair reinforcement and patch repair with mortar. • Cut/chip out spalled or damaged concrete.

Construction-related Activities	Types of Component 2 works	Generic Methodology
wingwalls, aprons or base slab.	stabilization and rock wall revetment works.	• Water blast cracked surface and clean out crack, fill crack with epoxy or grout. • Mass fill damaged area with flowable concrete. • After breaking out damaged concrete, replace/repair corroded reinforcement and patch repair with mortar. • Construct new reinforced concrete slab over granular material. • Pour concrete within dry waterway to repair aprons and culvert linings. • Construct concrete mass blocks for works such as replacing damaged wing walls. • Construct new reinforced concrete wing wall(s). • Pouring of in-situ concrete in one continuous operation between ends of members and construction joints and within such intervals of time that the contact surface of the preceding concrete is still in a plastic condition. Until hard set has occurred, freshly finished surfaces shall be effectively protected from rain or injury from other sources. Where appropriate the surface shall be kept moist in a manner approved by the Design Engineer, either by flushing or sprinkling or by covering with impermeable material or permeable material kept moist. • Reuse waste material where possible and/or removal of waste material from the site, and disposal in a licensed (permitted) disposal facility.
Rock supply.	All works	• Purchase of rock to follow LMP for Primary Suppliers. • The supply of sound and durable rock, resistant to abrasion and of uniform density that meets the Project design criteria. • Import and/or biosecurity management for imported (islands, national and international) rock material. • Delivery, unloading and placing of the rock in a manner that minimises fracturing of the rock and noise and dust generated by transportation, offloading, storage and use. All rocks to be covered to mitigate dust and water (sedimentation) potential issues, particularly in light of rainfall patterns in FSM. An ongoing record of all loads delivered shall be maintained and provided to the Design Engineer. These records shall

Construction-related Activities	Types of Component 2 works	Generic Methodology
		be cross-referenced with the rock placement records.
Rock protection and installation of rip rap and new gabion baskets.	Crossings (e.g. bridges and causeways), slope stabilization and rock wall revetment works.	• Careful placement of geotextile, bedding material and rock on the prepared excavated bench in a manner that ensures a graded mixture of smaller and larger rocks, so that the rock grading is maintained throughout the volume of the rock structure and it forms an interlocking mass with a minimum of voids. • Construction and placement of gabion baskets on prepared excavated bench including placing geotextile to ensure fines from backfill material do not infiltrate the gabions. • Install rip rap to waterway for flood protection works to embankments or abutments.
Roading.	All works	• Forming a new road surface. • Construct new road pavement by excavating to appropriate subgrade before constructing pavement layers/install fill material before constructing pavement layers. • Pot hole repair by clearing loose material and installing running course. • Stockpile subgrade and road seal for reuse, or disposal to agreed disposal area.
Earthworks – stormwater management.	All works	• Stormwater control system to be installed to isolate works areas including by diverting stormwater away from any areas of earthworks activity treated and disposed to ground, and installing bunds to retain sediment contaminated runoff. Use of suitably sized road drainage systems where already installed, otherwise construct new road drainage systems prior to road works so the drainage systems can be used during construction. • Scoured earth embankments to be reinstated by clearing the site, laying geogrid, placing a layer of backfill and wrapping geogrid over and planted, stabilized with rock as directed by the Design Engineer and ecological and land oner requirements. • Any disturbed river bank or coastal margins shall be back filled and re-contoured to an appropriate slope and planted/stabilized with rock as determined by Design Engineer (e.g. 2:1 slope) and land owner and ecological requirements.

Construction-related Activities	Types of Component 2 works	Generic Methodology
Placement of topsoil and planting.	All works	• Placement of topsoil and planting works as required by the Design Engineer, ecological and land owner requirements, and in consultation with stakeholders.
Completion of Works.	All works	• At sign-off and completion of the works the site shall be reinstated and all gear, equipment and rubbish will be removed from the site. Disposal of unsuitable, or material in excess of that required for the works, shall be treated as excavation waste and disposed of off-site in a designated permitted disposal area. • Reinstate the land temporarily used during works to the condition agreement by the landowner, and obtain written confirmation by the landowner that they are satisfied.
Final Inspection.	All works	• A final inspection shall be undertaken by the Design Engineer, IA and PIU to sign off the completion of the engineering works. • A final inspection shall be undertaken by CIU Safeguards Team and PIU to sign off the completion of E&S mitigation works.
Community Engagement.	All works and phases	• Engagement and consultation with stakeholders, including local communities, as per the PRIME project Stakeholder Engagement Plan (SEP). • Mitigation measures to protect the health, safety and wellbeing of road users and neighbours to works. • Actions to receive, manage and close out complaints as per the PRIME GM.

4. Health and Safety

There is minimal Occupational Health and Safety (OHS) legislation in FSM. A widely cited Supreme Court Decision (Amayo v. MJ Co., 10 FSM Intrm. 244, 250 (Pon. 2001)) sets out that:

> "*a general contractor in control of a structure or premises owes to its employees and employees of any other contractor rightfully thereon a duty to exercise ordinary care to keep the structure or premises in a safe condition for their use*".

No law exists for either public or private sector workers to remove themselves from dangerous work situations without jeopardy to their continued employment.

The World Bank Group's *General Environmental, Health, and Safety Guidelines 2007 (EHS Guidelines*) represent good international practice for managing environmental impacts and community and occupational health and safety risks. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs.

The EHS Guidelines note that when host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. Accordingly, the Project has adopted World Bank Group EHS Guidelines for all staff and contractors engaged on the Project.

Contractors and other Project workers engaged on construction works and otherwise on the Project will be required to provide evidence of OHS management as set out in the LMP. In addition, this Generic ESMP (Table 5-1 row 11) includes safety-in-design as a safety mitigation measures.

Relevant components of the WB EHS Guidelines dealing with environmental impacts are outlined in Section 5.

5. World Bank Group Environmental, Health and Safety Guidelines

The WB Environmental Health and Safety (EHS) Guidelines are the minimum requirements for the mitigation and management of PRIME road works impacts. For completeness, this section addresses all impacts identified in the WB EHS Guidelines, with the rider that Project OHS measures are addressed in the LMP.

5.1 Environmental - Air Emissions and Ambient Air Quality

This guideline applies to projects that generate emissions to air and provides an approach to the management of significant sources of emissions including specific guidance for assessment and monitoring of impacts. The key potential source of air emissions associated with the PRIME Project is in relation to potential cement or asphalt plant or dust pollutants emissions generated from construction activities and/or machinery usage. Emissions must meet the EHS Guidelines as follows:

- Emissions do not result in pollutant concentrations that exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines (see Table 5-1); and
- Emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards. As a general rule, this Guideline suggests 25 percent of the applicable air quality standards to allow additional, future sustainable development in the same airshed.

Table 5-1: WHO ambient air quality guidelines (WHO 2005).

Parameter	Averaging Period	Guideline Period in µg/m^3
Sulfur dioxide (SO_2)	24-hour 10 minutes	125 (Interim target-1) 50 (Interim target-2) 20 (guideline) 500 (guideline)
Nitrogen dioxide (NO_2)	1-year 1 hour	40 (guideline) 200 (guideline)
Particular Matter PM_{10}	1-year 24-hour	70 (Interim target-1) 50 (Interim target-2) 30 (Interim target-3) 20 (guideline) 150 (Interim target-1) 100 (Interim target-2) 75 (Interim target-3) 50 (guideline)
Particular Matter $PM_{2.5}$	1-year 24-hour	35 (Interim target-1) 25 (Interim target-2) 15 (Interim target-3) 10 (guideline) 75 (Interim target-1)

Parameter	Averaging Period	Guideline Period in µg/m^3
		50 (Interim target-2) 37.5 (Interim target-3) 25 (guideline)
Ozone	8-hour daily maximum	160 (Interim target-1) 100 (guideline)

Notes: PM 24-hour value is the 99th percentile. Interim targets are provided in recognition of the need for a staged approach to achieving the recommended guidelines.

Point sources are characterized by the release of air pollutants typically associated with the combustion of fossil fuels such as nitrogen oxides (NO_X), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter (PM) as well as other air pollutants including certain volatile organic compounds (VOCs). Emissions from point sources should be avoided and controlled according to good international industry practice (GIIP) through the combined application of process modifications and emissions controls, such as regular engine maintenance and repair, use of modern vehicle fleet with emissions control devices such as catalytic converters and driver education programs.

Fugitive source air emissions refer to emissions that are distributed spatially over a wide area and not confined to a specific discharge point. The most common pollutant involved in fugitive emissions for road works is dust or PM. This is released on-site excavation and movement of earth materials, contact of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. Recommended prevention and control of these air emissions sources include:

- Minimizing dust from material handling sources, such as conveyors and bins, by using covers and/or control equipment (water suppression, bag house, or cyclone);
- Minimizing dust from open area sources, including storage piles, by using control measures such as installing enclosures and covers, and increasing the moisture content for open materials storage piles;
- Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements on paved or unpaved road surfaces;
- Managing emissions from mobile sources; and
- Avoiding open burning of solid waste.

The CESMP will document the mitigation measures the Contractor will use to meet these guidelines.

5.2 Environmental - Hazardous Materials Management

This World Bank Group EHS Guidelines applies to projects that use, store, or handle any quantity of hazardous materials defined as materials that represent a risk to human health, property or the environment due to their physical or chemical characteristics.

The guideline provides guidance in relation to both General Hazardous Materials Management: (where hazardous materials are handled or stored) and Management of Major Hazards (storage or handling hazardous materials at, or above, threshold quantities

thus requiring special treatment to prevent accidents such as fire, explosions, leaks or spills and to prepare and respond to emergencies).

The overall objective of hazardous materials management is to avoid or, when avoidance is not feasible, minimize uncontrolled releases of hazardous materials or accidents during handling, storage and use. This objective can be achieved by:

- Establishing hazardous materials management priorities based on hazard analysis of risky operations identified through ESA;
- Where practicable, avoiding or minimizing the use of hazardous materials;
- Preventing uncontrolled releases of hazardous materials to the environment or uncontrolled reactions that might result in fire or explosion;
- Using engineering controls (containment, automatic alarms and shut-off systems) commensurate with the nature of hazard; and
- Implementing management controls (procedures, inspections, communications, training, and drills) to address residual risks that have not been prevented or controlled through engineering measures.

A Waste Minimization and Management Plan (WMMP) and Spill Management Plan (SMP) are to be prepared by the Contractor in the CESMP which set out strategies and actions required to reduce potential health and environmental risks associated with waste generation and disposal, including hazardous materials (discussed further in Section 7.2), management to avoid spills and other environmental releases, and identify opportunities for construction waste reuse.

5.3 Environmental - Stormwater

Stormwater includes any surface runoff and flows resulting from precipitation, drainage or other sources. Typically, stormwater runoff contains suspended sediments and other contaminants depending on catchment activities.

Rapid runoff, even of uncontaminated stormwater, degrades the quality of the receiving water by eroding stream beds and banks. In order to reduce the need for stormwater treatment, the following principles should be applied:

- Stormwater should be separated from operational streams in order to reduce the volume of wastewater to be treated prior to discharge;
- Surface runoff from process areas or potential sources of contamination should be prevented;
- Where this approach is not practical, runoff from process and storage areas should be segregated from potentially less contaminated runoff;
- Runoff from areas without potential sources of contamination should be minimized (e.g., by minimizing the area of impermeable surfaces) and the peak discharge rate should be reduced (e.g., by using vegetated swales and retention ponds where practicable);
- Where stormwater treatment is deemed necessary to protect the quality of receiving water bodies, priority should be given to managing and treating the first

flush of stormwater runoff where the majority of potential contaminants tend to be present;

- Where practicable, oil water separators and grease traps should be installed and maintained as appropriate at refueling facilities, workshops, parking areas, fuel storage and containment areas; and
- Sludge from stormwater catchments or collection and treatment systems may contain elevated levels of pollutants and should be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land resources.

The Contractor will include the Erosion and Sediment Control Plan in the CESMP and include measures to comply with these guidelines.

5.4 Environmental – Soil Erosion

Soil erosion may be caused by exposure of soil surfaces to rain and wind during site clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks, which may result in impacts to the quality of natural water systems and ultimately the biological systems that use these waters. Recommended soil erosion and water system management approaches include:

Sediment mobilization and transport

- Reducing or preventing erosion by:
    - Scheduling to avoid heavy rainfall periods (i.e., during the dry season) to the extent practical;
    - Contouring and minimizing length and steepness of slopes;
    - Mulching to stabilize exposed areas;
    - Re-vegetating areas promptly;
    - Designing channels and ditches for post-construction flows; and
    - Lining steep channel and slopes (e.g., use jute matting).
- Reducing or preventing off-site sediment transport through use of settlement ponds, silt fences, and water treatment, and modifying or suspending activities during extreme rainfall and high winds to the extent practical.

Clean runoff management

- Segregating or diverting clean water runoff to prevent it mixing with water containing a high solids content, to minimize the volume of water to be treated prior to release Road design;
- Limiting access road gradients to reduce runoff-induced erosion;
- Providing adequate road drainage based on road width, surface material, compaction, and maintenance Disturbance to water bodies;

- Depending on the potential for adverse impacts, installing free-spanning structures (e.g., single span bridges) for road watercourse crossings;
- Restricting the duration and timing of in-stream activities to lower low periods, and avoiding periods critical to biological cycles of valued flora and fauna (e.g., migration, spawning, etc.);
- For in-stream works, using isolation techniques such as berming or diversion during construction to limit the exposure of disturbed sediments to moving water; and
- Consider using trenchless technology for pipeline crossings (e.g., suspended crossings) or installation by directional drilling.

Structural (slope) stability

- Providing effective short term measures for slope stabilization, sediment control and subsidence control until long term measures for the operational phase can be implemented; and
- Providing adequate drainage systems to minimize and control infiltration.

The Contractor will include the Erosion and Sediment Control Plan in the CESMP and include measures to comply with these guidelines.

5.5 Environmental - Waste Management

These guidelines apply to projects that generate, store, or handle any quantity of waste. Solid (non-hazardous) wastes generally include any garbage or refuse. Hazardous waste shares the properties of a hazardous material (e.g., ignitability, corrosivity, reactivity, or toxicity), or other physical, chemical, or biological characteristics that may pose a potential risk to human health or the environment if improperly managed.

Waste management should be addressed through a waste management system that addresses issues linked to waste minimization, generation, transport, disposal, and monitoring.

The PRIME Project will generate a range of solid waste types including non-hazardous and potentially hazardous wastes including waste material generated from removal of existing road surfaces, bridges, causeways etc. Consideration to the management of hazardous materials will be required for the PRIME Project.

A WMMP is to be prepared by the Contractor which sets out strategies and actions required to reduce potential health and environmental risks associated with waste generation and disposal, as well as identify opportunities for material recycling or reuse (discussed further in Section 7.2).

5.6 Environmental - Noise and Vibration

Noise and vibration prevention and mitigation measures should be applied where there is the potential for noise and vibration levels to exceed applicable guidelines at sensitive receptors.

During construction and decommissioning activities, noise and vibration may be caused by the operation of pile drivers, earth moving and excavation equipment, concrete mixers, cranes and the transportation of equipment, materials and people. Some recommended

noise reduction and control strategies to consider in areas close to community areas include:

- Planning activities in consultation with local communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance;
- Using noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines; and
- Avoiding or minimizing project transportation through community areas.

The preferred method for controlling noise from stationary sources is to implement noise control measures at source. Methods for prevention and control of sources of noise emissions depend on the source and proximity of receptors. Noise reduction options that should be considered include: Selecting equipment with lower sound power levels; mandatory mufflers on engine exhausts and compressor components; limiting hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas; Re-locating noise sources to less sensitive areas to take advantage of distance and shielding; Taking advantage of the natural topography as a noise buffer when locating or using noisy machinery; planning activities in consultation with local communities; and developing a mechanism to record and respond to complaints through the Grievance Mechanism (GM) established for the PRIME Project (Appendix F).

To comply with the EHS Guidelines noise impacts from construction should not exceed the levels presented in Table 5-2, or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. The CESMP will include mitigation measures to meet these levels.

Table 5-2: WHO noise level guidelines (WHO 1999).

Receptor	One Hour L_{Aeq} (dBA)	
	Daytime (07:00 – 22:00)	Daytime (22:00 – 07:00)
Residential; industrial; educational	55	45
Industrial; commercial	70	70

5.7 Worker Health and Safety

The fundamental premise for OHS under the EHS Guidelines is that "*Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers*" and that "*Companies should hire contractors that have the technical capability to manage the occupational health and safety issues of their employees…*".

All workers engaged in the PRIME Project will need to be covered for OHS management under the terms of the EHS Guidelines. Relevant OHS provisions for all workers are set out in the PRIME LMP.

5.8 Community Health and Safety

This guidance addresses activities within the broader Project footprint. Issues may arise at any stage of a project life cycle and can have an impact beyond the life of the Project and includes issues such as:

- **Water Quality** - Groundwater and surface water represent essential sources of drinking water which may be impacted by Project activities involving discharges.
- **Traffic Safety** - Prevention and control of Project traffic-related injuries and fatalities should include the adoption of safety measures that protect Project workers and other road users. Road safety initiatives proportionate to the scope and nature of Project activities should include measures such as:
    - Adoption of best transport safety practices (e.g., emphasizing safety aspects among drivers, improving driving skills);
    - Use of speed control devices (governors) on trucks;
    - Deployment of speed limit signs;
    - Regular maintenance of vehicles;
    - Employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions; and
    - Planning and timing of road use for Project activities (such as delivery of equipment or material).
- **Disease prevention** - Health hazards typically include those relating to poor sanitation and living conditions, sexual transmission and vector-borne infections associated with imported labor. Communicable diseases of most concern are sexually-transmitted diseases (STDs) such as HIV/AIDS. Recommended interventions can include health awareness and education initiatives, subject to operational practicability.

Consideration to community health and safety will be required for the PRIME Project in relation to water quality, road safety, SEA/SH and disease prevention in relation to work forces working in the communities. This Generic ESMP includes controls to protect the community from road works incidents and nuisances, vehicle incidents and nuisances and harm from workers (refer Section 6). A Community Health and Safety Plan (CHSP) is to be prepared by the Contractor which sets out strategies and actions required to prevent and/or minimize any negative health or safety impacts on the community arising from the physical works (discussed further in Section 7.2).

5.9 Sector Guidelines - Toll Roads

Elements of this guideline apply to smaller scale and / or unsealed road projects and are therefore relevant for PRIME.

Issues specific to construction and operation of roads, as set out in the Toll Roads guidance document, include the following:

- **Environmental issues** – including habitat alteration and fragmentation, stormwater, waste, noise, air emissions and wastewater.

- **Community Health and Safety issues**
    - Pedestrian safety including installation of barriers, speed controls and traffic calming and signage.
    - Traffic safety including signage and speed limits around Project sites.
    - Emergency preparedness including emergency preparedness and response coordination with the local community and local emergency responders to provide timely first aid response in the event of accidents and hazardous materials response in the event of spills.

The CESMP will describe the detailed methods to manage these issues.

5.10 Sector Guidelines - Construction Materials Extraction

The construction materials extraction guidance document includes information relevant to construction materials extraction activities such as aggregates, sand, gravel, etc. It addresses stand-alone projects and extraction activities supporting construction, civil works, and cement projects.

Potential issues during the operational, construction, and decommissioning phases of construction materials extraction primarily include the following:

- **Environmental issues** – including air emissions, noise, vibrations, water, waste and land conversion.
- **Community health and safety issues** – including respiratory hazards, noise and physical hazards, land instability, water, explosives safety and decommissioning.
- The CESMP will describe the detailed methods to manage these issues.

6. Environmental and Social Risks and Management Procedures

The PRIME Project has the potential to create a range of impacts as a result of Project feasibility, design and construction of physical works on priority road assets under Component 2.

This section addresses E&S risk mitigation and management procedures relating to moderate risk sub-projects. This section documents the specific controls, measures, limits, procedures, standards and actions required to avoid, minimize, remedy and offset risks and impacts..

Design controls are intended to be specific and relate to the World Bank Good Practice Note on Road Safety[4], Good International Industry Practice (GIIP), World Bank EHS Guidelines[5], and ESS Guidance Notes as appropriate.

The following tables cover impacts from typical activities for 'Moderate risk' road works sub-projects , along with measures to be adopted to mitigate any potential environmental and social impacts identified. Tables cover:

- Potential Feasibility, Design and Pre-Construction Impacts (Table 6-1);
- Potential Construction Impacts (Table 6-2); and
- Potential Operational Impacts (Table 6-3).

If, during the design process, new risks are identified or the mitigation measures are not sufficient to maintain an overall 'Moderate' risk rating for the road works sub-project, and / or performance indicators cannot be met, the CIU Safeguards Team will need to develop a site-specific ESMP.

[4] http://pubdocs.worldbank.org/en/648681570135612401/Good-Practice-Note-Road-Safety.pdf

[5] http://documents.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General EHSGuidelines.pdf. and described in Section 5.

Table 6-1: Project Feasibility, Design and Pre-Construction - Environmental and Social Impact Mitigation

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
1. Ecological Biodiversity / Habitats					
All activities potentially affecting streams, estuary coastal, and terrestrial biodiversity (flora & fauna) and ecological habitats.	Loss or modification of stream, estuary coastal and terrestrial area biodiversity and habitats due to design of road / bridge / causeway works.	(i) Design Engineer to identify key ecological habitats and areas, as shown in Section 2 of this Generic ESMP, and described in the Project Baseline Assessment Report (Appendix A of the ESMF). (ii) Design of activity to maintain existing road footprints, where possible, reducing/ avoiding the need for widening / realigning into natural habitat areas except for resilience or safety purposes. Where not possible, limit impacts on ecological habitat through minimizing footprints, restoring and enhancing disturbed areas, providing wildlife corridors, and other site specific design measures as proposed by environmental specialists. (iii) Design of activity to mitigate potential impacts on ecological habitat from stormwater drainage through design-related features, such as stormwater treatment to remove sediment and other contaminants, reducing slope to decrease the velocity of run-off, select slope protection measures to avoid/minimize the footprint of erosion control, minimize cut and fill etc. (iv) Design crossings (including bridges, culverts, causeways), roads and stormwater drainage systems to avoid	(i) Design provision for avoidance or limited habitat impacts checked and cleared by CIU prior to finalization of bid documents.	CIU and Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		disturbance of sensitive habitat (e.g. mangroves, streams, sea grass, native forests, crops etc), and protected areas, where possible. Where it is not possible design measures are required such as: a planting regime is to be implemented to restore the lost habitat, wildlife corridors, stabilise slopes or provide compensation habitat nearby. (v) Design Engineer to require Environmental Health & Safety (EHS) clauses in bid documents to avoid unnecessary disturbance of ecological habitats, and require Contractor to require attention to such mitigation and where possible avoidance in Contractors Environmental and Social Management Plan (CESMP).			
2. Cultural Heritage					
All activities potentially affecting sites, features or artifacts of cultural, archaeological or historical (CAH) significance.	Loss or modification of cultural, archaeological or historically significant sites (e.g. grave sites, historical artifacts etc) and / or intangible heritage.	(i) Identification of CAH features and sites in the proximity of the works, by review of existing information (including the Baseline Resource Report (ESMF Appendix A), consultation with Historical Preservation Office, traditional-customary leaders and local communities. (ii) All aspects of design, including proposed construction methodology and temporary use of land within and outside the road alignment must avoid damage,	(i) All CAH features identified during the design phase. Chance find procedures prepared prior to bid documents prepared. (ii) All CAH features protected from harm, and / or agreements confirmed with land owners/occupiers/communities (as appropriate). (iii) No complaints or grievances in relation to CAH features lodged.	CIU and Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		desecration or disturbance to cultural heritage (including graves). (iii) Bid documents to provide maps, diagrams, GPS coordinates and other measures to identify existing cultural heritage sites and the specific measures the Contractor must implement to avoid or protect them. (iv) Design Engineer to insert EHS clauses in bid documents to require contractor to recognise location of CAH features and to implement explicit measures in the CESMP to avoid disturbance of cultural, archaeological or historically significant sites and protocols for chance finds.			
3. Permanent or temporary land or asset loss (e.g., land, buildings, fences, crops, etc.)					
All activities involving permanent loss of land and non-land assets or restricted land use.	Permanent loss of land or assets, or restricted land use due to land access or land use requirements for project works.	Screening, participatory design and consultation processes as set out in the RF and SEP are to be applied, including preparation of relevant land access procedure reports/plans (e.g. Land Access Due Diligence report, Voluntary Land Donation report or Abbreviated Resettlement Action Plan). (i) Improvement works for existing roads will be designed through participatory design approach. Affected land owners and community will be consulted from preliminary design stage and provide agreement to works design. (ii) Property losses adjacent to roads will be minimized and where unavoidable will be	(i) Land access procedure reports/plans prepared and implemented, including implementation of participatory design approach. (ii) Land access successfully secured, if required. (iii) No complaints or grievances in relation to land access.	CIU and Design Engineer.	PIU (including state counterpart agencies).

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		restored through mitigation measures outlined in the Resettlement Framework (RF). (iii) Design to avoid any permanent impact on livelihood or physical displacement. (iv) Due diligence to assess losses, consultation with affected persons and preparation of land access procedures.			
Temporary use of land for laydown area.	Temporary loss of land due to use of land for laydown area.	(i) Identification and use of Government land for laydown areas/ land previously used for similar activities, where possible. (ii) If required voluntary land donation (VLD) process to be initiated with support from CIU Safeguards Team. If no VLD, then rental allowance to be provided. At end of rental period land to be returned in original condition. (iii) Potential laydown areas (i.e. suitable government owned land) to be identified and communicated to the Contractor by the CIU for prior approval.	(i) All land acquired voluntarily with documentation of consultation and approvals. (ii) No complaints or grievances in relation to temporary use of land.	Contractor.	PIU and CIU.
4. Construction materials (e.g., aggregates) and waste materials generated					
Use of aggregate materials in construction activities.	Use of material from non-sustainable sources (i.e., coastal sand and coral reef / rock materials), or of insufficient quality for design needs.	(i) Only material from licensed local, inter-State or international land-based sources (i.e., quarries) to be used (i.e. no coastal sand and coral reef / rock to be used) or recycled / reuse materials (see below). (ii) CIU Audits of local and inter-State suppliers to determine suppliers are licensed, audit against the ESSs and the	(i) Only material from licensed local, inter-State or international land-based sources (i.e., quarries) used for construction material. (ii) List of local and inter-State suppliers has been developed. (iii) Audit results confirm suppliers are licensed, will not be providing	Design Engineer and CIU.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		ESMF and LMP, that they will not be providing coastal sand or coral aggregates, and are preferably providing recycled or reused materials. (iii) Aggregate supply operations that are not fully compliant (or could not become compliant even with support from PRIME) are not categorized as low risk and are not to be considered for the supply of aggregates under this ESMP. (iv) Design Engineer to specify acceptable source(s) of aggregates in the bid documents – either as lists for the Contractor to choose from, or specifications that the Contractor must comply with.	coastal sand or coral aggregates, and are preferably providing recycled or reused materials. Audit results identify E&S risks and possible management measures to meet PRIME ESMF and, LMP. .		
Waste materials generated during road construction activities.	Pollution arising from disposal of waste materials at unlicensed facilities/locations.	(i) Roads shall be designed to reuse materials, with specifications in the bid documents, including suitable use/reuse of PRIME aggregates and cleanfill material and waste materials from other projects/processes. This shall be in base-course, the mixing of cement or road surface materials, or for drainage, slope protection and other ancillary activities. (ii) Design to address the possible/probable disposal locations for cleanfill from road works and CIU to audit them for suitable disposal to avoid pollution (including visual pollution) and health and safety risks. Existing licensed facilities should be prioritised. Where these don't exist	(i) Waste material disposal only to suitable and permitted/licensed disposal facilities.	Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		Contractor to apply for authorization from appropriate regulatory agency, based on information requirements set out below. design Engineer to include in bid documents: a. Design and quality parameters for material reuse, including suitable use/reuse of cleanfill and aggregate material from the Project or elsewhere. b. Prescribe acceptable location(s) for cleanfill disposal and the specifications to avoid pollution and health and safety risks. c. Prescribe acceptable location(s) for solid, liquid, and hazardous waste. d. Requirement for Contractor to prepare CESMP, 'Waste Minimization and Management Plan (WMMP)' and 'Spill Management Plan (SMP)'. Refer Contractor Management Plan outlines in Appendix D.			
5. Coastal margin access					
Access to coastal area.	Permanent or temporary loss of access to coastal margin due to Project works, or associated activities.	(i) Design Engineer to identify where coastal margin access restrictions and issues may arise during preliminary design. (ii) Design to avoid access restrictions through participatory design approach, to ensure coastal margin access is	(i) Access to coastal margin maintained for land owners and wider community throughout project (including during and post-construction).	Design Engineer.	PIU (including state counterpart agencies) and CIU).

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		maintained during and following construction. (iii) Design Engineer to have EHS clauses in bid documents to minimize access restrictions or disturbance, and require Contractor to prepare CESMP containing provisions to minimize access restrictions.	(ii) No complaints or grievances in relation to access to coastal areas.		
6. Disruption to usual access					
Crossing works (e.g. replacement of bridges / culverts / causeways / roads).	Temporary loss or restriction of access for road users / local community.	(i) Design Engineer to identify where road access restrictions and issues may arise during preliminary design. (ii) Avoidance or minimization of road access restrictions through participatory design approach, to ensure road access is maintained during and following construction (i.e. alternative route(s) / crossing(s) are made available, or temporary crossings are designed). (iii) Road access restrictions and disruptions to be assessed for each works site. (iv) Design Engineer to have EHS clauses in bid documents and require Traffic Management Plan (TMP) and CESMP from Contractors (refer TMP outline in Appendix D).	(i) Access maintained at all times for road users and wider community throughout project (including during and post-construction), and any temporary restrictions limited to construction phase.	Design Engineer.	PIU (including state counterpart agencies) and CIU.
Disruption of access to adjoining properties due to works.	Temporary restriction on access to, or use of, adjoining privately owned land adjacent to works.	(i) Design Engineer to identify, during preliminary design, where road access restrictions and issues for adjoining properties may arise for each works site.	(i) Access maintained to adjoining properties for land owners and other parties throughout project (including during and post-construction), and	Design Engineer.	PIU and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		(ii) Avoid access restrictions through participatory design approach, to ensure access is maintained to adjoining properties during and following construction. (iii) Design Engineer to have EHS clauses in bid documents and require Traffic Management Plan (TMP) and CESMP from Contractors (refer TMP outline in Appendix D). (iv) Design Engineer to have EHS clauses in bid documents and require Traffic Management Plan (TMP) and CESMP from Contractors (refer TMP outline in Appendix D).	any temporary restrictions limited to construction phase.		
Disruption to Existing Services.	Disturbance of underground or overhead utility infrastructure (such as telecommunications, water, electricity, sewerage) resulting in a disruption of services.	(i) Design Engineer to identify the location of utility services in the proximity of the works during preliminary design. (ii) Avoidance/minimization of utility service disruption through participatory design approach with service providers.	(i) Identification of utility service disruption. (ii) Avoidance of utility service disruption.	Design Engineer.	PIU and CIU.
7. Erosion potential of stormwater / diverted surface waters					
Change in waterflow in watercourses or coastal areas as a result of road, bridge, crossing, causeway works.	Changes in erosion potential as a result in modified in water flow.	(i) Design of structures to avoid/minimize erosion potential such as concrete side drains / culverts, energy dissipation structures installed. Design or performance measures to consider floods, fish passage, habitat integrity, climate resilience etc.	(i) Changes in hydrology and erosion potential avoided through appropriate engineering design.	Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		(ii) Design Engineer to have EHS clauses related to sediment and erosion procedures in bid documents and require Erosion and Sediment Control Plan (ESCP) from Contractors (refer ESCP outline in Appendix D). (iii) Water flow / hydrology impacts to be assessed for each works site. (iv) Design of structures to minimize erosion potential such as concrete side drains / culverts, energy dissipation structures installed. Design or performance measures to consider floods, fish passage, habitat integrity, climate resilience etc. (v) Design Engineer to have EHS clauses related to sediment and erosion procedures in bid documents and require Erosion and Sediment Control Plan (ESCP) from Contractors (refer ESCP outline in Appendix D).			
8. Surface water quality					
Discharges from operational surfaces to surface water.	New pathways for increased sediment and contaminants, including refuse (e.g. trash, plastic bottles/bags, etc) to enter waterbodies.	(i) Design of features to avoid/minimize ingress of stormwater sediments and contaminants (e.g., catchpits), treatment devices to capture and treat sediments and where necessary oil and other hydrocarbons, and specifications for regular maintenance (including responsibilities) required.	(i) Stormwater control design suitable for works and avoiding ingress of sediments and contaminants. (ii) Definition of Project responsibilities for stormwater management.	Design Engineer.	PIU and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		Design Engineer to have EHS clauses related to stormwater sediments and contaminants and discharges in bid documents and require ESCP, Surface Water and Groundwater Management Plan (SWGMP), WMMP and SMP from Contractors (refer Contractor management plan outlines in Appendix D).			
9. Use and Accommodation of Imported Labor (if required)					
Use of imported labor.	Importing labor can result in the following impacts: • Environment (e.g. increased pressure on existing natural resources); • Economy and livelihoods (e.g. inflation pressures, exacerbate vulnerability of marginal groups, etc); • Infrastructure, services and health pressures (e.g. (potential increases in violence, alcohol / drug consumption, diseases, etc); and	(i) Design Engineer to identify whether imported labor likely required for works, due to lack of local skills, resources, expertise etc. (ii) No imported labor to be used unless clear justification provided by contractor. (iii) No accommodation provision for imported workforce to avoid associated risks and encourage use of local workers as far as practicable. (iv) If imported labor required, then Design Engineer to incorporate EHS clauses related to imported labor management in bid documents and require a Social Interaction Plan (SIP) and Code of Conduct (CoC) to be prepared by the Contractor (refer SIP outline in Appendix D).	(i) Bid documents accurately reflect controls required on labor management and community protection measures.	Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
	• Social and community wellbeing (e.g. GBV, SEA/SH).				
10. Design					
Safety in Design / Road Safety Assessments.	Design not robust enough for local conditions or not international best practice, and does not take into account locally available material/conditions and design results in increased frequency/severity of Project-related traffic incidents.	(i) Design Engineer to identify, evaluate and monitor the potential traffic and road safety risks to affected communities and road users through the project life cycle and develop measures and plans to address them. (ii) Design to incorporate technically and financially feasible road safety measures into the project to minimize potential road safety risks to road users and affected communities. (iii) Design requirements to be included in design consultant ToRs (stating that design must adhere to PRIME Safeguards instruments, ESS4 including ESS4 Guidance Note, and the outputs of any Road Safety Assessments (RSA) conducted under PRIME. If no RSA has been completed, then this will be included in the Design ToR. In particular design shall follow requirements set out in the "World Bank Good Practice Note for Road Safety" including consideration of the following matters (among others):	(i) All road safety matters raised in social assessment and public consultations are addressed. (ii) Documented evidence of ongoing review of project risks and ESMP updated if project risks change. (iii) Traffic Management Plan (TMP) required in design specifications – including mandating zero positive results from random alcohol and/or drug testing of drivers; and full use of GPS trackers to confirm compliance with TMP. (iv) No increase in frequency or severity of Project-related traffic safety incidents.	PIU and Design Engineer.	PIU (including state counterpart agencies) and CIU.

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
		a. The project to maintain safety and ethical considerations related to road safety data collection. b. Stakeholder engagements to capture concerns around road safety with suggestions for addressing them. c. Ongoing review of Project risks, and ESMP updated if Project risks change. (iv) Type and quality of locally available material communicated in ToRs to inform sound design, or requirement for sourcing suitable material from offshore.			
Design suitable for climate change adaptation and resilience objectives.	Design based on inaccurate climate change projects and assumptions, including sea level rise, extreme weather frequency and severity etc, leading to insufficient road drainage resulting in flooding and inundation issues, landslides, damage to road infrastructure and the lifespan of the road seal.	(i) Design specifications and objectives reflecting climate change predictions to be included in design consultant ToRs. (ii) Design must take into account the outputs and recommendations of the VA and CRRS studies, and any other relevant aspects of the risks of natural hazards and sea level rise.	(i) Design specifically takes account of climate change matters raised in PRIME Project Road Network VA and CRRS studies.	PIU and Design Engineer.	PIU (including state counterpart agencies) and CIU.
Design for noise/vibration during construction and	Design does not adequately account for	(i) Design to provide that noise/vibrations during construction and operation (traffic)	(i) Design specifications include suitable mitigation measures to	PIU and Design Engineer.	PIU (including

Activities	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.1: Project Feasibility, Design and Pre-Construction Phase					
operation (transport noise/vibration), including integration of suitable mitigation measures, if needed.	construction and operational transport noise/vibration impacts on sensitive receptors. Includes such as noise from increased heavy machinery and traffic.	avoid adverse impact on sensitive receptors, recognizing in respect of traffic noise/vibrations, that it will be impracticable to impose restrictions on all road users once complete and that the only reasonable design-related approach will be to deploy traffic calming measures to reduce vehicle speeds and consequent noise[6], and to consider use of quieter pavement surfaces and noise bunding in particularly sensitive areas. If avoidance is not achievable, then activity is re-screened to higher than Low Risk – Site Specific ESMP prepared incorporating the following: (ii) Design to provide that noise/vibrations during construction and operation will mitigate adverse impact on sensitive receptors, recognizing that it will be impracticable to impose restrictions on all road users once complete and that the only reasonable approach will be to deploy traffic calming measures to reduce vehicle speeds and consequent noise, and to consider use of quieter pavement surfaces and noise bunding in particularly sensitive areas.	avoid adverse impacts on sensitive receptors from construction and operational traffic noise/vibrations during operation.		state counterpart agencies) and CIU.

[6] https://www.nzta.govt.nz/assets/planning/process/trial-ip-toolkit/docs/traffic-calming.pdf

Table 6-2: Construction Phase - Environmental and Social Impact Mitigation

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
1. Air Quality / Dust					
Generation of dust and airborne contaminants as a result of works construction activities (e.g. vehicle emissions, soil disturbance, road surface removal, spillage from trucks transporting material etc). Secondary sources of emissions may include exhaust from diesel engines of earth moving equipment, as well as from open burning of solid waste on-site.	Dust and airborne contaminants creating nuisance (and potential health issues) to adjacent residential / commercial properties.	(i) Trained and responsible manager on site during working times to maintain logbook and carry out required site inspections. (ii) Erect effective barriers around dusty activities or at the site boundary. (iii) Set agreed speed restriction (10-20 km/h) for the site, particularly for unsealed haul routes. (iv) Construction vehicles shall be regularly serviced and maintained to prevent the emission of particulates. (v) The number and size of stockpiles shall be minimised, and have appropriate containment (e.g. bunding, covers) to prevent dust discharges. (vi) if winds are forecast above 5.5 m/s (20 km/hr), use dust suppression (i.e. a water cart, or similar) to dampen active work areas and stockpiles in dry conditions. (vii) Sweeping the road, where appropriate, to prevent the spread of soil and dust outside of the works area. (viii) Banning fires on site. (ix) Minimizing exposed areas. (x) Reinstatement of exposed areas.	(i) Trained manager on site during working times. (ii) Barriers erected around dusty activities or at the site boundary. (iii) Speed restriction imposed. (iv) Construction vehicles kept in good working order, regularly serviced and maintained. (v) Minimized number and size of stockpiles. (vi) Containment of stockpiles (vii) No dust or sediment discharges from stockpiles. (viii) No excessive dust discharges from active work areas. (ix) No onsite fires. (x) Reinstatement of exposed areas within one (1) month of completion of works.	Contractor.	PIU and CIU.

<table>
<tr><th>Parameters</th><th>Potential Impact</th><th>Mitigation Measures & Actions</th><th>Performance Indicators</th><th>Implementation</th><th>Supervision / Monitoring</th></tr>
<tr><td colspan="6">Table 6.2 - Construction Phase (impacts associated with construction activities)</td></tr>
<tr><td colspan="6">2. Noise and Vibration</td></tr>
<tr>
<td>Construction activity creating noise and / or vibration disturbance.</td>
<td>Noise and / or vibration disturbance to adjacent business and private properties where road works occur in close proximity.</td>
<td>(i) The Contractor shall ensure that construction noise does not exceed the WHO and WB EHS Guideline levels presented in the table below or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site.
<table>
<tr><td colspan="3">Noise level Guidelines</td></tr>
<tr><td colspan="3">One Hour L_{Aeq} (dBA)</td></tr>
<tr><td>Receptor</td><td>Daytime 07;00-22:00</td><td>Night time 22:00-07:00</td></tr>
<tr><td>Residential. Institutional, educational</td><td>55</td><td>45</td></tr>
<tr><td>Industrial, Commercial</td><td>70</td><td>70</td></tr>
</table>
(ii) The local community to be informed of the upcoming works (including maps, dates and times of operation) through stakeholder engagement activities specified in the SEP one month prior to commencement, so that people can make alternative arrangements during construction period if necessary.
(iii) Construction activities restricted to relevant State working hour requirements on Monday through Saturday with no construction activities taking place on Sunday or public holidays,</td>
<td>(i) Adherence to WHO/WB EHS noise level guidelines.
(ii) No construction activities undertaken outside of the designated work hours, unless prior agreement obtained by with State government and with agreement of stakeholders[7].
(iii) Construction vehicles kept in good working order and functioning muffler silencers fitted on all vehicles.
(iv) Vehicle speed limits to be adhered to at all times.
(v) Implementation of GM and complaint register process.
(vi) No disputes or grievances from local communities (including identified sensitive receptors) relating to vibration and noise effects.</td>
<td>Contractor.</td>
<td>PIU and CIU.</td>
</tr>
</table>

[7] For low-risk activities. If unacceptable to stakeholders, activity is a higher than low risk status requiring site specific ESMP.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		without prior approval of State government agencies, traditional leaders, community and the Contractor. Timing of works to avoid school hours, hours of worship and other sensitive times, in consultation with the stakeholders. (iv) Temporary noise barriers to be erected where noise attenuation will not meet noise level guidelines. (v) Construction equipment and vehicles will be maintained to a good standard and include muffler silencers. (vi) Reduced speed limits of no more than 20 miles per hour shall be imposed for vehicles travelling through the construction site. Vehicles travelling to and from the site shall not exceed State speed limits at any time. (vii) Track, monitor and investigate complaints through the Grievance Mechanism (GM). (viii) The Contractor shall be aware of the zone of vibration impact created by their machinery. Prior to the commencement of work, the Contractor shall identify any structures which fall within this zone and provide this information and options to reduce impacts to the PIU. (ix) The Contractor will be responsible for assessing the condition of buildings that may be susceptible to vibration within the zone of influence before commencing any work. (x) PIU State Focal Point (under supervision of CIU safeguards Team) to undertake noise monitoring for one day approximately one week prior to works starting, and once weekly during			

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		construction at nearby sensitive receptors during the operation of machinery and construction activities for community exposure risks to assess compliance with WB EHS noise level guidelines if these standards are exceeded. (xi) If operational monitoring indicates potential nuisance levels the Contractor is to implement practicable remedial measures including use of mufflers, noise barriers, timing of operations etc.			
	Noise and / or vibration impacts which may affect the health of workers.	In addition to the measures outlined above the Contractor is to: (i) Prepare and ensure adherence to occupational health and safety (OHS) procedures pursuant to the LMP. (ii) Provide all workers with hearing protection. (iii) Regularly maintain machinery, equipment and vehicles. (iv) Monitor noise on a weekly basis at the work site to measure occupational noise exposure against industry noise level guidelines[8]. Management of noise sources, location and duration of exposure of workers and / or PPE to reduce noise exposure.	(i) Preparation, implementation and adherence to OHS procedures. (ii) Construction vehicles in good working order and muffler silencers fitted on all vehicles. (iii) Evidence of documented implementation of Worker GM and complaint register process. (iv) Workers use appropriate PPE at all times. (v) No disputes or grievances from workers relating to vibration effects.	Contractor.	PIU and CIU.

[8] WB EHS Guideline 2.0 Occupational Safety and Health

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
3. Water Quality					
Surface Water Quality & Sediment.	Potential impacts on the water quality of watercourses and the coastal marine area from run off of sediments disturbed by construction activities, such as sedimentation from ground disturbance, discharge of contaminants.	(i) The Contractor shall prepare and implement a combined ESCP/SWGMP (as a subplan under the CESMP) detailing procedures to ensure ground disturbance is minimized, and measures to control offsite movement of disturbed sediments, hazardous substances and other potential contaminant discharges (refer outline in Appendix D). The scale of the ESCP/SWMGP shall correspond to the scale of risk associated with the activity in each case. (ii) Excavations that expose bare soil shall be minimized as far as practicable, and cut-off drains shall be deployed to prevent stormwater entry to exposed areas where practicable prior to and during wet weather. (iii) Soil stockpiles are to be located and appropriately contained (e.g. bunding, covered) to prevent discharge of sediment. (iv) Siting of soil stockpiles at a distance of at least 20 m from water courses, buildings etc. (v) Care shall be taken during the transportation of material to and from the site to avoid spillage. Including checking door latches, not over filling the tray, covering loads etc. (vi) In areas of soil disturbance, the Contractor shall upon completion of the works, or during periods where works are not undertaken for 7 days or more, compact, reseed, revegetate and/or stabilise with suitable matting (e.g. coconut, geotextile or similar) to minimise the	(i) Provision of draft ESCP/SWGMP (as a subplan under the CESMP) approved by PIU and CIU for review prior to site mobilization. (ii) Excavations ceased and exposed soil and stockpiles compacted and/or covered during heavy rainfall. (iii) Siting of soil stockpiles, at least 20 m away from watercourses, buildings etc. (iv) At the completion of works all areas where soil was exposed as a result of works are appropriately reseeded/ revegetated and stabilised. (v) All stormwater is diverted away from exposed construction/ working areas and stockpiles, and no contaminated stormwater noticeably entering any watercourse. (iv) Water quality monitoring results to be reported	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		uncontrolled discharge of sediment laden stormwater. (vii) Effective stormwater management shall divert clean water away from construction areas and stockpiles, and divert sediment laden, or contaminated runoff to sediment control devices (e.g. sediment traps) prior to discharge to ground where possible, and otherwise to swales and otherwise to small tributaries. Stormwater control devices shall be designed and submitted for approval by the Design Engineer prior to works starting. Where road drainage improvements are part of the road upgrade, prepare these prior to the main road works and use these systems/devices to capture and treat stormwater from construction site. (viii) Stormwater flows must not be allowed to run onto or over artificially cut slopes or saturate ground as to erode the near surface soils. Clean stormwater must be diverted around work areas and kept separate from contaminated stormwater. Stormwater diversion design must be submitted for approval to the Design Engineer. (ix) Excavation of slopes to be carried out to the satisfaction of the Design Engineer. (x) No works within any streambed or permanent channel – Low Risk activities covered under this ESMP. If it is not possible to avoid works in a streambed or channel, then activity is re-screened to higher than Low Risk – Site Specific ESMP may be required to	quarterly throughout construction period. (v) EPA/KIRMA to be notified within 24 hrs of determination of uncontrolled sediment discharge.		

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		be prepared incorporating the relevant matters above plus the following: (xi) In-stream works and streambed disturbance to be minimized. (xii) PIU State Focal Point (under supervision of CIU safeguards Team) to undertake a weekly visual assessment of watercourses in the vicinity of the works during construction, for any observable changes in suspended solids or oil/grease downstream of works). If changes are observed (i.e. discoloration in water column) or works are being undertaken in the watercourse or stream banks, water quality monitoring is to be undertaken within watercourses both upstream and downstream of the works. Parameters to be measured in the field to include temperature, pH, dissolved oxygen and turbidity. Operators to be requested to implement corrective action and report to EPA/KIRMA within 24 hrs. (xiii) Additional controls for hazardous substances including oils and hydrocarbons are provided below.			
Construction activities involving use of Hazardous Substances and/or resulting in discharges of contaminants to groundwater aquifers and waterways.	Loss and/or discharge of hazardous material into the aquatic and/or terrestrial receiving environment, or groundwater aquifer due to spillage in laydown areas, refuelling activities entering groundwater or surface water.	(i) The Contractor shall prepare and implement a SMP, detailing procedures to avoid release of contaminants such as fuels stored in bunded areas, refuelling activities on hardstand areas etc (refer outline in Appendix D) and to manage and clean up all spills.	(i) Provision of draft SMP (as a subplan under the CESMP) approved by PIU and CIU for review prior to site mobilization. (ii) No hazardous substances stored, or machinery refuelling	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		(ii) Storage of all hazardous substances and chemicals (including fuel) and refuelling is to occur at least 50 m away from watercourses and be appropriately contained (e.g. in bunded and roofed structures) to prevent contamination of surface water or groundwater. (iii) Contractors shall conduct daily inspections of machinery with particular attention to repair of hydraulic and fuel systems to prevent leakage. (iv) Careful handling of unhydrated cement material, wet cement, bitumen and fuel to avoid spills. (v) No deliberate discharge of unhydrated cement material and fuel to surrounding soils and waterways. (vi) The Contractor shall have spill kits available and staff be trained in their use. (vii) In case of any fuel or chemical spill, Contractors shall immediately try and contain the spill and contact the PIU immediately to report the incident and should be reported to the EPA/KIRMA within 24 hours.	within 50 m of any watercourse. (iii) No observed unhydrated cement spills on site or near any watercourse. (iv) Spill kits available on the site, and Contractor staff trained in their use. (v) Correct clean up and notification procedure followed in the event of a spill (in accordance with Section 12.1).		
4. Aquatic Ecological Resources					
Aquatic (freshwater and coastal marine) Biodiversity (i.e. flora and fauna) & Habitat.	Potential impacts on aquatic flora and fauna biodiversity and habitat in watercourses (e.g., freshwater fish, macroinvertebrates, habitat etc)	Qualification for a low risk activity includes avoidance of effects in accordance with relevant matters set out for Construction Water Quality. If it is not possible to avoid works in streambed, channel or marine environment, the activity is to be	(i) No discharge of untreated construction materials, sediment or other contaminants into watercourse or coastal	Contractor.	PIU and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
	and the coastal marine area (e.g. fish, coral reef habitat, seagrass beds etc) due to direct loss within works footprint, earthworks, pile driving activities, contaminant runoff and deposition on downstream sensitive ecological habitat.	re-screened to higher than Low Risk – Site Specific ESMP prepared incorporating the relevant mitigation matters set out for Construction Water Quality plus the following ecological-related requirements: (i) Ensure that upstream and downstream migration of fish is not impeded. (ii) Avoid net loss of natural aquatic ecological habitat (e.g. mangroves or sea grass) as a result of the Project. (iii) Treat discharge of Project-related sediment or other contaminants into watercourse or coastal marine area as a result of the works. (iv) Pre-construction/pre-disturbance surveys by qualified ecologists to relocate biodiversity features of importance. This may include translocation of animal or plant species to suitable areas outside of the Project impact area. (v) Avoiding significant conversion or degradation of natural aquatic habitats, unless all of the following are demonstrated: a. No other viable alternatives within the region exist for development of the Project on modified habitat; b. Consultation has established the views of stakeholders, including Affected Communities, with respect to the extent of conversion and degradation; and c. Any conversion or degradation is mitigated according to the mitigation hierarchy. (vi) In areas of natural aquatic habitat, mitigation measures to be designed to achieve no net	marine area as a result of the works. (ii) No impediment of fish migration as a result of the works (either during and post construction). (iii) No net loss of natural ecological habitat (e.g. mangroves, sea grass) as a result of the Project.		

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		loss of biodiversity[9] or ecosystem services, where feasible. (vii) Contractor to impose restrictions including no firewood collection, hunting, fishing etc. by workforce and no fires. (viii) All works to remain within the footprint prescribed in the bid documents or as agreed with the Design Engineer prior to works starting, including parking vehicles, laydowns and temporary work etc. etc. (ix) Training of staff to remain within the boundaries of the operational site during construction works.			
5. Terrestrial / Riparian Ecological Resources					
Terrestrial Biodiversity & Habitat.	Disturbance or direct loss of terrestrial flora/fauna and habitat as a result of Project related land clearance activities.	(i) Avoid net loss of critical or protected terrestrial ecological habitat as a result of the Project. (ii) Disturbance of natural terrestrial habitat, vegetation and associated fauna is to be minimized where ever possible. (iii) Avoiding significant conversion or degradation of natural terrestrial habitats, unless all of the following are demonstrated: a. No other viable alternatives within the region exist for development of the Project on modified habitat; b. Consultation has established the views of stakeholders, including Affected Communities, with respect to the extent of conversion and degradation; and	(i) No net loss of natural terrestrial ecological habitat as a result of the Project. (ii) No unnecessary clearance of natural terrestrial habitat, vegetation and/or fauna. (iii) Pre-construction/pre-disturbance surveys by qualified ecologists to remove nests or other re-locatable biodiversity features of importance.	Contractor.	PIU and CIU.

[9] To avoid a net loss of biodiversity proponent will need to demonstrate that damages resulting from Project impacts are balanced by at least equivalent gains.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		c. Any conversion or degradation is mitigated according to the mitigation hierarchy. (iv) Pre-construction/pre-disturbance surveys by qualified ecologists to remove nests or other re-locatable biodiversity features of importance. This may include translocation of animal or plant species to suitable areas outside of the Project's impact area. (v) Contractor to prepare and implement CESMP detailing procedures to minimize footprint and disturbance of terrestrial fauna and fauna within and in close proximity of the Project. No disturbance to be undertaken in critical and protected terrestrial ecological areas.	(iv) A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program.		
Invasive Species.	Introduction of invasive aquatic and / or terrestrial pest / weed species as a result of construction activities.	(i) Imported aggregates to be sourced from weed free locations and / or fumigated prior to arrival in FSM (permits to be acquired). (ii) Prior to commencement of work on site, and prior to demobilisation at the end of construction works at the site all construction vehicles shall be washed to remove all soil and vegetative material. (iii) In areas of other soil disturbance, soil exposed for more than 7 days shall be reseeded, and/or revegetated to minimise establishment and spread of weeds.	(i) All construction vehicles washed prior to commencing works, and at demobilisation to remove all soil and vegetative material. (ii) All vehicles shall be washed on a daily basis. (iii) Exposed soil reseeded and/or revegetated immediately on completion of works in that area.	Contractor.	PIU and CIU.
6. Waste Management and Construction Material					
General Waste Management.	Uncontrolled disposal of solid or liquid waste material into the	(i) The Contractor shall prepare a WMMP, to cover all aspects of general waste generation, storage	(i) Provision of draft WMMP to PIU and CIU for review	Contractor.	PIU (including

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
	aquatic and / or terrestrial receiving environment.	and disposal (refer WMMP outline in Appendix D). (ii) Construction workers shall have access to sufficient general rubbish receptacles, with secure lids, to allow for the collection and segregation of wastes. (iii) Residual solid wastes shall be collected and disposed of at an appropriately licensed disposal facility (e.g. approved/permitted by EPA/KIRMA). Paper, bottles and cans shall be transported to local recycling facilities, if available. (iv) Construction workers shall have access to on-site toilet and hand washing facilities. (v) Wastewater from toilet facilities shall be collected and disposed of at a licensed wastewater treatment plant. (vi) Stockpiling, burying, burning or dumping of solid or liquid wastes shall be strictly prohibited.	prior to commencement of construction. (ii) Site kept in general tidy condition, with no uncontained rubbish or waste (solid or liquid) present on site. (iii) Toilet and hand washing facilities present on site for use by construction workers. (iv) No unauthorised disposal of solid or liquid wastes as a result of Project activities.		state counterpart agencies) and CIU.
Construction Waste Management.	Pollution arising from disposal of construction related waste material (e.g. roading seal, decommissioned bridges, etc).	(i) The Contractor shall prepare a WMMP, to cover all aspects of construction waste generation, storage and disposal including hazardous waste (refer outline in Appendix D). (ii) Road material that cannot be reused shall be transported and/or stockpiled off-site for use on unsealed roads, or disposed of at an appropriately licensed disposal facility. Management of hazardous substances are addressed under Heading 3 (Water Quality) above and in Appendix D.	(i) Provision of draft WMMP to PIU and CIU for review prior to commencement of construction. (ii) All construction waste material that can't be reused (either at the works site, or another location) is to be disposed of at an appropriately licensed disposal facility.	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
Sourcing and use of aggregate materials for construction (e.g. aggregate, concrete and asphalt/bitumen).	Use of material from non-sustainable sources (i.e., coastal sand and coral reef / rock materials). Use of aggregates from unpermitted aggregate production operations. Use of asphalt/bitumen from unpermitted batching plant operations.	(i) Only material from licensed local, inter-State or international land-based sources (i.e., quarries) to be used (i.e. no coastal – lagoon sand and coral reef / rock to be used). (ii) Supply agreements to comply with the LMP. (iii) The Contractor shall provide a record of the quarry license approval from aggregate suppliers (i.e. issued by EPA/KIRMA) prior to start of construction and all monitoring requirements that may be required. (iii) The Contractor shall provide a record of the asphalt/bitumen batching plant permit for all asphalt/bitumen used on the site. (iv) No asphalt/bitumen is to be stored at the works site.	(i) Only material from licensed local or international land-based sources (i.e. quarries) used for construction material. (ii) Record of aggregate and asphalt/bitumen sourced from a licensed/permitted supplier to be provided to PIU and CIU prior to construction and held on site for review on request.	Contractor.	PIU (including state counterpart agencies) and CIU.
7. Land and Access Restrictions					
Permanent loss of land and non-land assets, restricted land use.	Permanent loss of land or assets, or restricted land use due to land access requirements for project works.	(i) Due diligence to assess implementation of land access procedures and SEP prepared during design and pre-construction phase by CIU Safeguards Team. (ii) Should unanticipated impacts occur to land or assets as a result of construction activities, entitlements for such impacts will be developed in accordance with the principles set out in the RF and a corrective action plan prepared in consultation with affected persons. (iii) Community grievances are to be addressed through the Grievance Mechanism if not resolved satisfactorily by Contractor or PIU (refer Appendix F).	(i) Due diligence to assess land access procedures and SEP implemented and adhered to, including stakeholder engagement requirements. (ii) No disputes in relation to the loss of privately-owned land or assets. (iii) Any issues or disputes in relation to the disturbance or acquisition of land and/or assets resolved through the GM process.	CIU.	PIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
Temporary loss of land adjacent to the road temporarily to be used for works activities during construction (such as for temporary access roads, construction laydown areas, temporary bridge crossing, etc).	Impacts due to temporary acquisition of land from construction related activities affecting private property or restricting access.	(i) Before land clearing starts in any section of road works, Contractor is to consult the ARAP and PIU and ensure all land access is secure, compensation and any other livelihood support has been provided, and identify potential issues relating to land that require addressing including consultation with landowners, moving/reinstating asset, or if productive land then works to be conducted post-harvest, etc. (ii) Arrangements for temporary use of land will be negotiated with the land owner prior to any works on the land in question commencing, as per the RF. If no agreement is reached mediation from State government may be used and/or different site is to be located and secured. (iii) If the land requirements are planned and arranged by PIU in advance of works and the arrangements will be set out in an ARAP. The Contractor is to work in accordance with the ARAP, under the instruction of the CIU, and be included in contract documents. (i) In the event of previously unforeseen non-land asset losses associated with temporary land acquisition (such as loss of productive trees or minor structures), the Contractor is to consult with the owners of the asset/s to determine the most appropriate re-siting of the affected asset, and undertake relocation where appropriate, in accordance with the process set out in the RF and ARAP. If relocation is not appropriate, compensation for the affected asset/s is to be undertaken at full replacement cost	(i) Consultation undertaken with land owner to determine appropriate re-siting of impacted infrastructure. (ii) A lease agreement in place prior to mobilisation between the Contractor and land owners in relation to land required for temporary use. (iv) Temporarily acquired land rehabilitated to pre-works conditions, or to a condition agreed by the land owner.	Contractor and PIU.	PIU and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		commensurate with rates set out in the ARAP or otherwise in accordance with the principles and processes described in the RF. (ii) As priority, identification and use of Government land for laydown areas/ land previously used for similar activities, etc. Use of private/customary land for temporary use by Contractor to be negotiated between contractor and land owners. At end of temporary use period land to be returned to owner in original condition or in a condition acceptable (as previously agreed) to the land owner. (iii) In the event that construction works completely block access (without alternative access) to a business then compensation for lost income for the period of disrupted access will be provided as per the RF and/or ARAP. (iv) Should unexpected impacts occur to land or assets as a result of construction activities, a corrective action plan will be prepared to provide mitigation consistent with the RF. (v) Community grievances are to be addressed through the GM if not addressed satisfactorily by contractor/PIU.			
Disruption of road access for users due to crossing works (e.g. replacement of bridges / culverts / causeways.	Permanent or temporary loss or restriction of access for road users / local community.	(i) Contractor to maintain road access throughout construction (i.e. alternative route(s) / crossing(s) are made available). (ii) The local community is to be informed of the upcoming works (including maps, dates and times of operation) through letter drops to all adjacent properties, community meetings and	(i) Access maintained for road users and wider community throughout construction. (ii) Consultation and notification undertaken as per SEP. (iii) Implementation and adherence to approved	Contractor.	PIU and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		the installation of signage, one month prior to commencement (as per SEP). (iii) TMP to be implemented and adhered to throughout construction (refer TMP outline in Appendix D). (iv) Any road user complaints to be addressed through the GM and complaints register (refer Appendix F).	TMP throughout construction. (iv) Any issues or disputes in relation resolved through the GM process.		
Disruption of access to adjoining properties due to works.	Temporary restriction on access to, or use of, adjoining privately owned land adjacent to works.	(i) Contractor to maintain access to adjoining properties throughout construction. (ii) Vehicular and pedestrian access to adjacent properties and adjoining roads shall be maintained throughout construction except for essential works where temporary closure shall be minimized. Any road closures are to be undertaken and managed in accordance with the DoTC&I and State agency standard practices. Where access to private property or to adjoining roads is to be affected by temporary road closure, the Contractor shall notify the affected parties in writing at least seven days prior and follow up with a face to face verbal discussion (e.g. community meeting). (iii) TMP to be implemented and adhered to throughout construction (refer TMP outline in Appendix D). (iv) Any road user complaints to be to be addressed through the GM and complaints register (refer Appendix F).	(i) No obstruction of access to adjacent properties, other than essential works which extend for pre-agreed periods and where affected parties are appropriately notified. (ii) Consultation and notification undertaken as per SEP. (iii) Implementation and adherence to approved TMP throughout construction. (iv) Any issues or disputes in relation resolved through the GM process.	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
Disruption to Existing Services.	Disturbance of underground or overhead utility infrastructure resulting in a disruption of services.	(i) Contractor shall engage with service providers prior to works commencing to confirm the likely presence and locations of services and develop a plan for minimising disruption of any services. (v) The Contractor shall be liable for any services disrupted as a result of the construction works. (vi) Contractor due diligence to ensure safety issues are developed to ensure all staff are aware of service locations.	(i) No disruption of services as a result of the proposed works.	Contractor.	PIU.
8. Traffic Safety					
Pedestrian & Vehicular Traffic.	Potential human hazards due to movement of vehicles and machinery on all roads and potential for increase accident risk around work areas. These risks could include increased traffic congestion, risk of traffic incidents, and general road safety issues (such as road crossing by pedestrians). Disruption of key transportation networks (i.e. replacement of bridge or causeway) could pose significant delays in journey times and overall inconvenience to road users.	(i) Contractor to implement TMP in consultation with DoTC&I and State representative agencies (refer TMP outline in Appendix D): (ii) The local community is to be informed of the upcoming works (including maps, dates and times of operation) through letter drops to all adjacent properties and community meetings, and the installation of signage, one month prior to commencement (as per SEP). (iii) Construction activities to be restricted to relevant State working hour requirements on Monday through Saturday with no construction activities taking place on Sunday or public holidays, without prior approval of State government agencies, traditional leaders, community and the Contractor. (iv) Signage and fencing around the site boundary and specific sites of work is to be used at all times and maintained to prevent pedestrian access into construction areas.	(i) Implementation and adherence to approved TMP throughout construction. (ii) No construction activities undertaken outside of the designated work hours. (iii) Signs and appropriate fencing in place at the entry point and site specific areas of work. (iv) No obstruction of access to adjacent properties, other than essential works which extend no longer than one day where affected parties are appropriately notified. (v) Alternative access provided for any access	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		(v) Vehicular access to adjacent properties and adjoining roads shall be maintained throughout construction except for essential works where temporary closure shall be minimized. Any road closures are to be undertaken and managed in full consultation with stakeholders and the local community. Where access to private property or to adjoining roads is to be affected by temporary road closure, the Contractor shall notify the affected parties in writing at least seven days prior and undertake face to face discussions/meetings with all affected parties and shall provide alternative access for obstruction longer than one day.	obstruction for longer than one day.		
9. Use and Accommodation of Imported Labor (if required)					
Use and accommodation of imported labor.	Importing labor can result in the following impacts: • Environment (e.g. increased pressure on existing natural resources); • Economy and livelihoods (e.g. inflation pressures, exacerbate vulnerability of marginal groups, etc); • Infrastructure, services and health pressures (e.g. (pressure waste management, water supply, power supply access to telecommunications;	(i) No provision of workers camps or dedicated worker accommodation for imported labor. (ii) All labor to be accommodated in market rentals, hostels etc. If accommodation for imported labor is essential, then activity is re-screened to higher than Low Risk – Site Specific ESMP prepared incorporating the following: (iii) Establish/form stakeholder committee(s), where future work plans, site requirements, labor and material requirements and problems are discussed, in order to prioritise employment of locals, where appropriate. (iv) Implement Social Interaction Plan (SIP), covering SEA/SH and GBV, including worker induction, and during regular (weekly) toolbox meetings consideration as appropriate on	(i) Verified no accommodation provision for imported labor. **For activities screened higher than low risk [example only]:** (ii) Verified implementation and adherence to approved SIP throughout construction. (iii) Verified that any issues or disputes in relation to workforce labor resolved through the GM process.	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
	potential increases in violence, alcohol / drug consumption, diseases, etc); and • Social and community wellbeing (e.g. GBV, SEA/SH etc).	culture, tradition, custom and expectations of local communities (refer outline in Appendix D). (v) Transparency and open communication with the communities on issues that affect them. (vi) Any imported labor related issues to be addressed through the GM and complaints register (refer Appendix F).			
10. Labor Management					
Use of underage persons by Contractor.	Use of persons under the age of 18 in Project construction activities.	(i) Contractor to agree to contract provisions that require no persons under the age of 18 are to be employed for construction activities. (ii) Implementation of the Project Labor Management Procedures (LMP).	(i) Verified implementation and adherence to LMP.	Contractor.	PIU (including state counterpart agencies) and CIU.
Use of forced labor by Contractor.	Use of forced labor on the Project.	(i) Contractor to confirm that they are not using forced labor for construction activities. (ii) Implementation of the Project Labor Management Procedures (LMP).	(i) Verified implementation and adherence to LMP.	Contractor.	PIU (including state counterpart agencies) and CIU.
11. Cultural Heritage / Archaeology					
Sites, features or artifacts of cultural, archaeological or historical significance.	Physical disturbance of cultural, archaeological or historically significant sites (e.g. grave sites, historical artifacts etc) due to proposed construction activities.	(i) Sites in close proximity (e.g. within 25 m of proposed construction activities) to the works are to be mapped and communicated to the Contractor workers to minimize risk of disturbance. (ii) The chance find procedure (refer Section 12.3.2) is to be implemented should physical	(i) No disturbance to sites of cultural, archaeological or historical significance during construction. (ii) Chance find procedure to be implemented and followed throughout the	CIU and Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		cultural resources be uncovered during construction.	Project, including handling and notification processes.		
12. Health and Safety					
Worker Health & Safety.	Potential injury to workers or fatality as a result of construction activities.	(i) The Contractor shall comply with the FSM Labor Code, and any State level labor and H&S laws and regulations, the PRIME E&S instruments, World Bank Group EHS Guidelines and inform all employees of their rights. (ii) The Contractor shall prepare OHS procedures pursuant to the LMP, as approved in writing by the PIU prior to commencing works. The Contractor is required to implement the OHS procedures, as well as the PRIME E&S instruments, and train workers in its content. (iii) The Contractor will employ a full time OHS manager on site for the duration of the works. (iv) Prior to construction the Contractor will conduct training for all workers on the OHS procedures and health and safety matters as required by good engineering/infrastructure construction practice. (v) OHS training shall be provided on an ongoing basis throughout the Project, task by task, and records kept of competencies and training. (vi) Workers shall be provided with appropriate Personal Protective Equipment (PPE) suitable for civil work such as safety boots, helmets, gloves, protective clothes, goggles and ear muffs for protection (as appropriate) at no cost	(i) Preparation of the OHS procedures prior to the commencement of any construction works and its acceptance by Project. (ii) All workers trained on the OHS procedures prior to the worker commencing work on site. (iii) All workers to be provided with and be wearing appropriate PPE for their position at all times. (iv) Potable water, first aid, toilet and hand washing facilities available for all workers on site. (v) All contracted and direct workers to sign CoC.	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		to the workers. Site Manager will follow up to ensure appropriate safety equipment is used. (vii) The Contractor shall provide potable water supplies, first aid facilities, toilets for all genders and hand washing facilities at works sites. (viii) All contracted and direct workers required to sign a Code of Conduct (CoC) (refer CoC in projects LMP) which outlines acceptable behaviour for the workers and their role, including reference to Gender Based Violence (GBV), Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH).			
Community Health & Safety.	Injury, harassment, harm or fatality arising for local communities as a result of construction activities in the vicinity of the works sites, including risks associated with imported labor.	(i) The Contractor shall be required to consult with adjacent landowners prior to commencement of work on site, as directed by the SEP. (ii) Temporary signage and boundary exclusion fences are to be used to prevent pedestrian access into construction areas, and inform the community of works activities, timing and the GM process. (iii) The Contractor OHS procedures shall include the requirement to raise awareness and educate all site staff on the prevention and treatment of communicable diseases including filariasis, dengue, zika, hepatitis, HIV/AIDS and Covid-19 (refer outline, Appendix D). (iv) The Contractor and all workers (including imported labor) associated with the Project are to comply to FSM national and State Covid-19 health and safety management plans, and	(i) Adjacent landowners consulted on timing and nature of works prior to the commencement of construction works. (ii) Signs and appropriate fencing in place at the entry point to the area of works. (iii) All contracted and direct workers to sign CoC. (iv) All workers made aware and educated on the prevention and treatment of communicable diseases.	Contractor.	PIU (including state counterpart agencies) and CIU.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.2 - Construction Phase (impacts associated with construction activities)					
		international WHO standards, and include Covid-19 provision in the OHS procedures. (v) All contracted and direct workers required to sign a Code of Conduct (CoC) (refer CoC in projects LMP) which outlines acceptable behaviour for the workers and their role, including reference to Gender Based Violence, Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) and undergo training.			

Table 6-3: Environmental and Social Impact Mitigation during Operation

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.3 - Operational Phase					
1. Surface and Groundwater Quality					
Discharges from operational surfaces into surface water or groundwater aquifers.	Introduction of road activity contaminants from operational surfaces. New pathways for contaminants, including refuse (e.g. trash, plastic bottles/bags, etc) to enter waterbodies.	(i) Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g., catchpits), to prolong life of infrastructure.	(i) Stormwater control is effective, regularly maintained (including drainage channels and culverts clear and unobstructed), and operates as per design.	Relevant State government transportation department.	Relevant State government transportation department.
2. Flooding					
Road Flooding.	Overflow of drainage systems due to poor maintenance affecting road users and property owners.	(i) Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g., catchpits), to reduce the potential for site inundation (i.e., flooding) during extreme weather events, and to prolong life of infrastructure.	(i) Stormwater control is effective, regularly maintained (including drainage channels and culverts clear and unobstructed), and operates as per design. (ii) No flooding issues as a result of insufficient drainage channel and culvert maintenance.	Relevant State government transportation department.	Relevant State government transportation department.
3. Road Integrity					
Road Integrity.	Compromised road integrity due to water movement creating erosion issues as a result of upgrades / sealing of roads.	(i) Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g., catchpits), to reduce the potential for site inundation (i.e., flooding) during extreme weather events, and minimize erosion risk. (ii) Regularly maintain road surfacing (e.g., filling potholes etc).	(i) Stormwater control is effective, regularly maintained (including drainage channels and culverts clear and unobstructed), and operates as per design. (ii) No erosion of newly created road pavements, or adjacent properties as a result of the works or inadequate maintenance.	Relevant State government transportation department.	Relevant State government transportation department.

Parameters	Potential Impact	Mitigation Measures & Actions	Performance Indicators	Implementation	Supervision / Monitoring
Table 6.3 - Operational Phase					
4. Health and Safety					
Road safety.	Increase in accidents relating to increased speeds on roads.	(i) Evaluate potential for installation of traffic calming devices in villages and barriers on corners, speed signs and include training and awareness programs. (ii) Consult with Police to enforce speed limits.	(i) No increase in traffic related accidents.	Relevant State government transportation department.	Relevant State government transportation department.
Transport noise during operation.	Increase of traffic noise from increased speeds on roads.	(i) Evaluate potential for installation of traffic calming devices in villages and barriers on corners, speed signs and include training and awareness programs. (ii) Consult with Police to enforce speed limits.	(i) No increase in traffic noise from pre-Project levels.	Relevant State government transportation department.	Relevant State government transportation department.

7. Civil Works Contractor Requirements

7.1 Environmental, Social, Health and Safety Clauses in Bid Documentation

Environmental and social, health and safety clauses are to be incorporated in DoTC&I bid documents for contracted works. This Generic ESMP is to be attached to the Contractor bid documents with specific reference made to the mitigation measures specified in Section 6, the Environmental, Social, Health and Safety Clauses provided in Appendix C, and any other site-specific mitigation relevant (as determined by the CIU).

The CIU Safeguards Team will be responsible for the oversight of the environmental, social, health and safety activities of the Contractor and will review draft bid documents, the Contractor's tender response, review and clear the Contractor's CESMP, train State representatives in how to supervise EHS onsite on a daily basis and will conduct periodic on-site visits to monitor and supervise progress. All CIU E&S activities will be undertaken in conjunction and cooperation with the PIU.

7.2 Contractor Environmental and Social Management Plan

The Contractor is required to prepare and implement a Contractor Environmental and Social Management Plan (CESMP) prior to the commencement of construction.

As part of the CESMP, specific management plans and procedures are required, either as chapters within the CESMP document, appended as subplans, or as separate standalone plans (i.e., health and safety). Subplans and procedures likely to be required are listed in Table 7-1. The exact list of subplans and procedures required for the specific works/Contractor is to be confirmed by the CIU and indicated in the bid documents. CESMP subplans and procedures may be updated from time to time depending on the changing nature of the work.

The CESMP is to be approved by the PIU and CIU. A recommended outline of these subplans and procedures is provided in Appendix D.

Table 7-1: CESMP Subplans and Procedures.

CESMP Subplan	Scope
Erosion and Sediment Control Plan (ESCP)	Recommended outline of plan provided in Appendix D.
Surface Water and Groundwater Management Plan (SWGMP)	Recommended outline of plan provided in Appendix D.
Waste Minimization and Management Plan (WMMP), including pollution prevention and control, and hazardous waste.	Recommended outline of plan provided in Appendix D.
Spill Management Plan (SMP)	Recommended outline of plan provided in Appendix D, as well as Section 12.1 of this Generic ESMP.
Traffic Management Plan (TMP), including Road Safety Management	Recommended outline of plan provided in Appendix D.

CESMP Subplan	Scope
Social Interaction Plan (SIP)	Recommended outline of plan provided in Appendix D.
Quarry EHS Management Plan	Relevant where Contractors manage their own quarry. Recommended outline of plan provided in Appendix B of the Project LMP (final scope to be determined by the CIU Safeguards Team).
Emergency Management and Response Plan (EMRP)	Recommended outline of plan provided in Appendix D, as well as Section 12 of this Generic ESMP.
Community Health and Safety Plan (CHSP)	Recommended outline of plan provided in Appendix D.
Occupational Health and Safety Procedures	Recommended outline of plan provided in Appendix B of the Project LMP.
Subcontractor Management Plan	Recommended outline of plan provided in Appendix D.
Environmental Monitoring Plan (EMP)	Recommended outline of plan provided in Appendix D. CIU Safeguards Team to incorporate relevant components of Section 9.3 of this Generic ESMP.

8. Institutional Responsibilities and Structures

The responsibility to implement all commitments in this Generic ESMP will be distributed between Project relevant implementing agencies in collaboration with National, State and Municipal Government agencies and/or authorities.

The relevant institutional structures to be either utilized (for existing institutions) or established for the PRIME Project including roles and responsibilities are shown in Figure 8-1 and described below.

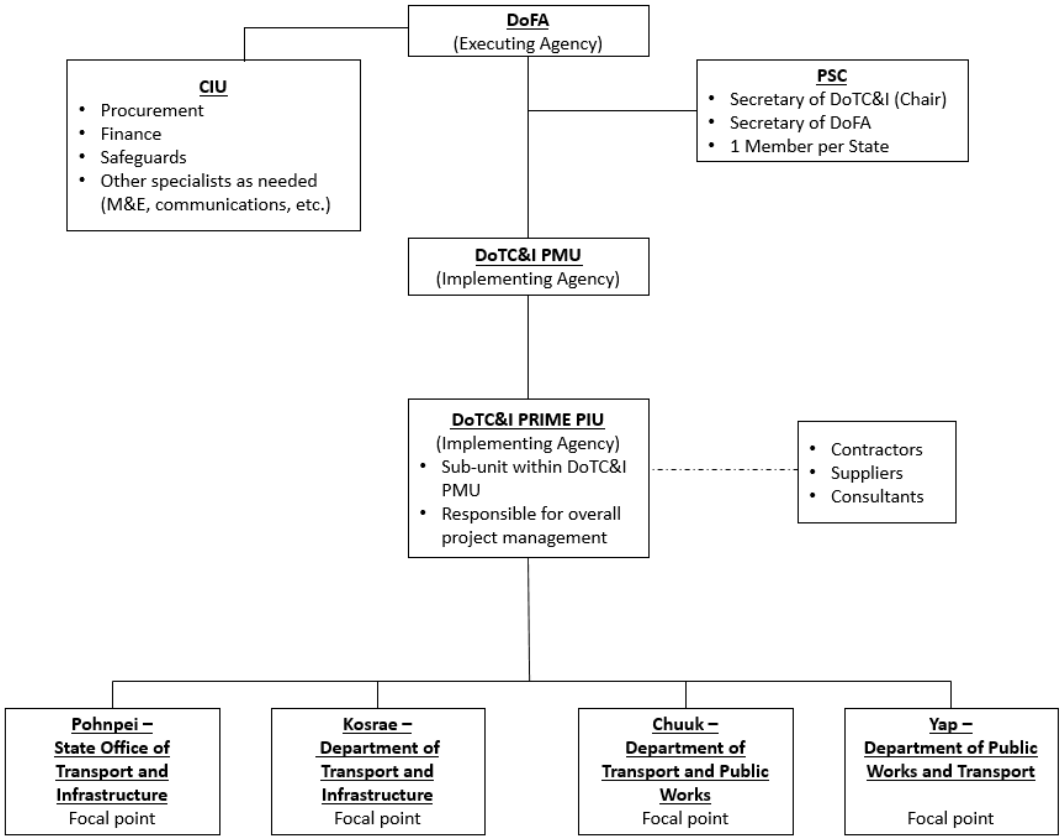

Figure 8-1: Implementation arrangements for Component 2 works.

8.1 Coordination among the National and State Governments and Departments

FSM will implement the Project through the DoTC&I as the Implementing Agency (IA).

In implementing the Project, the DoTC&I IA will work closely with the national Department of Finance and Administration (DoFA) and the four State Governments, including Kosrae Department of Transportation and Infrastructure (Kosrae DoT&I); Pohnpei Office of Transportation and Infrastructure (Pohnpei T&I); Chuuk Department of Transport and Public Works (Chuuk DoT&PW); and Yap Department of Public Works and Transportation (Yap DoPW&T).

The PRIME Project is designed to work with the National GoFSM and with each of the four State Governments and will be implemented over a five-year period following project effectiveness.

In particular, as the PRIME Roads and associated infrastructure fall under the jurisdiction of the relevant State Governments, Project Implementation Agreements (PIAs) with each of the States will also be required to help govern the PRIME activities in each State, with one PIA for each of the following groups:

(a) National DoTC&I, Kosrae State Government and Kosrae DoT&I;

(b) National DoTC&I, Pohnpei State Government and Pohnpei T&I;

(c) National DoTC&I, Chuuk State Government, and Chuuk DoT&PW; and

(d) National DoTC&I, Yap State Government, and Yap DoPW&T.

PIAs will be executed prior to the commencement of Project activities under Component 2 to ensure clarity and agreement between all relevant parties on implementation roles and responsibilities.

As each road authority is under its respective State's control and to ensure good technical coordination, focal points will be appointed in each State to work on and manage day-to-day PRIME activities associated with its land transport sector and to liaise with the National DoTC&I.

Within the National GoFSM, DoTC&I has a project management unit (PMU) that has responsibility for the delivery of Overseas Development Assistance funded infrastructure projects (including the World Bank, Asian Development Bank, United States Federal Aviation Administration, People's Republic of China and the United Nations) with the exception of energy (managed by the Department of Resources and Development) and telecommunications (managed by the DoTC&I Communications Division). The primary focus of the PMU is on program management with day-to-day project management tasks deferred to project implementation units.

A PRIME PIU will be established within DoTC&I. All contracts with consultants, contractors and suppliers will be signed by the DoTC&I Secretary with the administration and contract management tasks of the contract being implemented by the PIU as their day to day responsibility. The DoTC&I Secretary will sign off on all consultant and contractor invoices and authorize CIU to make payments.

During project implementation, the DoFA Centralized Implementation Unit (CIU) Safeguards Team will assist DoTC&I with the environmental and social aspects.

Both the CIU and DoTC&I are existing units, and are familiar with WB ESF and project-specific environmental and social risk management instruments from their experiences with other WB-funded projects.

8.2 PIU Implementation Support

The PIU will coordinate the implementation of the PRIME Project with DoTC&I management, DoTC&I PMU, DoFA CIU, PIU State Focal Points, and the State transport agencies in a manner that is to be set forth in the PIAs that outlines the roles of each organization. The PIU will also be responsible for preparing and implementing the Project Component 2 works in accordance with annual work plans and budgets which will detail the Project's activities and eligible expenditures. The PIAs will clarify, among other things, the necessary state and intra-government cooperation and support necessary for the Project.

The PIU will have overall supervision of Generic ESMP implementation. Environmental and social risk management during Component 2 works will also be the responsibility of the PIU, supported by the CIU Safeguards Team.

8.3 CIU Implementation Support

The already established CIU within the DoFA, the PRIME Project Executing Agency (EA), is a functional unit that supports the implementation of the WB portfolio and includes an environmental and social E&S risk management team.

In order to provide strong and efficient support throughout FSM, the CIU provides support to core implementation functions needed for all WB portfolio projects in FSM including, but not limited to, procurement, financial management, social and environmental safeguards, monitoring and evaluation, as well as outreach and communications. The CIU team members responsible for these functions report to the CIU Program Coordinator and provide services and hands on support to the PRIME Project Implementing Agency (i.e., DoTC&I) for preparation, implementation, monitoring and capacity building activities associated with the Project's safeguard instruments. However, Project implementation responsibilities remain with the IA (DoTC&I).

The CIU Safeguards Team will support the PIU in supervising the implementation of the Generic ESMP, and the environmental and social risk management during Component 2 works.

8.4 Implementation Roles and Responsibilities

The management, coordination and implementation of the Generic ESMP and its integral tasks will be the responsibility of the PRIME PIU with support from the CIU Safeguards Team.

The PIU will appoint a Principal Contractor for each works package who will be responsible for the delivery and management of the works. Names of relevant individuals (such as the Site Manager), together with their contact details, will be included in the CESMP in due course when the contract for the works is awarded.

Table 8-1 identifies the specific roles and responsibilities of personnel involved in implementing the mitigation measures outlined in the Generic ESMP.

Table 8-1: Implementation Roles and Responsibilities.

Organisation	Contact	Responsibilities
PRIME Project Implementation Unit (PIU)	PIU Project Manager	(i) Approve the content of any future revisions to the Generic ESMP, based on technical review and recommendations by CIU Safeguards Team; (ii) Procure and manage design engineers; (iii) Procure and employer of the Contractor; (iv) Manage Contractor activities and outputs; (v) Responsible to ensure that the Contractor implements the Generic ESMP; (vi) Approve content of the CESMP, and any other management plans required to be prepared by the Contractor in conjunction with the CIU

Organisation	Contact	Responsibilities
		Safeguard Team before forwarding to WB for clearance; (vii) Implement and monitor all stakeholder engagement strategies/plans for the Project in conjunction with the CIU Safeguard Team; (viii) Coordinate, facilitate, and where appropriate participate, in face-to-face stakeholder meetings with on-the-ground support from the PIU Focal Points, and CIU Safeguards Team; (ix) Overseeing adherence to the Project Grievance Mechanism (GM); (x) Oversee implementation of any recommended environmental and social mitigation measures set out in the Generic ESMP in conjunction with the CIU Safeguard Team; and (xi) Prepare monthly and quarterly project monitoring reports.
	PIU Project Officer	Provide assistance and support to the PIU Project Manager on the above responsibilities.
	PIU State Focal Points	(i) Oversee all State level stakeholder engagement related activities for Component 2 civil works; (ii) Supervise the Contractor on the ground; (iii) Undertake regular (daily – weekly) E&S monitoring / audits at each works site; (iv) Manage the grievance mechanism (GM) at the State level, including receiving, resolving for forwarding grievances (e.g. to PIU Project Manager, CIU Safeguards Team or others), as appropriate; (v) Interact with related and complementary support activities that require ad hoc or intensive stakeholder engagement; (vi) Act as mediator between the Contractor and stakeholders; and (vii) Proactively identify stakeholders, Project risks and opportunities (with support from the CIU Safeguard Team) and inform the PIU Project Manager to ensure that the necessary planning can be done to either mitigate risk or exploit opportunities.
DoFA Centralized Implementation Unit (CIU)	E&S Safeguards Team	(i) Ensure environmental and social clauses and generic ESMP are included in Contractor bid document, ensure environmental and social protection and mitigation measures are included in the Terms of Reference for design and supervision consultants/engineers; (ii) Train State focal points to undertake E&S monitoring / auditing and Project GM;

Organisation	Contact	Responsibilities
		(iii) Monitor physical works, carry out audits etc., to ensure environmental and social protection and mitigation measures are implemented by Contractors; (iv) Oversee the implementation of specific mitigation measures outlined in the Generic ESMP and CESMP; (v) Manage the Project GM and EHS incidents as required, providing technical support to resolving issues and incidents; (vi) Storing data (including grievance records), collating and interpreting stakeholder feedback and providing details to the PIU, DoTC&I, Design Engineer and others as necessary; (vii) Provide E&S reporting on a quarterly basis as part of WB reporting; (viii) Assist as required to obtain all relevant permits from EPA, KIRMA and federal agencies; and (ix) Providing technical and capacity building support to the PIU and other project implementing agencies on the Generic ESMP, as the PIU does not contain E&S expertise.
Civil Works Contractor Contractors (to be determined)	Site Manager (to be determined)	(i) Engage trained and qualified E&S risk management personnel with a minimum of 3 years' experience in Environmental, Health and Safety management to take day-to-day responsibility for Contractor environmental and social risk management; (ii) Prepare and implement CESMP, and relevant subplans; (iii) Support the PIU State Focal Points in engaging with stakeholders relating to communicating the scope and timing of works (either by attendance at meetings, installation of notice boards, door knocks/letter drops, etc.); (iv) Negotiation with landowners/users in relation to temporary use of land required for construction relation activities (e.g. laydown and storage/stockpile areas, worker camps, amenities, etc.) and assessment of temporarily used land after reinstatement/restoration to a condition acceptable to the land owner in accordance with the ARAP, Land Due Diligence Report, VLD, RF and / or Generic ESMP; (v) Negotiation with landowners regarding relating/reinstalling physical assets (such as fences, walls etc) located directly within the Project footprint; (vi) Receiving complaints and grievances by stakeholders and forwarding to the PIU State Focal Point during works construction, and

Organisation	Contact	Responsibilities
		resolution of grievances if they are related to the Contractor (in coordination with the PIU) consistent with the PRIME GM; (vii) Implement specific mitigation measures outlined in the Generic ESMP; (viii) Prepare additional E&S management plans relevant for the scope of the works under their CESMP (e.g. TMP, H&SP, SMP, SIP, WMMP, ESCP etc.); (ix) Responsible for the overall implementation and daily management of the CESMP and additional E&S management plans, including maintain these documents up to date, with all records/updates to the CESMP signed; (x) Record keeping of training and personnel, worker and visitors and their safety/status on site; (xi) Site inspections (daily and random) to ensure adherence to the CESMP requirements; (xii) Monitor each element of the site work process to ensure that appropriate protection procedures are in place; (xiii) Direct actions, as required, to protect the environment and to minimize and/or rectify any environmental damage; (xiv) Training and awareness including inductions and suitable training prior to commencing with works (i.e. work near water / spill prevention); (xv) Maintain clean sites in the interests of safety; (xvi) Weekly and monthly reporting to the Design Engineer; and (xvii) Compliance with all FSM national and State guidelines and Standards.
Design Supervision Consultant	Design Engineer (to be confirmed)	(i) Design in accordance with the ESMF, Generic ESMP and other E&S instruments for PRIME; (ii) Prepare bid documents and incorporating ESHS clauses; (iii) Provide technical assistance to PIU and CIU in the review and clearance of the CESMP; (iv) Monitoring and supervision of contract and works in accordance with the CESMP; and (v) Verification and approval of qualifications and experience of personnel engaged for Contractor E&S risk management and Contractor Health and Safety Management.
Site Personnel	Anyone recorded on the visitor log for the site.	(i) Adherence to the Generic ESMP and CESMP; (ii) General duty to comply with the FSM Environmental Protection Act 2014 – responsible for environmentally sound management of

Organisation	Contact	Responsibilities
		operations and reporting any observed incidents to the Site Manager; and (iii) All personnel working at the site have a responsibility to minimize potential environmental impacts arising from the construction and operation of the site.

9. Monitoring and Reporting

9.1 Objectives of ESMP Monitoring

The objectives of monitoring as set out in this Generic ESMP are to:

1. Assess the implementation of the mitigation measures outlined in Table 6-1, Table 6-2 and Table 6-3 of this Generic ESMP.
2. Monitor environmental effects in accordance with detailed requirements set out in the CESMP.

9.2 Monitoring Roles and responsibilities

Overall supervision and coordination of monitoring implementation of mitigation measures in accordance with the monitoring plan in Section 9.3 is the joint responsibility of the PIU and CIU.

Monitoring of environmental effects will be undertaken by the Contractor during construction in accordance with the Environmental Monitoring Plan in Appendix D.

9.3 Monitoring Plan

9.3.1 Introduction

This Generic ESMP applies to activities which have been screened as potentially associated with low to medium risk of environmental and social impacts (see Section **Error! Reference source not found.** above).

Mitigation of low and medium risk activities for each project phase is intended to be informed by the Generic ESMP, in particular by taking reference to the mitigation measures set out in Table 6-1 to Table 6-3 above.

The following sections set out monitoring plans separately for the:

1. Project Feasibility, Design and Pre-Construction Phase (Section 9.3.2);
2. Construction Phase (Section 9.3.3); and
3. Operational Phase (Section 9.3.4).

9.3.2 Project Feasibility, Design and Pre-Construction Phase

The monitoring plan for ‘Project Feasibility, Design and Pre-Construction Phase’ is set out in Table 9-1.

Table 9-1: Monitoring Plan for 'Project Feasibility, Design and Pre-Construction Phase' – Low - Medium risk activities.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Landowner and occupier involvement in participatory design process.	[*Where participatory design process used*]. Document verification and interviews with stakeholders.	Initially during project set-up and subsequently at 6-month interval until Phase completion.	To verify that during the design process all landowners and occupiers have been invited to participate.	PIU and CIU.
Landowners and occupiers satisfaction with participatory design process.	[*Where participatory design process used*]. Survey of landowners and occupiers to determine satisfaction – face-to-face interviews, survey using pre-determined format – e.g. Survey Monkey, Kobo Toolbox, Survey123 or similar.	Initially during project set-up and subsequently at 6-month interval until Phase completion.	To verify that landowners and occupiers involved with the participatory design process are satisfied with their involvement.	PIU and CIU.
Complaints from landowners and occupiers relating to the land access process.	Document verification and interviews with stakeholders.	Monthly.	To confirm that during the design phase no complaints have been received from landowners and occupiers relating to the land access process.	PIU and CIU.
Delays attributable to land access process.	Document verification and interviews with design consultants.	Monthly.	To confirm no delays in the design process are attributable to land access issues.	PIU and CIU.
Design to avoid ecological habitat impacts.	Review interim and final design documents.	Prior to finalization of bid documents.	To confirm that design avoids ecological habitat impacts.	Checked and cleared by CIU.
All cultural, archaeological or historical (CAH) features to be identified.	Review interim and final design documents and draft bid documents.	Prior to bid documents prepared.	To confirm that design has identified CAH features.	Checked and cleared by PIU and CIU.
All CAH features protected from harm.	Review interim and final design documents and draft bid documents.	Prior to bid documents prepared.	To confirm that design has included provision for protection of CAH features and / or agreements confirmed with land owners/occupiers/communities (as appropriate).	Checked and cleared by PIU and CIU.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
No complaints or grievances lodged in relation to CAH features.	Document verification.	Monthly.	To confirm that during the design phase no complaints have been received in relation to CAH features.	PIU and CIU.
Land access procedure reports/plans prepared.	Review interim and final design documents and draft bid documents.	Prior to bid documents prepared.	To confirm that design has included written procedures and documentation for land access.	Checked and cleared by PIU and CIU.
Land successfully secured (pre-construction).	Review documentation relating to land acquisition.	Prior to commencement of construction.	To confirm successful pre-construction securing of land for the Project.	PIU and CIU.
No complaints or grievances in relation to land access.	Document verification.	Monthly.	To confirm that during the design phase no complaints have been received in relation to land access.	PIU and CIU.
Temporary use of land.	Document verification.	Prior to commencement of construction.	To confirm all land for temporary preconstruction use, has been acquired voluntarily with documentation of consultation and approvals.	PIU and CIU.
No complaints or grievances in relation to temporary use of land.	Document verification.	Monthly.	To confirm that during the design phase no complaints have been received in relation to temporary use of land.	PIU and CIU.
Source of construction material.	Document verification.	Prior to commencement of construction.	To confirm that construction material is to be sourced only from licensed local or international land-based sources (i.e. quarries).	PIU and CIU.
List of local permitted aggregate suppliers.	Document verification.	Within one month of commencement of construction.	To verify that a comprehensive list of permitted local suppliers has been developed.	PIU and CIU.
Waste material disposal.	Document verification.	Within one month of commencement of construction and six monthly thereafter.	To confirm that design makes provision for waste material disposal only to suitable and permitted/licensed disposal facilities.	PIU and CIU.
Hazardous material management including hazardous waste disposal.	Document verification	Within one month of commencement of construction and six monthly thereafter.	To confirm that design makes provision for hazardous waste management in accordance with Appendix D.	PIU and CIU.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Access to coastal margin.	Document verification.	Prior to preparation of bid documents.	To confirm design has identified where coastal margin access restrictions and issues may arise during preliminary design and that design measures have been taken to use a participatory design approach, to ensure coastal margin access is maintained during and following construction.	PIU and CIU.
No complaints or grievances in relation to access to coastal areas.	Document verification.	Monthly.	To confirm that during the design phase no complaints have been received in relation to access to land.	PIU and CIU.
Access for road users and wider community.	Document verification.	Prior to preparation of bid documents.	To confirm that design provision has been made to maintain access at all times for road users and wider community, and any temporary restrictions limited to construction phase.	PIU and CIU.
Access maintained to adjoining properties for land owners and other parties.	Document verification.	Prior to preparation of bid documents.	To confirm that design provision has been made to maintain access for adjoining properties for land owners and other parties throughout Project, and any temporary restrictions limited to construction phase.	PIU and CIU.
Identification of potential utility service disruption.	Document verification.	Prior to preparation of bid documents.	To confirm that potential utility service disruption has been taken into account in the design phase.	PIU and CIU.
Avoidance of utility service disruption.	Document verification.	Prior to preparation of bid documents.	To confirm that design provision has been given to avoiding potential utility service disruption.	PIU and CIU.
Changes in hydrology and erosion potential.	Document verification.	Prior to preparation of bid documents.	To confirm appropriate engineering design applied to avoid changes in hydrology and erosion potential.	PIU and CIU.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Stormwater control design.	Document verification.	Prior to preparation of bid documents.	To confirm appropriate engineering design applied to stormwater control design and measures taken to avoid ingress of contaminants,	PIU and CIU.
Imported labor.	Document verification.	Prior to preparation of bid documents.	To confirm explicit provision given in bid documents for no imported labor UNLESS approved by CIU.	PIU and CIU.
Road safety matters raised in social assessment and public consultations.	Document verification.	Prior to preparation of bid documents.	To confirm design has considered and incorporated (where appropriate) all road safety matters raised in social assessment and public consultations.	PIU and CIU.
Review of project risks and Generic ESMP updated if project risks change.	Document verification.	Prior to preparation of bid documents.	To confirm design provides for ongoing review of project risks and provision made for ESMP to be revised if Project risks change.	PIU and CIU.
Review of Project risks and develop site specific ESMP as required.	Document verification	Prior to preparation of bid documents.	To confirm that if risks are screened as higher than low, a site specific ESMP is required.	PIU and CIU.
Traffic Management Plan (TMP).	Document verification.	Prior to preparation of bid documents.	To confirm design requires Traffic Management Plan incorporating requirements set out in this Generic ESMP.	PIU and CIU.
Climate change matters raised in PRIME Project Road Network VA and CRRS studies.	Document verification.	Prior to preparation of bid documents.	To confirm design specifically takes account of climate change matters raised in PRIME Project Road Network VA and CRRS studies.	PIU and CIU.
Sensitive receptors such as cultural heritage, natural or critical habitats.	Document verification.	Prior to preparation of bid documents.	To confirm design specifically takes account of need to avoid adverse impacts on sensitive receptors (cultural heritage, natural or critical habitats) potentially affected by Project design.	PIU and CIU.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Adverse impacts on sensitive receptors from machinery noise/vibration during construction and traffic noise/vibration during operation.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include suitable mitigation measures to avoid adverse impacts on sensitive receptors from machinery noise/vibration during construction and traffic noise/vibration during operation.	PIU and CIU.
Construction vehicle maintenance.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include requirement for construction vehicles to be regularly serviced and maintained to prevent the emission of particulates.	PIU and CIU.
No dust or sediment discharges from stockpiles.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include avoidance of dust or sediment discharges from stockpiles.	PIU and CIU.
No excessive dust discharges from active work areas.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include avoidance of excessive dust discharges from active work areas.	PIU and CIU.
No onsite fires.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include prohibition of onsite fires.	PIU and CIU.
WB EHS noise guideline levels.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications require compliance with WB EHS noise guideline levels set out in ESMP.	PIU and CIU.
Construction activities undertaken outside of the designated work hours.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include a requirement that no construction activities are to be undertaken outside of the designated work hours, unless prior agreement obtained by with State government and with agreement of stakeholders.	PIU and CIU.
Construction vehicles – noise maintenance.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include a requirement that construction vehicles are kept in good working order	PIU and CIU.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
			with functioning muffler silencers fitted on all vehicles.	
Vehicle speed limits.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include a requirement that vehicle speed limits are to be adhered to at all times.	PIU and CIU.
Implementation of GM and complaint register process.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include provisions to Implement a GM and complaint register process.	PIU and CIU.
No disputes or grievances from local communities relating to vibration and noise effects.	Document verification.	Prior to preparation of bid documents.	To confirm that design specifications include provisions to avoid disputes or grievances from local communities (including identified sensitive receptors) relating to vibration and noise effects.	PIU and CIU.

9.3.3 Construction Phase

The ‘Construction Phase’ monitoring plan for low - medium risk activities is set out in Table 9-2.

Table 9-2: Monitoring Plan for 'Construction Phase' – Low - Medium risk activities.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Contractor Management Subplans				
Erosion and Sediment Control Plan (ESCP)	Document verification.	Prior to commencement of construction.	To verify that **Contractor Environmental and Social Management Plans (CESMP)** have been prepared in accordance with the PRIME E&S Instruments and World Bank ESS.	PIU and CIU.
Surface Water and Groundwater Management Plan (SWGMP)				
Waste Minimization and Management Plan (WMMP)				
Spill Management Plan (SMP)				
Traffic Management Plan (TMP), including Road Safety Management				
Social Interaction Plan (SIP)				
Quarry EHS Management Plan (see LMP)				
Emergency Management and Response Plan (EMRP)				
Community Health and Safety Plan (CHSP)				
Occupational Health and Safety (OHS) procedures (see LMP)				
Subcontractor Management Plan				
Environmental Monitoring Plan				
Air Quality (e.g. Dust)				
Trained manager on site during working times.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that air quality and dust mitigation measures have all been incorporated in the **Community Health and Safety Plan (CHSP)** and are being implemented.	PIU and CIU.
Barriers erected around dusty activities or at the site boundary.				
Speed restriction imposed.				
Construction vehicles regularly serviced/maintained to prevent visible particulates.				
Stockpiles minimized, contained and no dust or sediment discharges from stockpiles.				
Dust discharges from active work areas no excessive dust discharges from active areas.				
Washing vehicle tyres and sweeping the road (as required).				
No onsite fires.				
Reinstatement of exposed areas within one (1) month of completion of works.				

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Noise/Vibration				
Adherence to WHO/WB EHS noise level guidelines.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that noise measures have all been incorporated in the **CHSP** and are being implemented.	PIU and CIU.
No construction activities outside of designated work hours without approval.				
Construction vehicles in good working order; functioning mufflers fitted all vehicles.				
Vehicle speed limits – up to 20 miles per hour for vehicles through construction site.				
Implementation of GM and complaint register process – with follow-up.				
Workers use appropriate noise PPE at all times.				
Local community informed of upcoming works at least one month prior to commencement.				
Occupational and Community Health and Safety				
Evidence of documented implementation of Worker GM and complaint register process.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that OHS and labor management measures have all been incorporated in the **OHS Procedures, CHSP and LMP** and are being implemented.	PIU and CIU.
Preparation, implementation and adherence to OHS procedures (see LMP).				
No disputes or grievances from workers relating to vibration effects.				
All workers trained on the OHS procedures (see LMP) prior to the worker commencing work on site.				
All workers to be provided with and be wearing appropriate PPE for their position at all times.				
Potable water, first aid, toilet and hand washing facilities available for all workers on site.				
Contracted workers and direct workers to sign Code of Conduct (CoC).				
Adjacent landowners consulted regarding timing/nature of works pre commencement.				
Verified no accommodation provision for imported labor.				
Verified that any issues or disputes in relation to workforce labor resolved through the GM process.				
Verified implementation and adherence to LMP.				

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
All workers educated on the prevention and treatment of communicable diseases.				
Erosion and Sediment Control				
Provision of draft ESCP/SWGMP (as a subplans under the CESMP).	Document verification.	Prior to site mobilization.	To verify completion, review and approval.	PIU and CIU.
Excavations stop and exposed soil/stockpiles compacted and/or covered during heavy rainfall.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that erosion and sediment control mitigation measures have all been incorporated in the **Erosion and Sediment Control Plan (ESCP)/ Surface Water and Groundwater Management Plan (SWGMP)** and are being implemented.	PIU and CIU.
Siting of stockpiles, at least 20 m away from watercourses, buildings etc.				
At the completion of works all areas where soil was exposed as a result of works are appropriately reseeded/ revegetated and stabilised.				
All stormwater is diverted away from exposed construction/ working areas and stockpiles, and no contaminated stormwater noticeably entering any watercourse.				
Water quality monitoring results to be reported quarterly throughout construction period.				
Hazardous substances				
Standard Operating Procedures (SOPs) for management, including appropriate storage, of all hazardous materials used on site.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP	To verify that hazardous substances measures have all been incorporated pursuant to Appendix D of this ESMP, in the **Spill Management Plan (SMP)** and Waste Management Action Plan (WMP) and are being implemented.	PIU and CIU.
No hazardous substances stored, or machinery refuelling within 50 m of any watercourse.				
No observed unhydrated cement spills on site or near any watercourse.				
Spill kits available on the site, and Contractor staff trained in their use.				
Correct clean up and notification procedure followed in the event of a spill (in accordance with Section 12.1).				
No discharge of untreated construction materials, sediment or other contaminants into watercourse or coastal marine area as a result of the works.				

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Ecological Impacts				
No impediment of fish migration as a result of the works (either during and post construction).	Site inspection.	Prior to mobilization and at monthly intervals thereafter.	To verify that design protection provisions have been implemented.	PIU and CIU.
No net loss of sensitive ecological habitat (e.g. mangroves, sea grass , riparian or terrestrial habitats) as a result of the Project.				
Pre-construction surveys by qualified ecologists to remove re-locatable biodiversity features.(only for activities screened as higher than low risk).				
In areas of natural habitat, no net loss of biodiversity or ecosystem services.				
CIU approval [prior to mobilization] of long-term biodiversity monitoring/evaluation program (only for activities screened high risk).				
No unnecessary clearance of terrestrial vegetation.				
All construction vehicles washed prior to commencing works and washed on a daily basis.				
Exposed soil reseeded and/or revegetated immediately on completion of works in that area.				
Provision of draft WMMP to PIU and CIU for review prior to commencement of construction.				
Waste Management				
Provision of draft WMMP to PIU and CIU for review prior to commencement of construction.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that waste management measures have all been incorporated in the **Waste Minimization and Management Plan (WMMP)** and are being implemented.	PIU and CIU.
Site kept in general tidy condition, with no uncontained rubbish or waste (solid or liquid) present on site.				
Toilet and hand washing facilities present on site for use by construction workers.				
No unauthorised disposal of solid, liquid or hazardous wastes as a result of Project activities. Disposal in accordance with Waste Management Action Plan (Appendix D).				
All construction waste material that can't be reused (either at the works site, or another location) is to be disposed of at an appropriately licensed disposal facility.				

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Aggregate Sourcing				
Only material from licensed local or international land-based sources (i.e. quarries) used for construction material.	Document verification and site inspections.	Prior to construction and at intervals thereafter in accordance with CESMP.	To verify that erosion and sediment control mitigation measures have all been incorporated in the **Quarry EHS Management Plan** and are being implemented.	PIU and CIU.
Record of aggregate and asphalt/bitumen sourced from a licensed/permitted supplier to be provided to PIU and CIU prior to construction and held on site for review on request.				
Quarry EHS controls implemented in terms of Dust Control, Other Air Pollutants, Noise and Vibrations, Water and Wastewater Management, Hazardous Materials Management, Solid Waste Management, Land Conversion and OHS.				
Land Access and Consultation				
Land access procedure documents (e.g. Land Access Due Diligence report, Voluntary Land Donation report or ARAP).	Document verification and site inspections.	Prior to mobilization.	To verify that land access procedure documents e.g. (e.g. **Land Access Due Diligence report, Voluntary Land Donation report or ARAP**) are being implemented and adhered to.	PIU and CIU.
Stakeholder engagement requirements set out in the RF and SEP are implemented.	Document verification and site inspections.	Prior to mobilization and at monthly intervals thereafter.	To verify that design protection provisions have been implemented.	PIU and CIU.
No disputes in relation to the loss of privately-owned land or assets.				
Any issues or disputes in relation to the disturbance or acquisition of land and/or assets resolved through the GM process.				
Consultation undertaken with land owner of to determine appropriate re-siting of impacted infrastructure.				
A lease agreement in place prior to mobilisation between the Contractor and land owners in relation to land required for temporary use.				

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Temporarily acquired land rehabilitated to pre-works conditions, or to a condition agreed by the land owner.				
Access maintained for road users and wider community throughout construction.				
Consultation and notification undertaken as per SEP.				
Implementation and adherence to approved TMP throughout construction.				
Any issues or disputes in relation resolved through the GM process.				
No obstruction of access to adjacent properties, other than essential works which extend no longer than one day where affected parties are appropriately notified.				
Alternative access provided for any access obstruction for longer than one day.				
Sites of cultural, archaeological or historical significance				
No disturbance to sites of cultural, archaeological or historical significance during construction.	Document verification and site inspections.	Prior to mobilization and at monthly intervals thereafter.	To verify that CAH design protection provisions have been incorporated and are being implemented.	PIU and CIU.
Chance find procedure to be implemented and followed throughout the Project, including handling and notification processes.				

9.3.4 Operational Phase

The 'Operational Phase' monitoring plan activities is set out in Table 9-3.

Table 9-3: Monitoring Plan for 'Operational Phase' – low to medium risk activities.

What (is the parameter to be monitored)	How (is the parameter to be monitored)	When (define frequency/or continuous)	Why (is the parameter being monitored)	Who (is responsible for monitoring)
Surface and Groundwater Quality				
Discharges from operational surfaces into surface water or groundwater aquifers.	Site inspections.	Six monthly intervals.	To verify that stormwater control is effective, regularly maintained (including drainage channels and culverts clear and unobstructed), and operates as per design.	Relevant State government transportation department.
Road flooding.	Site inspections.	Six monthly intervals.	To verify that no flooding issues arise as a result of insufficient drainage channel and culvert maintenance.	Relevant State government transportation department.
Road Integrity.	Site inspections.	Six monthly intervals.	No erosion of newly created road pavements, or adjacent properties as a result of the works or inadequate maintenance.	Relevant State government transportation department.
Road safety.	Site inspections.	Six monthly intervals.	To confirm no increase in traffic related accidents.	Relevant State government transportation department.
Transport noise during operation.	Site inspections.	Six monthly intervals.	To confirm no increase in traffic noise from pre-Project levels.	Relevant State government transportation department.

9.4 Non-Compliance Management

Monitoring will identify non-compliance with CESMP and Contract clauses, the Generic ESMP, land acquisition frameworks or plans, PRIME ESCP, World Bank Environmental and Social Standards and the local laws and regulations. Where non-compliances or non-conformances with instruments are identified, the following process applies:

Incident Type	Identified By:	Process
Minor breach, procedural, no harm	Construction ESHS team	Results and corrective actions reported in monitoring forms and weekly reports to Design Engineer / PIU. Corrective actions maintained on register and progress reported weekly until close out.
	Design Consultant or PIU or CIU	Communicated with Contractor for remedy within 1 week. Corrective actions maintained on register and progress reported weekly until close out. Results and corrective actions reported in monitoring forms and six monthly reports to World Bank.
Moderate breach or non-compliance. Has led to an incident, or could lead to an incident without corrective action.	Construction ESHS team	Results and corrective actions reported in monitoring forms and weekly reports to Design Engineer / PIU. Corrective actions maintained on register and reported weekly until close out. Close out of corrective action signed off by Design Engineer / PIU.
	Design Consultant or PIU or CIU	Results and corrective actions reported in monitoring forms and weekly reports to Design Engineer / PIU. Corrective actions maintained on register and regularly reported until close out. Close out of corrective action signed off by Design Engineer / PIU. Results and corrective actions reported in progress meetings and missions and documented six monthly reports to World Bank. World Bank assists where appropriate and necessary.
Significant non-compliance or breach leading to substantial or high risk situation. Major incident caused or could be caused by non-compliance.	Construction ESHS team	Immediate notification to Design Consultant and PIU, then World Bank. Corrective action report prepared, documenting root cause analysis, risk analysis, and proposed remedies, actions, stakeholder involvement etc. for clearance by PIU and World Bank. Results and corrective actions reported in progress meetings with Design Engineer and PIU/CIU (at least weekly) and in progress meetings and missions with World Bank. Corrective actions maintained on register and regularly reported until close out. Formal reporting in monthly reports to Design Engineer and PIU.

	Design Engineer or PIU or CIU	Immediate notification to Contractor, Design Engineer, PIU, CIU and World Bank. Corrective action report prepared, documenting root cause analysis, risk analysis, and proposed remedies, actions, stakeholder involvement etc. for agreement with the Contractor and for clearance by PIU and World Bank. Results and corrective actions reported in progress meetings with Contractor (at least weekly) and in progress meetings and missions with World Bank. Corrective actions maintained on register and regularly reported until close out. Close out of corrective action signed off by Design Engineer / PIU. World Bank assists where appropriate and necessary. Formal reporting to World Bank during missions and six monthly progress reports.

9.5 Reporting

Reporting requirements are outlined in Table 9-4 below.

Table 9-4: Schedule of reporting

Report Type	Frequency of Submission	Responsibility	Submit to:
CESMP	Prior to commencement of works	Contractor	PIU and CIU, then World Bank
CESMP updates	As required	Contractor	PIU and CIU, then World Bank
Other Contractor Management Plans	Prior to commencement of works	Contractor	PIU and CIU, then World Bank
Updates to any Contractor Management Plans	As required	Contractor	PIU and CIU, then World Bank
Incident Reporting	As below in Section 10	Contractor (Site Manager)	Engineer, PIU, CIU, then to EPA/KIRMA and World Bank
Complaints and Grievances Reporting	Within 24 hrs of grievance	Contractor (Site Manager).	PIU and CIU
Complaints and Grievances Reporting	Within 24 hrs of significant or serious grievance	PIU and CIU	World Bank
Weekly Construction Reports	Mondays (for week prior)	Contractor (Site Manager)	Engineer
Monthly Construction Report	First week of month (for month prior)	Contractor	Engineer

Monthly Construction Report	Second week of month (for month prior)	Engineer	PIU and CIU, then World Bank
Works Completion Report	After completion of works and reinstatement of site	Contractor	Engineer
Works Completion Report	After completion of works and reinstatement of site	Engineer	PIU and CIU, then World Bank

10. Complaints and Grievances

Complaints and grievances from the community, other stakeholders and the general public shall be treated with respect, actions taken immediately and investigated thoroughly.

A Grievance Mechanism (GM) has been developed for the PRIME Project and is provided in Appendix F, in the event that there is a community complaint or grievance that needs to be resolved.

A grievance could, in theory, arise as a result of a nearby residents being unhappy with environmental or social impacts generated by the works, either during construction of operation, or direct impact on livelihoods as a result of inappropriate or unforeseen activities by the proponent or their Contractors.

11. Emergency Preparedness, Incident Management and Response

This Generic ESMP is designed to provide information and practical actions to minimize the risk of an environmental incident/s occurring by promoting awareness amongst employees, suppliers and sub–contractors. Companies and individuals can be found liable for an environmental incident unless the action or event could not reasonable have been foreseen or been provided against.

In the event of an environmental incident or accidental spill the main environmental priority is to prevent the spill from entering the freshwater or coastal marine environment. An Emergency Management and Response Plan (EMRP), and a Spill Management Plan (SMP) is to be prepared by the Contractor (refer outlines in Appendix D).

11.1 Spill Management, Emergency Procedures and Equipment

As part of the SMP a Spill Response Procedure is to be prepared for the works site.

All Contractor staff involved in the handling of fuel, oils and other hydrocarbons must be trained in spill and emergency procedures. Contractors must organize suitable training.

Evidence of training should be held on site for inspection / auditing purposes.

Spill procedures are outlined in Table 11-1. Site personnel will familiarize themselves with the procedure and necessary actions shall be included in staff training undertaken by the Contractor.

Table 11-1: Spill procedures

Procedure	Performance Indicator	Responsibility
Specific procedures to be developed and implemented for leaks and spills involving: • Fuel, Oils and Hydrocarbons; • Strong Acids; • Caustic Soda; • Other Chemicals; and • Breach of Environmental Standards.	Clear response to define categories of spill.	Contractor Management.
All Contractor staff involved in the handling of fuel, oils and hydrocarbons must be trained in spill and emergency procedures. Contractor management must organize suitable training. Evidence of training should be held on site for inspection / auditing purposes. Site personnel to familiarize themselves with the procedure and necessary actions shall be included in staff training undertaken by the Contractor.	All relevant staff trained. Clear and ready access reference to training records of all Contractor staff.	Contractor Management.

Procedure	Performance Indicator	Responsibility
Spill response to be sub-divided into two response categories: Simple spills of benign materials that can be managed immediately by the person present on site (these do not constitute an environmental emergency); and More complex spills that may require additional resources or specialist skills for containment and rehabilitation.	Clear delineation of spill response categories for action and escalation as necessary.	Contractor Management.
Spill kits available and designed for fuel, oil and hydrocarbon spills. Spill kits stored adjacent to fuel storage areas and high risk spill areas. Staff trained in use of spill kits.	Spill kits available and located where necessary.	Contractor Management.
Immediately contain any spill to prevent contamination of soils and waterways. Immediately inform Contractor Management of spill. PIU (State counterpart agency and National), CIU and State environmental agencies (EPA/KIRMA) to be notified within 24 hours of a spill event.	Incident reporting has occurred. Spill has been contained as far as practicable to minimise environmental risk.	Contractor Site Manager.
Remove contaminated material and dispose off-site in accordance with advice and permit requirements provided by state environmental agencies (EPA/KIRMA) in coordination with Project Manager and CIU E&S Safeguards Team.	No contaminated material remains on site.	Contractor Management.

Spill kits should consist of at least the following items:

- Oil absorbent pads;
- Loose absorbent material such as sand;
- Sand, sandbags to create a temporary bund;
- Oil spill boom and additional oil removal equipment.
- Appropriate personal protective equipment;
- A laminated copy of the Accidental and Emergency Spill Response Procedure;
- Shovels and other general site equipment may also be used in case of an emergency; and
- A spill kit should be located at all petrochemical storage areas.

11.2 Contingency Response –incident and/or emergency

An Emergency Management and Response Plan (EMRP) is to be prepared by the Contractor (refer outline in Appendix D).

During site works, the Contractor shall allocate sufficient resources (personnel, plant, equipment, materials) to the site and store on-site, at suitable locations and at all times, sufficient resources to immediately attend to any non-conformance, incident and/or emergency event. Table 11-2 summarizes the emergency procedures.

In the event of an emergency, site personnel are to notify the PIU State Focal Point, and appropriate authorities, as outlined in under Section 8.2.

Table 11-2: Emergency procedures

Procedure	Performance Indicator	Responsibility
Injury Response		
Procedures for accident response are to be set out in the OHS procedures (refer LMP) – obligation on workers to notify any workplace injury and obligation on supervisors immediately to respond to notification and ensure injury is medically treated as necessary.	Worker notification of injury – urgent injury response.	Contractor – workers and supervisors.
Assessment of Risk		
Regular risk assessment will be undertaken to review potential emergency situations that may arise. Methodology consistent with Generic ESMP (Appendix B). Determination of whether an incident is classified as an Emergency is based on the risk assessment. For an incident classified as an emergency, the following prioritization of response procedure (refer below), will be followed. Any unforeseen incident overlooked during the l risk assessment will be treated as an emergency situation until the Contractor management and/or PIU advises otherwise.	Site fully aware of risk status on ongoing basis.	Contractor.
Prioritization of Response		
Emergency response to prioritizes the actions undertaken according to the following sequence: • Protection and rescue of human life; • Minimization of the area impacted by the incident; • Protection of the environment, plant and property; • Rendering the area safe in which the emergency has occurred;	Emergency response undertaken in accordance with prioritization sequence.	Contractor.

Procedure	Performance Indicator	Responsibility
• Restoration of all disrupted services; and • Decontamination and rehabilitation of the incident scene and surrounding area. Depending upon the severity of an incident, emergency response may also involve using the services of, or notifying, the following groups: • Police; • Ambulance; • Department of Transport, Communication and Infrastructure (and/or State representative authorities); • EPA/KIRMA ; • State and Municipal Government; • Community and traditional leaders (such as Council of Chiefs); and • Others likely to be affected (e.g. local communities, downstream water users etc).		
Fire		
Fire management procedures to include the following: • All fuel shall be stored in a bunded secure restricted locations (e.g. shipping container, building etc) away from machinery and other sources of ignition; • Fire extinguishers and/or a water pump are to be kept on site, regularly maintained and tested to ensure good working order; • A detailed firefighting response procedure, fire fighter training, emergency drills, first aid/evacuation, and systems for warning Local Government at all work sites; • Induction sessions to construction project workers on fire hazard, measures to prevent accidental fires and the importance of reducing the risk of accidental fire for both safety and the protection of adjacent lands; • Adequate water supplies for use in the case of fire will be established in critical areas; • Earthing and lightning protection will be installed to structures vulnerable to lightning strike; and • Storage and handling of all substances under conditions which minimize the risk of fire or toxic emissions.	Fire management procedures implemented, and staff fully aware of preventive measures and responsibilities.	Contractor – workers and supervisors.
Extreme Weather Events (e.g. Typhoon and Flooding)		

Procedure	Performance Indicator	Responsibility
Stop work and close/secure construction site during official warnings for Typhoons/hurricanes. Check, cover and tie down materials, plant and equipment. Ensure appropriate water diversion and sediment control devices are in place to contain and treat water-borne sediments.	Implementation of extreme weather event management measures.	Contractor – workers and supervisors.
Communicable Disease including Covid-19		
The Contractor OHS procedures shall include the requirement to educate all site staff on the prevention and treatment of communicable diseases including filariasis, dengue, zika, hepatitis, HIV/AIDS and Covid-19 (refer outline, Appendix D). The Contractor and all workers (including imported labor) associated with the Project are to comply to FSM National and State Covid-19 health and safety management plans, and international WHO standards, and include Covid-19 provision in the OHS procedures (including travel restrictions for staff/workers returning home).	Relevant OHS management measures have been incorporated in the OHS procedures (including and State, National and International requirements). Implementation and adherence to Contractor OHS procedures.	Contractor.

11.3 Accidental Discovery

11.3.1 Item of Contamination or UXO

The Contractor Site Manager is responsible for briefing and training site staff and sub-contractors on signs, indications, and precautions with respect to contamination (e.g., buried contaminated fill material, unearthed chemical drums or bags, etc) or unexploded ordinance (UXO).

Should an area of contamination or UXO be discovered, site staff will stop work, delineate and restrict access to the site, and advise the Site Manager. The Site Manager shall assess the site and determine if further investigation or specific management is required.

If contamination is suspected, the Site Manager shall immediately notify the PIU State Focal Point, who is then to inform the PIU Project Manager, State environmental agencies (EPA/KIRMA) and CIU Safeguards Team (as appropriate). If deemed necessary, the material shall be sampled as soon as practicable and analyzed in a laboratory, and contained and/or disposed off-site at a permitted receiving site location based on the testing outcomes.

For UXO discovery, work shall immediately cease, the item shall be isolated, secured and all access prevented, with notification to the PIU Project Manager, CIU Safeguards Team, state environmental agencies (EPA/KIRMA), and national and state police for identification of specific UXO clearance expertise.

11.3.2 Cultural Heritage

The Contractor is required to appropriately and respectfully manage the accidental discovery of sites of archaeological or cultural heritage significance, such as physical cultural resources and artefacts (e.g., unmarked graves) should they be encountered on site during construction.

The Chance Find Procedure is outlined in Table 11-3. This seven-step procedure is to be followed should actual or potential physical cultural resources be uncovered during construction works, i.e., for when a person working on the project discovers an archaeological or cultural heritage site or item.

The Contractor Site Manager will be responsible for the implementation of the Chance Find Procedure, under guidance from the PRIME PIU CIU Safeguards Team.

Table 11-3: Chance Find Procedure

Step	Process	Duration
1	Stop the activities in the area of the chance find and secure the site to prevent any further disturbance, damage or loss. In cases of human remains, arrange for a guard to watch the site until the police, local government person with delegated authority take over.	Immediately.
2	Prohibit the collection of objective by any person.	Immediately.
3	Notify the local government officials and PIU State Focal Point (and police if it is human remains). The PIU is to then notify the State Historic Preservation Office and land owner/traditional leader.	Immediately.
4	Delineate the discovered site or area (e.g. fencing).	As soon as possible (within 24 hours).
5	Any objects that are found must be handed over to the GoFSM (i.e. State Historic Preservation Office).	1 week.
6	Project works can resume only after instruction is provided by appropriate State and/or National government officials, and PRIME PIU Project Manager.	Once approval provided by PIU Project Manager, under direction of the State and National governments.

Appendix A ESA Consultant's Terms of Reference for Generic ESMP

"The Consultant is to prepare a generic Environmental and Social Management Plan (ESMP) for the project. The ESMP shall be prepared in accordance with Annex 1 of World Bank ESS1 and the EIA laws and regulations of each State and the national government of the FSM. The ESMP should be based on the FSM environmental and social context (baseline data collected under Task 1) and cover the typical / known issues relating to the construction and operation of roads, drainage, bridges, culverts and causeways. The ESMP should include the management of risks such as (but not limited to): erosion and sediment control, discharges of pollutants to air/water/soil, quarrying/dredging of aggregates, importing aggregates, dust emissions, noise emissions, avoiding sensitive sites and receptors (cultural heritage, social, health, environmental), spills, emergency procedures, workforce behavior, occupational health and safety, community health and safety, workers accommodation, traffic management, design mitigation for safety, climate change and natural hazard resilience and sustainability of resources; waste management etc."

Appendix B Risk Assessment and Impact Identification

12. Risk Assessment & Impact Identification

12.1 Methodology

In assessing the environmental and social risk of road works activities, impacts are rated to determine the appropriate response or management actions that should be implemented to minimize potential impacts. The risk assessment methodology for the PRIME road works activities is described below.

The commonly adopted Australasian Standard for Risk Management[10] has been used to determine the level of risk posed by activities associated with road works based on the likelihood or probability of an event, and the consequences of the impacts of that event occurring (see Table 12-1). Note this is risk rating at the *activity level* to inform the specific mitigation measures to be applied and is different to the World Bank Environmental and Social Framework risk ratings (low, moderate, substantial, high) that are applied at the *project level* based on accumulated risk assessment of all activities related to the sub-project (refer to the ESMF screening process).

Table 12-1: Qualitative risk analysis matrix

	Consequence				
	1	2	3	4	5
Likelihood	Severe	Major	Moderate	Minor	Negligible
A - Almost Certain	E	E	H	M	M
B – Likely	E	H	H	M	L
C- Possible	H	H	M	M	L
D – Unlikely	H	M	M	L	L
E - Rare	M	M	L	L	L

Risk Map Color Code
E = Extreme
H = High
M = Moderate
L = Low

This conventional risk management framework is considered applicable in the context of this assessment which has a focus on high level identification of biodiversity and ecosystem services, social and socio-economic risks.

There are four main levels of risk after combining the 'likelihood' and 'consequences' factors (see Table 12-2 and Table 12-3). Each level has a response or management control action.

The four 'Risk Levels' are:

- Extreme (E) Risk - those impacts that require significant mitigation to avoid serious harm because of the high probability of severe or major harm (significant, long term, irreversible damage).

[10] AS/NZS ISO 31000:2009. Risk Management – Principles and guidelines.

- High (H) Risk - those impacts that are likely and predictable but of moderate consequence; requiring specific and detailed mitigation, possibly bespoke or complex if harm could be to sensitive environments and communities.
- Moderate (M) Risk - those that are unlikely or likely, they are predictable and they require industry standard mitigation measure in place to address impacts and monitoring programs.
- Low (L) Risk - those impacts that do not require any specific mitigation actions but may be part of routine management and monitoring plans.

In cases of "E", "H" and "M" Risks, mitigation measures are identified to reduce the level of residual risk.

Table 12-2: Qualitative measures of likelihood

Level	Descriptor	Example
A	Almost certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Could occur
D	Unlikely	Could occur but not expected
E	Rare	Occurs in only exceptional circumstances

Source: Modified from Standards Australia/New Zealand 2006

Table 12-3: Qualitative measures of consequence

Level	Descriptor	Environmental / Social Impacts	Public/Media Attention	Financial cost to remediate (USD)
1	Catastrophic	Irreversible changes to habitat / species. Significant extensive detrimental long term impacts on the environment, community or public health. Catastrophic and/or extensive chronic discharge or persistent hazardous pollutant. Damage to an extensive portion of aquatic ecosystem. Long term impact on water resource. Human life at risk or life has been lost. Large scale involuntary resettlement. Indigenous peoples disconnected from land and resources. GBV harm.	Probable public or media outcry with national/international coverage. Significant green NGO campaign	>$700,000
2	Major	Degradation or damage to habitat that will have long term consequences. Off-sire release contained with outside assistance. Short to medium term detrimental environmental and social	May attract attention of local and state media and local community groups	$350,000 – $700,000

Level	Descriptor	Environmental / Social Impacts	Public/Media Attention	Financial cost to remediate (USD)
		impact off-site or long term environmental damage on-site. Indigenous Peoples at risk from harm. Moderate scale of involuntary resettlement or economic displacement. GBV harm.		
3	Moderate	Onsite release contained with outside assistance. Significant discharge of pollutant possible source of community annoyance. Non-persistent but possible widespread damage to land. Damage to habitat or land use that can be remediated without long term loss or very localized persistent damage. Voluntary resettlement required. Small scale involuntary resettlement. Community unrest potential. Impacts on wellbeing and livelihood through noise/traffic/access.	May attract attention of local media heightened by local community	$35,000 – $350,000
4	Minor	On site release immediately contained without outside assistance. Small emissions odor, dust or noise/vibration without sensitive receptors. Voluntary resettlement. .	Local community attention or repeated complaints	$3,500 – $35,000

12.1.1 Outcome of Risk Assessment & Impact Identification

Table 12-4 to Table 12-6 present the results of the assessment of risks associated with the road works activities. A summary of key measures to mitigate risk are identified.

Table 12-4: Outcome of Assessment of Key Feasibility, Design and Pre-Construction Phase Environmental, Social, Health and Safety Risks for Road Works

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
1. Easement agreement (s)							
Easement agreement documentation for existing road easements not available for entire sections of proposed works areas.	Land owners and land users adjacent to works areas.	Risk of land owner/user objection to proposed works.	4	B	H	Improvement works for existing roads will be designed through participatory design approach. Affected land owners and community will be consulted from preliminary design stage and provide agreement to works design. Property losses adjacent to roads will be minimized and where unavoidable will be restored through mitigation measures outlined in the Resettlement Framework (RF).	L
2. Ecological biodiversity/habitats							
Road / Bridge / Causeway design.	Stream and coastal area biodiversity and habitats.	Loss or modification of stream and coastal area biodiversity and habitats.	3	A	H	Mitigation of potential impacts on ecological habitat as a result of improvement works to existing roads and structures through screening and design-related avoidance. Biodiversity and natural ecological habitat impacts will be screened and assessed for each works site, if required, site-specific ESMP will be prepared to provide the avoidance and mitigation measures. Design team to have EHS clauses in bid documents and require Contractors Environmental and Social Management Plan (CESMP).	L
3. Cultural heritage							
Road / Bridge / Causeway design.	Cultural heritage features and artifacts.	Loss or modification of cultural heritage features and artifacts, graves.	3	A	H	Mitigation of potential impacts on cultural, archaeological or historically significant sites through screening and design-related avoidance. Cultural heritage and archaeological impacts to be screened and assessed for each works site, and if required a site-specific ESMP is to be prepared to outline specific avoidance and mitigation measures. Design team to have EHS clauses in bid documents and require CESMP from Contractors.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
4. Permanent or temporary asset loss (e.g., land, buildings, fences, crops, etc.)							
Loss of land and non-land assets.	Asset owners.	Permanent loss of land or restricted land use due to land access requirements for project works. (Impacts identified through works design and due diligence process in advance of works.)	3	A	H	Avoidance of severe impacts on livelihood or those requiring physical displacement through design. Due diligence to assess losses, consultation with affected persons, preparation of resettlement instrument (resettlement plan or voluntary land donation plan). Full implementation of resettlement instrument mitigation	L
Temporary use of land for laydown area.	Asset owners.	Temporary loss of land due to use of land for laydown area.	3	A	H	Identification and use of Government land for laydown areas/ land previously used for similar activities, etc. If required voluntary land donation (VLD) process to be initiated. If no VLD, then rental allowance to be provided. At end of rental period land to be returned in original condition.	M
5. Construction materials (e.g., aggregates) and waste materials generated							
Use of aggregate materials in construction activities.	Environmental risk.	Use of material from non-sustainable sources (i.e., coastal sand and coral reef materials).	1	B	E	Only material from licensed local or international land-based sources (i.e., quarries) to be used (i.e. no coastal sand and coral reef / rock to be used). Design team to have EHS clauses in bid documents and require CESMP from Contractors.	M
Waste materials generated during road construction activities.	Disposal of waste materials.	Pollution arising from disposal of waste materials at unlicensed facilities.	2	A	E	Material reused in roading process where possible or disposed of at permitted landfills. Design team to include in bid documents: a) Relevant EHS clauses related to disposal of waste material. b) Requirement for Contractor to prepare CESMP, 'Waste Minimization and Management Plan (WMMP)' and 'Spill Management Plan (SMP)'.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
6. Coastal margin access							
Loss of access to coastal area.	Land owners, wider community.	Permanent or temporary loss of access to coastal margin due to adjacent works.	3	A	H	Design engineer to identify where coastal margin access restrictions and issues may arise during preliminary design. Avoidance or minimization of access restrictions through participatory design approach, to ensure coastal margin access is maintained during and following construction. Access restriction impacts to be screened and assessed for each works site, and if required a site-specific ESMP is to be prepared to outline specific avoidance and mitigation measures, including consultation with landowners, reinstatement of access etc. Design team to have EHS clauses in bid documents to avoid unnecessary access restrictions or disturbance, and require Contractor to prepare CESMP.	L
7. Disruption to usual access							
Replacement of bridges / causeways.	Asset users / local community.	Permanent or temporary loss of access for users / local community.	2	A	E	Design engineer to identify where issue will arise. Site-specific ESMP to be prepared including consultation with landowners, reinstatement of access, etc. Design and construction team to ensure alternative route(s) / crossing (s) are available. Where this is not possible then temporary crossing to be provided. Road access restrictions and disruptions to be screened and assessed for each works site, and if required a site-specific ESMP is to be prepared to outline specific avoidance and mitigation measures, including consultation with landowners, reinstatement of access. Design team to have EHS clauses in bid documents and require Traffic Management Plan (TMP) and CESMP from Contractors.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
	Adjoining land owners.	Temporary restriction on use of adjoining privately owned land adjacent to bridge / causeway alignment.	2	A	E	Design engineer to identify where issue will arise. Site-specific ESMP to be prepared including consultation with landowners, reinstatement of access, etc. Use of private/customary land for temporary use to be negotiated between with land owners. At end of rental period land to be returned in original condition. Access restrictions and disruptions to be screened and assessed for each works site, and if required a site-specific ESMP is to be prepared to outline specific avoidance and mitigation measures, including consultation with landowners, reinstatement of access et Design team to have EHS clauses in bid documents and require TMP and CESMP from Contractors.	M
8. Erosion potential of stormwater / diverted surface waters							
Change in waterflow as a result of culvert / bridge installation.	Watercourses and coastal areas.	Changes in erosion potential as a result in changes in water flow.	3	A	H	Design of structures to minimize erosion potential such as concrete side drains / culverts, energy dissipation structures installed. Design team to have EHS clauses related to sediment and erosion procedures in bid documents and require Erosion and Sediment Control Plan (ESCP) from Contractors. Water flow / hydrology impacts to be screening screened and assessed for each works site, and if required a site-specific ESIA and ESMP is to be prepared to outline specific avoidance and mitigation measures, including any appropriate technical studies.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
9. Surface water quality							
Discharges from operational surfaces.	Surface waters.	New pathways for contaminants, including refuse (e.g. trash, plastic bottles/bags, etc) to enter waterbodies.	3	A	H	Design of features to minimize ingress of stormwater contaminants (e.g., catchpits), and specifications for regular maintenance required. Design team to have EHS clauses related to stormwater contaminants and discharges in bid documents and require ESCP, WMMP and SMP from Contractors.	L
10. Use and Accommodation of Imported Labor (if required)							
Use and accommodation of imported labor.	Local community.	Environmental (increased pressure on existing natural resources) economic and livelihoods (inflationary pressures, exacerbate vulnerability of marginal groups, etc), infrastructure and services pressure, health (potential increases in violence, alcohol/drug consumption, sexually transmitted diseases, etc), and social and community wellbeing.	3	A	H	Identify whether imported labor required. If imported labor required then a Social Interaction Plan (SIP) is to be prepared to include site workers induction, rules regarding alcohol use, interaction with the local community, establish requirement for stakeholder committee/community liaison officer, etc.	M
11. Design							
Safety in Design / Road Safety Assessments.	Local community.	Design not robust enough for local conditions or not international best practice, and does not take into account locally available material.	2	A	E	Design specifications included in design consultant ToRs (stating that design must adhere to appropriate international best practices guidelines for the works). Type and quality of locally available material communicated include in ToRs to inform sound design, or requirement for sourcing suitable material from offshore.	M
Avoiding sensitive receptors (cultural heritage, natural or critical habitats) through design.	Local community / environment.	Sensitive receptors not being adequately screened, leading to these sensitivities not been fully understood or identified during design phase, resulting in inappropriate design, or unnecessary impacts.	2	A	E	Mitigation of potential impacts on sensitive receptors through screening and design-related avoidance (e.g. participatory design approach'). Sensitive receptors will be screened and assessed for each works site, if required, site-specific ESMP will be prepared to provide the avoidance and mitigation measures.	M

Table 12-5: Outcome of Assessment of Key Construction Phase Environmental, Social, Health and Safety Risks for Road Works

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
1. Air Quality / Dust							
Generation of dust as a result of construction activities in PRIME Project works locations including laydown areas.	Soil disturbance, road surface removal, spillage from trucks transporting material.	Dust creating nuisance (and potential health issues) where road works occur in close proximity to adjacent residential / commercial properties.	4	B	M	Construction vehicles shall be regularly serviced and maintained to prevent the emission of visible particulates. The number and size of stockpiles shall be minimized, and have appropriate containment to prevent dust discharges. Dust suppression (i.e. a water cart, or similar) shall be used to dampen active work areas and stockpiles in dry conditions. Washing vehicle tires and sweeping the road on a daily basis to prevent the spread of soil and dust outside of the works area. Banning fires on site.	L
2. Noise & vibration							
Construction activity creating noise and / or vibration disturbance in PRIME Project works locations including laydown areas.	Local community.	Noise and / or vibration disturbance to adjacent households where road works occur in close proximity.	3	A	H	The Contractor shall ensure noise attenuation is in accordance with the WHO and WB EHS guidelines. Consultation and engagement so people are fully informed and can make alternative arrangements for work or accommodation during works, in accordance with SEP. Strict adherence to State working hour requirements. Regularly maintenance of machinery, equipment and vehicles to ensure noise reduction e.g. mufflers, use of air brakes, etc. Reduced speed limits. Monitor and investigate complaints through GM, and consider noise barriers where appropriate. Contractor to identify structures within zone of vibration impact, and assess condition of structure. Noise monitoring at site and sensitive receptors.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
	Contractors.	Noise/ vibration impacts on health of workers.	3	A	H	Contractor to ensure adherence to OHSP. Workers provided with PPE including ear protection. Regularly maintenance of machinery, equipment and vehicles.	L
3. Surface Water Quality							
Construction activities in PRIME Project works locations e.g., road / culverts / bridges / causeways.	Changes in water quality in adjacent receiving environment, including surface water and ground water aquifers.	Ground disturbance leading to runoff of contaminants (e.g., sediment, hydrocarbons, cement, etc) in stormwater and changes in water quality of adjacent receiving environment.	3	A	H	Contractor to prepare and implement ESCP detailing procedures to ensure ground disturbance in minimized, and measures to control offsite movement of disturbed sediments hazardous substance and other discharges, effective stormwater control, slop excavation, in-stream works and monitoring requirements.	L
		Ingress of contaminants (such as hydrocarbons) due to spillage in laydown areas, refueling activities entering groundwater.	3	A	H	Contractor to prepare and implement a SMP, detailing procedures to minimize release of contaminants such as fuels stored in bunded areas, refueling activities on hardstand areas etc. Additional controls for hazardous substances including oils and hydrocarbons are provided below.	L
		Loss and/or discharge of hazardous material into the aquatic and/or terrestrial receiving environment, or groundwater aquifer.	3	A	H	Storage of all hazardous substances and chemicals (including fuel) and refueling is to occur at least 50 m away from watercourses. Conduct daily inspections of machinery with particular attention to repair of hydraulic and fuel systems to prevent leakage. Careful handling of unhydrated cement material and wet cement and fuel to avoid spills. The Contractor shall have spill kits available and staff be trained in their use. Immediate notification of PIU in case of any fuel or chemical spill, to report the incident and should be reported to the EPA/KIRMA within 24 hours.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
4. Aquatic Ecological Resources							
Construction activities in PRIME Project works locations adjacent to culverts/bridges/causeway.	Aquatic (i.e., freshwater fish, habitat) & coastal marine resources (fish, coral reef habitat, seagrass beds, etc).	Ground disturbance leading to runoff of contaminants (e.g., soils, hydrocarbons, cement, etc) in stormwater and deposition on downstream sensitive ecological environment. Direct loss of habitat and/or resources in footprint of bridges / causeway. Loss of endemic and/or protected species.	3	A	H	In addition to the mitigation proposed for water quality, mitigation measures are to include identifying and plugging all discharge points, ensure upstream and owns fish migration is not impeded, and design crossings (including bridges, culverts and causeways) to avoid disturbance of sensitive habitat (e.g. mangroves, sea grass etc) where possible. Where it is not possible a planting regime is to be implemented to restore the lost habitat.	L
5. Terrestrial / Riparian Ecological Resources							
Construction activities in PRIME Project works locations including laydown areas.	Sensitive terrestrial fauna / fauna particularly in sensitive ecological areas.	Direct loss of habitat in construction footprint or disturbance of terrestrial fauna and fauna.	3	A	H	Contractor to implement site-specific ESMP detailing procedures to minimize footprint and disturbance of terrestrial fauna and fauna particularly in sensitive ecological areas.	L
Invasive species.	Terrestrial fauna / fauna.	Introduction of invasive aquatic and / or terrestrial pest / weed species as a result of construction activities.	4	B	M	Imported aggregates to be sourced from weed free locations. Washing of vehicles. Exposed soil to be reseeded and revegetated.	L
6. Waste Management and Construction Material							
Disposal of solid or liquid waste.	Environment.	Uncontrolled disposal of solid or liquid waste material into the aquatic and / or terrestrial receiving environment.	3	A	H	The Contractor to prepare a Waste Minimization and Management Plan (WMMP), to cover all aspects of general waste generation, storage, disposal and reuse. Workers to have access to rubbish receptacles, which allow for the collection and segregation of wastes. Solid wastes to be collected and disposed of at an appropriately licensed disposal facility. Paper, bottles and cans shall be transported to local recycling facilities, if available.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
Use of aggregate materials in construction activities.	Environmental risk.	Use of material from non-sustainable sources (i.e., coastal sand and coral reef materials). Introduction of exotic and/or invasive flora and fauna.	1	B	E	Only material from licensed local or international land-based sources (i.e., quarries) to be used (i.e. no coastal sand and coral reef / rock to be used). The Contractor shall provide a record of the quarry license approval from aggregate suppliers (i.e. issued by EPA/KIRMA) prior to start of construction.	M
Waste materials generated during road construction activities.	Disposal of waste materials.	Pollution arising from disposal of waste materials at unlicensed facilities.	2	A	E	The Contractor shall prepare a WMMP, to cover all aspects of construction waste generation, storage, disposal and reuse. Road material that cannot be reused shall be transported and/or stockpiled off-site for use on unsealed roads, or disposed of at an appropriately licensed disposal facility.	M
7. Land and Access Restrictions							
Permanent loss of land and non-land assets.	Land and asset owners and users.	Permanent loss of land or assets, or restricted land use due to land access requirements for project works.	3	A	H	Implementation of any construction related measures set out in the land access procedures (e.g. Land Access Due Diligence report, Voluntary Land Donation report or Resettlement Plan), including consultation requirements set out in the RF and SEP. Contractor is to consult with the owners of the assets that require relocation in order to determine the most appropriate re-siting the affected infrastructures, and undertake relocation where appropriate. Should unexpected impacts occur to land or assets as a result of construction activities, community grievances are to be addressed through the Grievance Mechanism.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
Temporary loss of land and/or permanent loss of non-land assets such as crops, fences, ornamental gardens, etc in road alignment, laydown areas or temporary diversion roads.	Asset owners.	Impacts due to construction affecting private property or restricting access. (Impacts that fall under construction method for which the contractor is responsible for determining).	3	A	H	Land required for construction facilities is to be secured by the Contractor as required, via VLD if suitable. If no VLD then lease agreement is to be negotiated and agreed between the civil works Contractor and the land owner prior to mobilization, and rental allowance to be provided if appropriate (in accordance with RF). At end of rental period, any temporarily acquired land is to be rehabilitated to a pre-works condition or in a condition acceptable to the land owner. Should unexpected impacts occur to land or assets as a result of construction activities, community grievances are to be addressed through the GM.	L
Disruption of road access for users due to crossing works (e.g. replacement of bridges / culverts / causeways.	Road users.	Permanent or temporary loss or restriction of access for road users / local community.	3	A	H	Contractor to maintain road access throughout construction (i.e. alternative route(s) / crossing(s) are made available). The local community is to be informed of the upcoming works (including maps, dates and times of operation) through letter drops to all adjacent properties, and the installation of signage (as per SEP). TMP to be implemented and adhered to throughout construction. Any road user complaints to be to be addressed through the GM and complaints register.	L
Disruption of access to adjoining properties due to works.	Residential and commercial properties, and other land owners.	Temporary restriction on access to, or use of, adjoining privately owned land adjacent to works.	3	A	H	Contractor to maintain access to adjoining properties throughout construction. Vehicular and pedestrian access to adjacent properties and adjoining roads shall be maintained throughout construction except for essential works where temporary closure shall be minimized. Any road closures are to be undertaken and managed in accordance with the DoTC&I standard practices. TMP to be implemented and complaints addressed through the GM.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
Disruption to Existing Services.	Utility Providers / local community.	Disturbance of underground or overhead utility infrastructure resulting in a disruption of services.	3	A	H	Contractor to engage with service providers prior to works commencing to confirm the likely presence and locations of services and develop a plan for minimizing disruption of any services. The Contractor shall be liable for any services disrupted as a result of the construction works.	L
8. Traffic Safety							
Movement of construction vehicles.	Local Community / Contractors / Pedestrian & Vehicular Traffic.	Potential human hazards due to movement of vehicles and machinery on all roads and potential for increase accident risk around work areas.	1	B	E	Contractor to implement TMP which will include speed limits, pedestrian safety measures, traffic control supervisor to be used, and alternative routes to be identified, timing of works to ensure safe access for children, etc. Contractor to communicate TMP to local community as described in the Stakeholder Engagement Plan (SEP) and works specific ESMP's.	M
9. Use and Accommodation of Imported Labor (if required)							
Use and accommodation of imported labor.	Local community.	Environmental (increased pressure on existing natural resources) economic and livelihoods (inflationary pressures, exacerbate vulnerability of marginal groups, etc.), infrastructure and services pressure, health (potential increases in violence, alcohol/drug consumption, sexually transmitted diseases, etc.), and social and community wellbeing.	3	A	H	Establish/form stakeholder committee(s), where future work plans, site requirements, labor and material requirements and problems are discussed, in order to prioritize employment of locals, where appropriate. Implement Social Interaction Plan (SIP), including undertaking weekly toolbox meetings with all site workers on culture, tradition, custom and expectations of local communities. Transparency and open communication with the communities on issues that affect them. Any imported labor related issues to be addressed through the GM and complaints register.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
10. Labor Management							
Use of underage people.	Contracted workers.	Use of people under the age of 18 in hazardous Project activities.	3	A	H	Contractor agrees to contract provisions that require no people under the age of 18 are to be employed in hazardous activities. Implementation of the Project Labor Management Procedures (LMP).	L
Forced labor.	Contracted workers.	Use of forced labor on the Project.	3	A	H	Contractors confirm that they are not using forced labor. Where employment occurs directly with Government, employees are not considered forced by virtue of the fact as they have signed a contract. Implementation of the Project Labor Management Procedures (LMP).	L
11. Cultural Heritage / Archaeology							
Sites, features or artifacts of cultural, archaeological or historical significance.	Cultural heritage.	Physical disturbance of cultural, archaeological or historically significant sites (e.g. grave sites, historical artifacts etc) due to proposed construction activities.	3	A	H	Sites in close proximity to the works are to be mapped and communicated to the Contractor workers to minimize risk of disturbance. Should sites of cultural, archaeological or historical significance be deemed at risk of indirect disturbance as a result of Project activities, the CIU is to develop strategies to protect these sites in consultation with the local community and the relevant State Government department. A chance find procedure is to be implemented should physical cultural resources be uncovered during construction.	L

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
12. Health and Safety							
Worker Health & Safety.	Construction workforce.	Potential injury to workers as a result of construction activities.	3	A	H	Contractor to comply with the FSM Labor Code, an inform all employees of their rights. Contractor to prepare and implement an OHSP which is to be approved in writing by the PIU prior to commencing works, and train workers in its content. Contractor to conduct training for all workers on the OHSP and health and safety matters as required by good engineering practice. Workers to be provided with appropriate PPE suitable for civil work such as safety boots, helmets, gloves, protective clothes, goggles and ear muffs for protection (as appropriate) at no cost to the workers. Contractor to provide potable water supplies, first aid facilities, a toilet and hand washing facilities at works sites. All workers required to sign a Code of Conduct (CoC) which outlines acceptable behavior for the workers and their role, including reference to GBV, SEA/SH.	M

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation Summary	Post-Mitigation Residual Impact
			C	L	Rating		
Community Health & Safety.	Local community.	Potential issues arising to local community as a result of construction activities in the vicinity of the works sites.	3	A	H	Contractor to consult with adjacent landowners prior to commencement of work on site, as directed by the SEP. Temporary signage and boundary fences are to be used to deter pedestrian access into construction areas, and inform the community of works activities, timing and the GM process. Contractor OHSP to include the requirement to educate all site staff on the prevention and treatment of communicable diseases including filariasis, dengue, zika, hepatitis, HIV/AIDS and Covid-19. All contractor site staff required to sign a Code of Conduct (CoC), as well as prepare a GBV Action Plan which outlines acceptable behavior for the workers and their role, including reference to GBV, SEA/SH.	M

Table 12-6: Outcome of Assessment of Key Operational Phase Risks Road Works

Activity	Source of Risk	Description of Potential Impact	Assessment of Risk			Mitigation	Post-Mitigation Residual Impact
			C	L	Rating		
1. Surface and Groundwater Quality							
Discharges from operational surfaces.	Surface waters and groundwater aquifers.	Introduction of road activity contaminants from operational surfaces. New pathways for contaminants, including refuse (e.g. trash, plastic bottles/bags, etc) to enter waterbodies.	3	A	H	Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g. catchpits), to prolong life of infrastructure.	L
2. Flooding							
Road flooding.	Road users and property owners.	Overflow of drainage systems due to poor maintenance affecting road users and property owners.	3	A	H	Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g. catchpits), to reduce the potential for site inundation (i.e. flooding) during extreme weather events, and prolong life of infrastructure.	L
3. Road Integrity							
Road Integrity.	Erosion .	Compromised road integrity due to water movement creating erosion issues as a result of upgrades / sealing of roads.	3	A	H	Regularly maintain and clear drainage channels, culverts and stormwater control features installed as part of construction phase (e.g. catchpits), to reduce the potential for site inundation (i.e. flooding) during extreme weather events, and minimize erosion risk.	L
4. Health and Safety							
Road Safety.	Road users and local community.	Increase in accidents relating to increased speeds on roads.	3	A	H	Evaluate potential for installation of traffic calming devices in villages and barriers on corners, speed signs, etc Consult with Police to enforce speed limits.	L

12.2 Environmental and Social Sensitivities Maps

To assist with identifying potential areas where impacts on environmental and social values may arise from the PRIME Project, data from primary (field investigations) and secondary sources (primarily GIS data) for a range of parameters including hazards (erosion and flooding), sensitive receptors and identified road corridor assets (described in Section 4.3)

have been mapped (see


Tafunsak Baptist Church
Tafusak
Kosrae International Airport
Okat
Walung
Utwa Ma
Utwa Elementary School
Source
PRIME Road
World Bank
Area of Biological Significance
Kosrae Island Resource Management Authority
Rivers/ Streams
Kosrae Island Resource Management Authority
Legend
Bridge (4)
Culvert or Crossing (95)
Private Fence (1)
Private Dwellin
Commercial Bu
Bridge (16)

Figure 12-1 to Figure 12-4). The information used in these maps is provided in Appendix B of the ESMF.

Identifying areas of environmental and social risk assists with the early screening of areas of potential concern from an environmental and social perspective. Based on key attributes outlined in **Error! Reference source not found.**, an assessment of level of sensitivity for each state has been undertaken (Table 12-8 to Table 12-11).

Figure 5-1 to Figure 5-4 identify areas considered to be of 'Medium' or 'High' environmental and social sensitivity depending on the nature of the works proposed. Note these locations are considered indicative only and require further investigation.

Where areas are identified as 'High' sensitivity, engineering design may be required (where appropriate) to avoid or minimize potential impacts. Potential impacts in relation to 'Medium' sensitivity areas can be managed through implementation of mitigation measures.

Table 12-7: Key environmental and social attributes enabling assessment of level of sensitivity

Sensitivities	High	Medium
a. Higher density of important assets (e.g. residential houses, businesses, fences walls, fruit trees, etc) located in road easement. b. Watercourse / culvert upstream of biologically significant CMA area. c. Erosion / flood risk hazard zone. d. Populated area.	2 or 3 of the 4 attributes required	1 of the 4 attributes required
Notes:	*Further investigation required to confirm potential impacts. Risks to be aware of rather than necessary limit works from proceeding.*	*Impacts can be managed through suitable engineering design.*

Table 12-8: 'High' sensitivity areas - Kosrae

Box No.	E&S Sensitivity
1, 9, 10	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets.

2, 3	Watercourse / culvert / bridge upstream or in biologically significant area; Important assets.
3	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone.
4	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Populated area.
5, 6, 7, 8	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets; Populated area.
11	Erosion / flood risk hazard zone; Important assets; Populated area.

Table 12-9: 'High' sensitivity areas - Pohnpei

Box No.	E&S Sensitivity
1, 11, 16	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets.
2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 19	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone.
11,	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets.
13	Erosion / flood risk hazard zone; Important assets.
16	Watercourse / culvert / bridge upstream or in biologically significant area; Important assets.

Table 12-10: 'High' sensitivity areas - Chuuk

Box No.	E&S Sensitivity
1, 2, 3, 4, 5	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets.
5, 6	Erosion / flood risk hazard zone; Important assets.

Table 12-11: 'High' sensitivity areas - Yap

Box No.	E&S Sensitivity
1 - 8	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone.
9	Watercourse / culvert / bridge upstream or in biologically significant area; Erosion / flood risk hazard zone; Important assets.

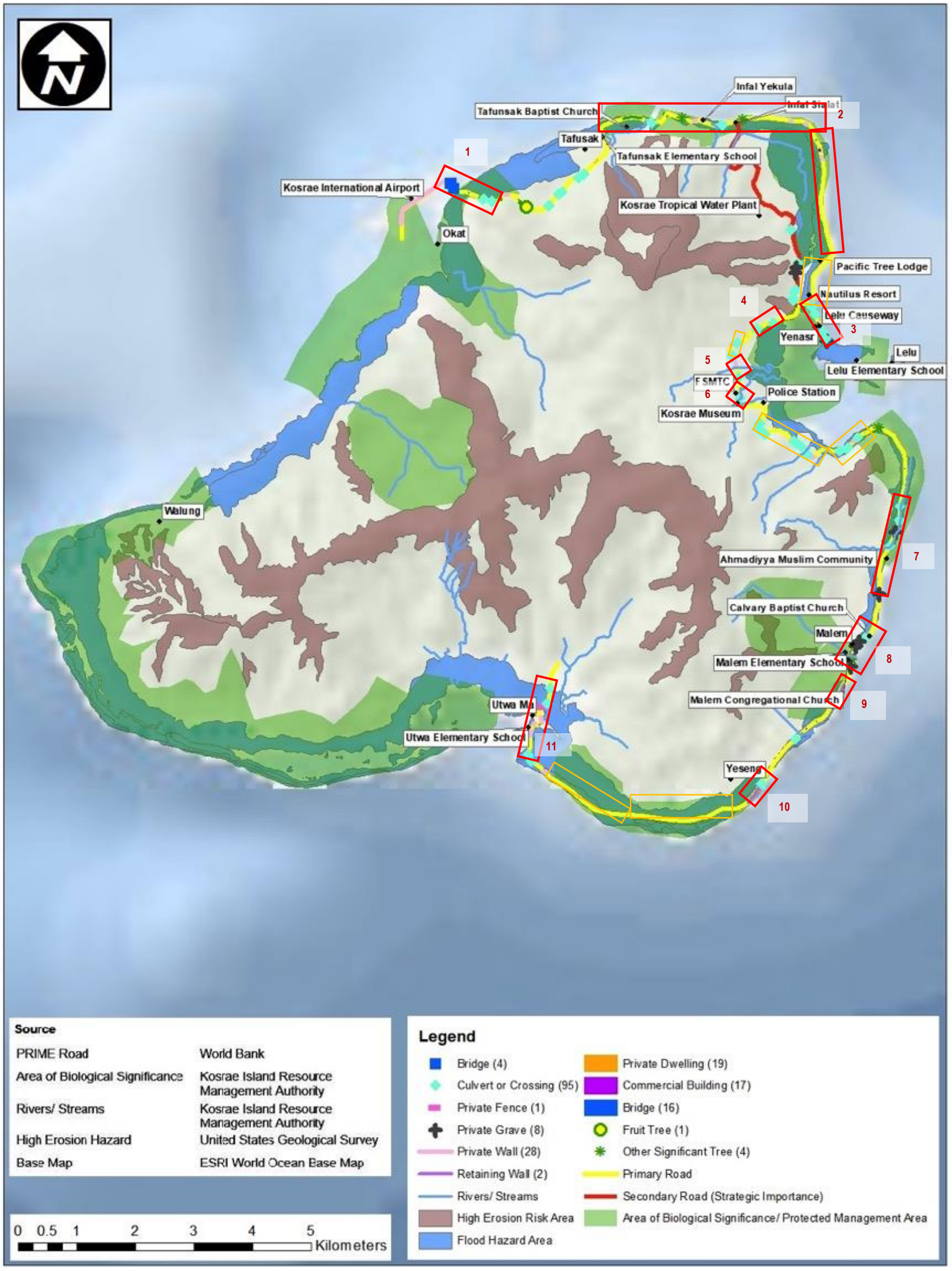

Figure 12-1: Key E&S sensitivities on Primary Road network – Kosrae (showing 'high' (red box) and 'medium' (orange box) sensitivities)

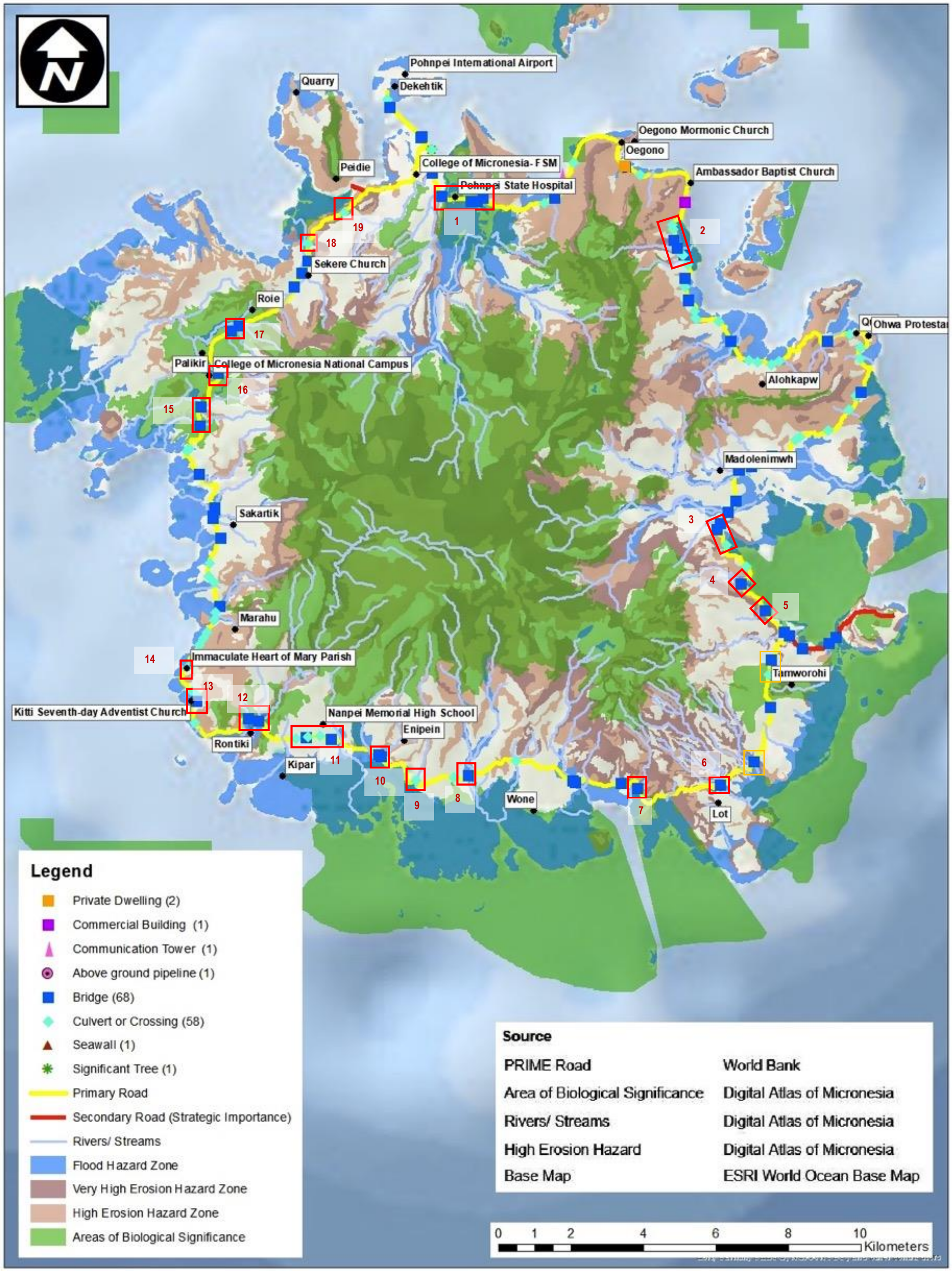

Figure 12-2: Key E&S sensitivities on Primary Road network – Pohnpei (showing 'high' (red box) and 'medium' (orange box) sensitivities).

Figure 12-3: Key E&S sensitivities on Primary Road network – Chuuk (showing 'high' (red box) and 'medium' (orange box) sensitivities).

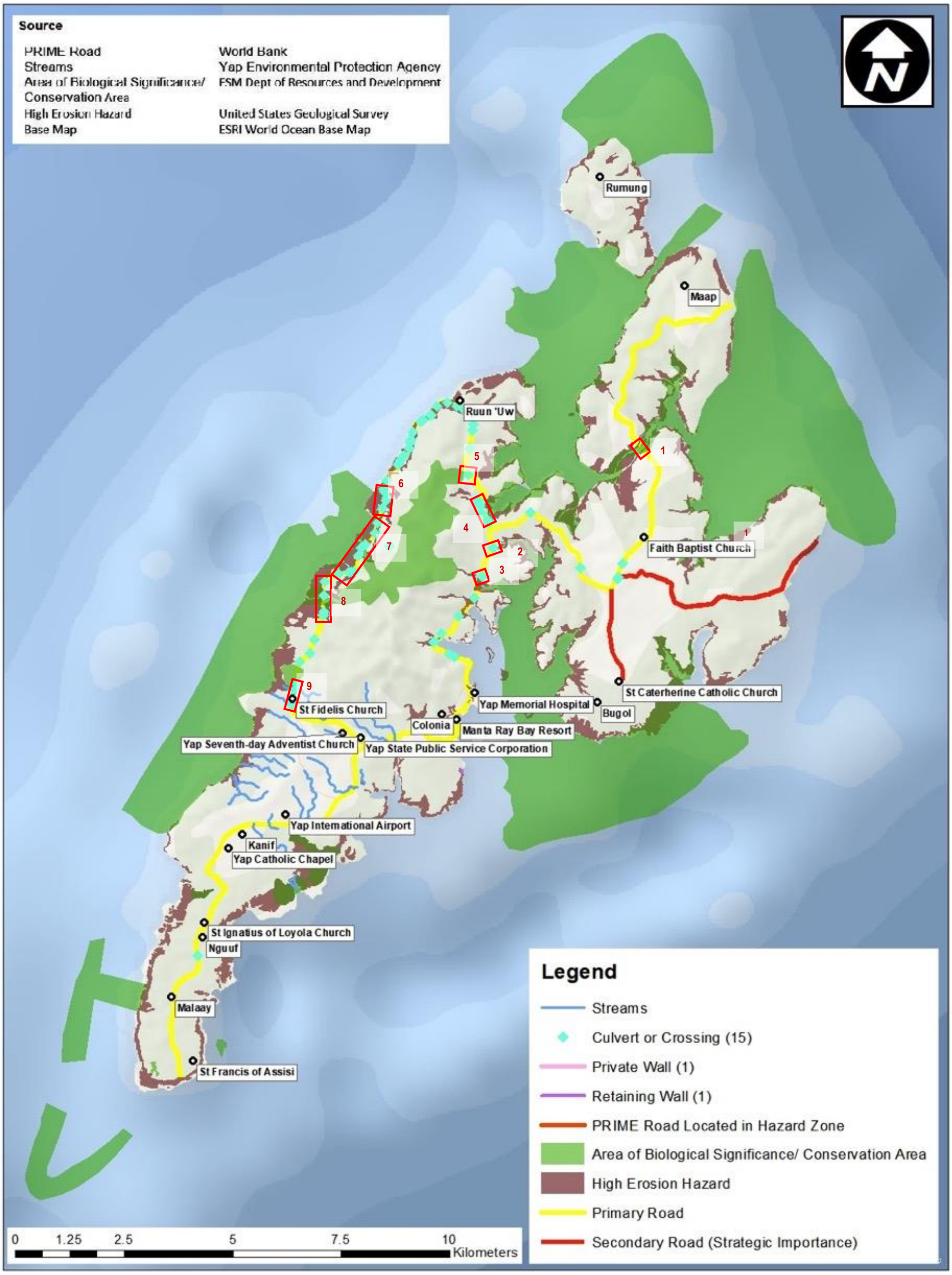

Figure 12-4: Key E&S sensitivities on Primary Road network – Yap (showing ‘high’ (red box) and ‘medium’ (orange box) sensitivities).

Appendix C Contractors Environmental and Social Management Plan Outline and Guide.

Contractor Environmental and Social Management Plan Outline and Guide

When preparing and implementing CESMP, Contractors must comply with the bid documents, PRIME Generic ESMP, PRIME Labor Management Procedures (including occupational health and safety procedures), PRIME Resettlement Framework, World Bank Environmental and Social Standards, World Bank Group Environmental, Health and Safety Guidelines, Federal and State laws and policies and associated guidance documents. The outlines provided below are a guide only, and in some cases provide only the minimum requirements.

1 CESMP Management Framework

The Contractor shall provide a framework which covers the following:

(i) Contractor's EHS policies;
(ii) Details of the road works including a schedule of activities and key milestones and maps/diagrams of work areas;
(iii) Roles and responsibilities for site management and EHS management;
(iv) EHS risk register and process for managing the register;
(v) Legislation register (including standards and other EHS performance or compliance criteria) and process for managing the register;
(vi) Monitoring plan and auditing and reporting processes (this must include specific monitoring actions and indicators for each of the plans listed below);
(vii) Incident management procedures;
(viii) CESMP update procedures;
(ix) Workforce management – recruitment, training, grievances; and
(x) Grievance management processes;

2 Erosion and Sediment Control Plan

2.1 Objectives

Management of erosion and sedimentation at the Project site is based on the following objectives:

- Minimize loss of sediment from areas disturbed by the PRIME Project;
- Reduce the requirement for passive or active treatment of site runoff containing elevated sediment levels; and
- Minimize impacts on downstream water uses and environmental values due to increased stream sediment loads.

2.2 Strategy

The Contractor shall ensure that erosion and sediment controls are implemented effectively. The strategy for managing erosion and sedimentation is to be detailed in a Contractors Erosion and Sediment Control Plan (ESCP) and is to incorporate the following components:

- Minimization of disturbed land areas and rehabilitation;
- Stabilization of disturbed areas;
- Drainage control;
- Managing stockpiles;
- Road, bridge, causeway and related construction; and
- Maintenance and monitoring.

Specific measures to be include:

(i) Effective stormwater management shall be engineered to divert clean water away from construction areas and stockpiles and divert contaminated runoff to sediment treatment and control devices (e.g., sediment traps) prior to discharge (if required);

(ii) Where possible, divert clean, or treated stormwater should be discharged to ground rather than direct to water bodies;

(iii) Adjacent properties shall not be used to receive sediment laden stormwater from the works site;

(iv) Excavations that expose soil, including vegetation stripping, shall be minimized during periods of wet weather (i.e., wet season);

(v) Stockpiles are to be located and appropriately contained (i.e., bunded) to prevent discharge of sediment;

(vi) In areas of soil disturbance, the Contractor shall upon completion of the works compact, reseed, revegetate and/or stabilize (with coconut matting, geotextile or similar) to minimize the uncontrolled discharge of sediment-laden stormwater;

(vii) Stormwater flows must not be allowed to run onto or over exposed slopes or saturate ground as to erode the near surface soils;

(viii) Excavation of slopes to be carried out to the satisfaction of the PIU and in accordance to design specifications;

(ix) Silt curtains shall be installed during works associated with freshwater and marine systems for all projects associated with these habitats and where sediment may be released from project areas;

(x) In-stream and coastal margin works shall be minimized; and

(xi) Support PIU State Focal Point (under supervision of CIU safeguards Team) weekly visual assessments of watercourses in the vicinity of the works during construction, for any observable changes in suspended solids or oil/grease downstream of works).

3 Surface Water and Groundwater Management Plan

3.1 Objectives

The objectives for management of solid and liquid waste material at the Project site are to:

- Ensure that the quality of water downstream of the works site complies with legislative, licensing and financing commitments;
- Minimize impacts on downstream water uses and environmental values; and
- Maximize environmental benefits of clean water by diverting surface runoff away from areas of disturbance.

3.2 Strategy

3.2.1 Introduction

One of the important water management strategies for the Contractor is to separate clean water from contaminated water that may require treatment. Accordingly, it is essential to establish separate 'clean' and 'contaminated' water management systems as follows:

- Clean surface runoff from undisturbed areas upslope of works site and associated infrastructure (i.e., stockpiles, laydown areas etc) is intercepted by diversion channels and directed away from disturbed areas and back into natural drainage lines. 'Clean' water is defined as any surface or groundwater that is unaffected by Project operations; and
- Dirty water is to be collected, contained and, if necessary, treated prior to being released to the environment. 'Dirty' water is defined as surface or groundwater that has come into contact with working areas of the works and therefore has the potential to become contaminated.

The design of clean and dirty water diversion channels, water retention basins and passive or active water treatment systems, will take into account the following issues:

- The need to avoid contamination of new catchments, where possible, and to minimize cross-catchment activities and water flows;
- The required flow and storage capacity of diversion channels and water/sediment retention basins, based on catchment size, appropriate hydrological design criteria, and required retention times for sediment settling;
- Potential need for passive and active treatment of contaminated water; and
- Requirements for erosion protection measures (e.g., rock armouring, grassing etc).

Water management structures will be regularly maintained (e.g., de-silting). Facility inspections will include assessment of the maintenance and stability of water management structures, as well as the overall effectiveness of these structures.

3.2.2 Discharge Authorization of Potentially Contaminated Water

The Contractor shall obtain authorization from the PIU and EPA/KIRMA prior to any discharge of any potentially contaminated (i.e., sediment laden) waters from the works site.

Authorization will only be given when it has been demonstrated that the water quality complies with discharge guidelines set out by the EPA/KIRMA to protect downstream water resource use and environmental values.

The Contractor is to regularly monitor passive discharges to the environment from its water management structures. These structures will be designed and operated such that under normal operating conditions they will achieve the same discharge criteria as active discharges at least 95% of the time.

3.2.3 Drainage Management

Any clean surface run-off upslope of the works site and associated infrastructure (such as laydown areas and stockpiles) will be intercepted by diversion channels and directed away from disturbed areas and back into natural drainage lines. Clean water diversion drains will also be installed where there is significant undisturbed catchment areas up-gradient of other works infrastructure including soil stockpiles prior to the commencement of construction.

Cut-off drains will be used to collect contaminated water runoff from works areas during construction.

All fuel storage areas will be bunded as the primary means of spill containment. Bunds will be designed according to relevant international standards and will have sufficient capacity to contain at least 110% of the fuel storage containers' maximum capacity.

Surface water management features such as diversion bunds and drains will be checked on a regular basis to ensure they are working effectively.

Contaminated water collected at the base of stockpiles will be directed into water storages or sediment traps to allow for settlement of suspended material, and to enable passive or active treatment, if necessary, prior to reuse.

4 Waste Minimization and Management Plan

4.1 Objectives

The objectives for management of solid and liquid waste material at the Project site are to:

- Reduce potential health and environmental risks associated with any waste generation and disposal; and
- Maximize recycling of solid and liquid waste materials generated on site.

4.2 Strategy

4.2.1 Introduction

The Waste Minimization and Management Plan will provide detailed procedures for the management of solid and liquid waste.

The waste management procedures for the Project will be based on the following hierarchy (in decreasing order of preference):

i. Minimize the production of waste.

ii. Maximize waste recycling and reuse.

iii. Treatment of waste.

iv. Ensure safe waste disposal.

The Contractor will be responsible for developing and implementing the Waste Management and Minimization Plan.

Regular inspections will be conducted to monitor the success of waste management according to key performance indicators.

A waste inventory will be developed by the Contractor that includes the sources and quantities of all major waste types (including non-hazardous / hazardous solid and liquid wastes) and the relative proportions of each waste type that are recycled, reused, disposed of or temporarily stored on site.

Large volumes of road materials and material generated from the demolition and removal of causeways, bridges and culverts (i.e., concrete, asphalt, hard fill, rebar, etc.) will be generated. The management of this waste based on the hierarchy of waste management outlined above are required to be undertaken to ensure objectives are achieved.

4.2.2 Waste Reduction

The first priority for the management of Project wastes will be to reduce the volume of waste generated. This will be achieved by:

- Procuring supplies that produce less waste by virtue of the way they are produced, packaged or consumed;
- Procuring supplies that have been produced from recycled materials, if possible; and
- Maximizing the efficiency of all on site production processes.

In addition, non-hazardous materials will be used in preference to hazardous materials wherever possible.

4.2.3 Recycling and Reuse

Waste will be segregated into different types at the location where they are generated to:

- Maximize the recovery of recyclables;
- Minimize the contamination of recyclable materials; and
- Minimize the requirement for sorting mixed waste streams.

Solid waste will be segregated into four categories as follows:

- Biodegradable materials – vegetation and food scraps;
- Recyclable materials such as plastic; glass; metal; paper and cardboard, where available;
- Non-hazardous residual waste/cleanfill/concrete etc.; and
- Hazardous waste.

4.2.4 Segregation, Collection and Handling of Recyclable Materials

Clearly labelled, color-coded bins will be placed at designated locations (i.e., at points of waste generation) for temporary storage of segregated material, including recyclable materials. Separate containment bins, or areas, shall be provided for glass, recyclable plastics, metals, paper, processed timber, demolition waste and cleanfill waste.

To maintain sanitary conditions, materials to be temporarily stored for reuse or recycling will be covered, emptied and cleaned of residue waste.

Recyclable and reusable waste will be transported and disposed of weekly by the Contractor at the relevant State permitted waste management facility. Bin placement and collection schedule will be reviewed during for the duration of works and, if necessary, altered to reflect emerging waste generation patterns.

4.2.5 Waste Disposal

Any non-hazardous residue waste that cannot be reused or recycled will be deposited in clearly marked, general litter bins. Waste from these bins will be transported and disposed of weekly by the Contractor at the relevant State permitted waste disposal facility. Apart from fuel and oils on the site the requirement to cater for other hazardous waste is not anticipated.

The Contractor will implement an education campaign for staff to minimize the generation of litter and actively encourage the clean-up of litter within the Project Area and nearby receiving environment.

4.2.6 Residue Waste Landfill (non-biodegradable)

A landfill should be identified and used for the disposal of non-biodegradable waste. This landfill must have the necessary State EPA/KIRMA Permits in place.

4.2.7 Hazardous Waste

Hazardous substances will be acquired, handled and stored in accordance with national and state legislation. Any disposal of hazardous waste will be undertaken in a manner that ensures that any long-term risk to employees, contractors, the local community and environment, is minimized.

If disposal of hazardous waste is unavoidable, disposal is in accordance with the material safety data sheets. If burial of hazardous waste is unavoidable, it is buried in a designated appropriately permitted waste landfill to minimize the long-term risk of contaminant escape, or removed from the island.

The following hazardous materials management procedures and systems should be followed:

- A Waste Inventory should be implemented by the contractor. The inventory includes the sources and quantities of all major waste types (including non-hazardous / hazardous solid and liquid wastes) and the relative proportions of each waste type that will be recycled, reused, disposed, or temporarily stored on site.
- All hazardous materials requiring offsite disposal or special handing should be dealt with on a case-by-case basis and detailed in the waste inventory.
- A Waste Management Action Plan should be developed by the contractor.
- Provision of protective equipment (i.e., gloves, plastic coveralls, safety glasses and self-contained respirators).
- Clearly labelled and displayed 'Material Safety Data Sheets' for all hazardous materials.
- Comprehensive training regarding emergency response and the handling, storage and use of hazardous materials.
- Development of emergency response procedures.

Note: The classification, packaging, labelling and safe transport of hazardous goods will be the responsibility of manufacturers, suppliers and transport contractors.

4.2.8 Wastewater Management and Treatment

Transportable toilet facilities will be provided for use by Workers removing the need for treating and discharging waste from Project sites.

5 Spill Management Plan

5.1 Objectives

The objectives of the Spill Management Plan (SMP) are:

- Avoid spills through the safe storage, management and disposal of hazardous substances;
- Minimize the impact of hazardous substances spills on the local community and the environment by managing the response to any spill; and
- To prevent or mitigate[11] spills from entering the freshwater or coastal marine environment.

5.2 Strategy

Hazardous materials may pose environmental risk depending on the chemical constituents, size and the location of the spill. Spill management broadly covers the management of a range of hazardous liquids including fuel, oil, wastewater and chemicals. Spill ratings definitions fall within the following categories:

- **Store, use and dispose** of all hazardous materials as per the Material Safety Data Sheets, local laws, World Bank EHS Guidelines and other Good International Industry Practices (procedures will be documented in detail in the WMMP);
- **Contained within initial protection area** (i.e., all spills contained by bund or drainage control);
- **Contained within Project works area** (i.e., all spills that occur away from fixed spill containment structures such as bunds but within the works area);
- **Offsite spill** (i.e., all spills that originate from activities within the Project footprint; and
- **Non-compliance discharge** (i.e., all spills that originate from within the Project area and escape this area. Examples include all spills that affect the river environment or flow down creeks beyond Project areas, spillage from a truck during transport etc).

Spill Response Procedure are to be prepared for the works site (refer Table 11-1).

Table 5-1: Spill procedures

Procedure	Performance Indicator	Responsibility
Specific procedures to be developed and implemented for leaks and spills involving: • Oils and Hydrocarbons; • Strong Acids; • Caustic Soda; • Other Chemicals; and • Breach of Environmental Standards.	Clear response defined for categories of spill.	Contractor Management.

[11] Mitigation for activities with a higher than low risk rating

All Contractor staff involved in the handling of fuel must be trained in spill and emergency procedures. Management must organize suitable training. Evidence of training should be held on site for inspection / auditing purposes. Site personnel to familiarize themselves with the procedure and necessary actions shall be included in staff training undertaken by the Contractor.	All staff trained. Clear and ready access reference to training records of all Contractor staff.	Contractor Management.
Spill response to be sub-divided into two response categories: • Simple spills of benign chemicals that can be managed immediately by the person present on site (these do not constitute an environmental emergency); and • More complex spills that may require additional resources or specialist skills for containment and rehabilitation.	Clear delineation of spill response categories for action and escalation as necessary.	Contractor Management.
Spill kits available and designed for fuel spills. Spill kits stored adjacent to fuel storage areas and high risk spill areas. Staff trained in use of spill kits.	Spill kits available and located where necessary.	Contractor Management.
Immediately contain any spill to prevent contamination of soils and waterways. Immediately inform Management of spill. PIU, CIU and EPA/KIRMA to be notified within 24 hours of a spill event.	Incident reporting has occurred. Spill has been contained as far as practicable to minimise environmental risk.	Contractor Site Manager.
Remove contaminated material and dispose off-site in accordance with advice from CIU E&S Safeguards Team or EPA/KIRMA.	No contaminated material remains on site.	Contractor Management.

Spill kits should consist of at least the following items:

- Oil absorbent pads;
- Loose absorbent material such as sand;
- Sand, sandbags to create a temporary bund;
- Oil spill boom and additional oil removal equipment;
- Appropriate personal protective equipment;
- A laminated copy of the Accidental and Emergency Spill Response Procedure; and
- Shovels and other general site equipment may also be used in case of an emergency.

6 Traffic and Road Safety Management Plan

6.1 Objectives

The objectives of the Traffic and Road Safety Management Plan (TMP) are:

- Minimize the impact of Project traffic and construction road easements on the health and safety of workers and the local community, and the environment;
- Keep workers safe while working near traffic and keeping the public safe from physical works in public space; and
- Minimize adverse impacts of increased or decreased accessibility associated with project development on local communities and the environment (i.e., road access or usage).

6.2 Strategy

6.2.1 Traffic Management and Road Accidents

Prior to mobilizing to site, the contractor will prepare a *Traffic and Road Safety Management Plan* in consultation with PIU/DoTC&I/CIU Safeguard Team to ensure community safety, occupational safety and environmental risks associated with Project works, project traffic, transportation and pedestrians are minimized.

General management and mitigation measures to minimize community safety risks associated with road works should be implemented. While there will always be a risk of accidents; strong management will ensure that such risks are minimized.

Key measures to be undertaken to ensure that traffic issues are well managed and risks are minimized include:

- Consultation with DoTC&I and State representative agencies in preparing TMP, including:
    - Kosrae Department of Transport and Infrastructure (DoT&I);
    - Pohnpei State Office of Transport and Infrastructure (T&I);
    - Chuuk State Department of Transport and Public Works (DoT&PW); and
    - Yap State Department of Public Works and Transportation (DoPW&T).
- Deploy general road safety measures where appropriate such as having trained workers directing traffic, managed traffic diversions, deployment of physical barriers and cones as necessary, lighting at intersections and signage such as advisory speed signs;
- Incorporation of speed reduction zones near project areas;
- Impose speed limits of no more than 20 miles per hour for vehicles travelling through the construction site;
- Management of controlled crossing points for pedestrians and vehicles;
- Construction activities to be restricted to relevant State working hour requirements on Monday through Saturday with no construction activities taking place on Sunday

or public holidays, without prior approval of State government agencies, traditional leaders and the community;

- Regular consultation with roadside residents during operational phases to advise of any upcoming restrictions/delays or advise of mitigation measures and any necessary improvements;
- Implementation of strict speed limits by project vehicles in settlement areas;
- Project vehicles to be equipped with warning lights to ensure high visibility to other road users;
- Strong enforcement of Project regulations regarding drug and alcohol use and levels of fatigue while driving Project vehicles; and
- Implementation of grievance mechanism during the Project to ensure that issues or concerns of local communities can be identified and addressed.

6.2.2 Health and Livelihood Impacts on Communities

Key measures to minimize health and livelihood impacts include:

- Lower speed limits to be maintained by Project vehicles in settlements and other densely populated areas; and
- Clear signage around work areas including use of cones, barriers around sites, etc.

6.2.3 Dust and Noise

Potential air quality impacts can largely be mitigated with careful management of equipment operators (contractors) and maintenance of equipment.

Key measures to minimize potential air quality impacts during Construction include:

- Spraying water on exposed surfaces to minimize dust generation where necessary. If ongoing nuisance dust issues occur for local communities, laying gravel or sealing the road in the vicinity of settlement areas should also be considered.

Key measures to minimize potential noise impacts associated with access roads during Construction include:

- Ensuring Project vehicles are fitted with secure dust covers and are regularly maintained to reduce roadside engine emissions.

7 Social Interaction Plan

This plan may be integrated into the Community Health and Safety Plan.

7.1 Objectives

The objective of the Social Interaction Plan (SIP) is to:

- Minimize the impact of labor on the local community and the environment by managing how the workforce interacts with local people.

7.2 Strategy

If not suitably managed, importing labor for the Construction workforce can result in a range of impacts including on the following:

i. Environment (e.g., increased pressure on existing natural resources);

ii. Economy and livelihoods (e.g., inflation pressures, exacerbate vulnerability of marginal groups, etc);

iii. Infrastructure, services and health pressures (e.g. (potential increases in violence, alcohol / drug consumption, diseases, etc); and

iv. Social and community wellbeing.

A SIP is to be prepared which outlines the following:

- Site workers induction and weekly toolbox meetings on local culture, tradition, custom and expectations of local communities;
- Rules regarding alcohol and drug use;
- Appropriate interaction of workers with the local community;
- Direct and contracted workers required to sign a Code of Conduct (CoC)[12] which outlines acceptable behavior for the workers and their role, including reference to Gender Based Violence (GBV), Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH);
- Workers to be educated on the prevention and treatment of communicable diseases including filariasis, dengue, zika, hepatitis, HIV/AIDS and Covid-19;
- Transparency and open communication with the communities on issues that affect them; and
- Establish requirement for stakeholder committee (s), where future work plans, site requirements, labor and material requirements and problems are discussed.

Any labor related grievances from the community to be addressed through the Project GM and complaints register (refer Appendix F of the Generic ESMP).

Training and awareness of all staff and contractors on the Project GM, Labor GM and SIP is to be undertaken by the Contractor during induction and through the Project (e.g., weekly toolbox meetings) as necessary.

[12] Refer Appendix C of the Project LMP.

8 Emergency Management and Response Plan

8.1 Objectives

The objective of emergency response management for the Project is to:

- Ensure that Emergency Response procedures are established that can be rapidly implemented in the event of an environmental, health, social, security or natural hazard emergency.

8.2 Strategy

8.2.1 Introduction

Key procedures for preparing for, and responding to, accidental events and natural hazards should include (but not be limited to):

- Emergency Response Procedures;
- Incident Reporting Procedure; and
- Crisis and Emergency Management Standard.

8.2.2 Assessment of Risk

Regular environmental risk assessment will be undertaken to review potential environmental emergency situations that may arise. The methodology to be used for the periodic risk assessments will be consistent that outline in Generic ESMP (Annex B). External stakeholders, such as the local government authorities, may also be involved or notified in relation to emergency response implementation depending upon the severity of an environmental incident.

Determination of whether an incident is classified as an Emergency is based on the environmental risk assessment. For an incident classified as an emergency, the following procedures will be followed. Any unforeseen environmental incident overlooked during the environmental risk assessment will be treated as an emergency situation until the Contractor management and/or PIU advises otherwise.

8.2.3 Prioritization of Response

Emergency response to an environmental incident prioritizes the actions undertaken according to the following sequence:

- Protection and rescue of human life;
- Minimization of the area impacted by the incident;
- Protection of the environment, plant and property;
- Rendering the area safe in which the emergency has occurred;
- Restoration of all disrupted services; and
- Decontamination and rehabilitation of the incident scene and surrounding area.

Depending upon the severity of an environmental incident, emergency response may also involve using the services of, or notifying, the following groups:

- Police;
- Ambulance;
- Department of Transport, Communication and Infrastructure (and/or State representative authorities;
- EPA/KIRMA;
- State and Municipal Government;
- Community leaders (such as Council of Chiefs); and
- Others likely to be affected (e.g., local communities, downstream water users etc).

8.2.4 Fire

The fire risk from the works is considered minimal, however fire may originate from other sources (including both natural and human sources), but threaten the works site. Potential environmental impacts may include breakout of fire into surrounding vegetation, as well as release of significant quantities of air pollutants and contaminated runoff from burnt areas. Management and mitigation measures to minimize the risks associated with fire will generally include:

- Adoption of mitigation measures including all fuel shall be stored in a bunded container away from machinery and other sources of ignition and fire extinguishers and/or a water pump to be kept on site;
- Development of detailed firefighting procedures, fire fighter training, emergency drills, first aid/evacuation, and systems for warning Local Government;
- Provision of induction sessions to Project employees on fire hazard to provide a basic understanding of fire awareness, measures to prevent accidental fires and the importance of reducing the risk of accidental fire for both safety and the protection of adjacent lands;
- Fire equipment adequate for the level of risk identified for the various facilities, which are regularly maintained and tested to ensure good working order;
- Adequate water supplies for use in the case of fire will be established in critical areas;
- Earthing and lightning protection will be installed to structures vulnerable to lightning strike; and
- Storage and handling of all substances under conditions which minimize the risk of fire or toxic emissions.

8.2.5 Flooding and Storm/Typhoon Damage

Flooding and storm events (including Typhoons) have the potential to impact the Project works area (e.g., traffic accident, power interruption).

A flood risk may exist for the works areas, and transport routes, depending on its location and proximity to the coast.

Rainfall intensities can also be relatively high in FSM. High rainfall intensities have the potential to create a flood risk, particularly in low-lying areas where transport routes and

other infrastructure may be located. Even minor flooding within these low-lying areas may have significant impacts on Project infrastructure.

Based on the works area landform and local flood risks, the Contractor shall give consideration to flow diversion options during project planning and construction phases.

8.2.6 Unexploded Ordinance (UXO)

Unexploded Ordinance (UXO) are known to exist in FSM as a result of military actions throughout the Pacific during World War II from 1942-1945. While many of the UXO's have been cleared there is a chance some may still remained undiscovered.

Given the works to be implemented under the PRIME Project are largely within existing road corridors that had been constructed and maintained since that time (typically 1970s onwards), the chance of workers encountering UXO's as part of this Project is low.

However, mechanisms for identifying and reporting UXO's should be included as part of the OHS procedures. In the event that a temporary road, bridge or causeway alignment is required an assessment for UXO risk should be undertaken, and a UXO clearance team may be required.

8.2.7 Communicable Diseases, including Covid-19

The Contractor OHS Procedures shall include the requirement to educate all site staff on the prevention and treatment of communicable diseases including filariasis, dengue, zika, hepatitis, HIV/AIDS and Covid-19 (refer Project OHS procedures in Appendix B of the LMP).

The Contractor and all workers (including imported labor) associated with the Project are to comply to FSM National and State Covid-19 health and safety management plans, and international WHO standards, and include Covid-19 provision in the OHS Procedures (including travel restrictions for staff/workers returning home).

9 Community Health and Safety Plan

This plan may be combined with the SIP.

9.1 Objectives

Management of Project Community Health and Safety will be based on the following objective:

- To prevent and/or minimize any negative health or safety impacts on the community arising from the Project.

9.2 Strategy

Management and mitigation of health impacts in accordance with GoFSM policies and regulations and include the following components outlined below.

9.2.1 Community Health and Safety

Various measures will be implemented during pre-construction, construction and operation phases to minimize Project impacts on community health and safety. These include:

- Using key standards and OHS and safety procedures;
- Implement traffic safety, noise and dust mitigation measures; and
- Access to the laydown areas / active work areas will be restricted by the presence of security.

9.2.2 Air Quality

Various measures will be implemented during the construction phase to minimize Project impacts relating to a potential deterioration in air quality. These include:

(i) Trained manager on site during working hours to manage dust generating activities and mitigate risk of adverse impacts;

(ii) Construction vehicles shall be regularly serviced and maintained to industry standard to prevent the emission of visible particulates;

(iii) The number and size of stockpiles shall be minimized, and have appropriate containment to prevent dust and sediment laden stormwater discharges;

(iv) Dust suppression (i.e. a water cart, or similar) shall be used to dampen active work areas and stockpiles in dry conditions;

(v) Washing vehicle tires and sweeping the road (as required) to prevent the spread of soil and dust outside of the works area;

(vi) No fires on site; and

(vii) Reinstatement of exposed areas within one (1) month of completion of works.

9.2.3 Noise

Various measures will be implemented during the construction phase to minimize Project impacts relating to a potential deterioration in noise quality. These include:

(i) The Contractor shall ensure noise attenuation is in accordance with the provisions of WHO/WB EHS noise level guidelines[13];

(ii) The local community will be informed of upcoming works (including maps, dates and times of operation) through meetings with the local community and the installation of signage, one month prior to commencement;

(iii) Construction activities shall be restricted to relevant State working hour requirements on Monday through Saturday with no construction activities taking place on Sunday or public holidays, without prior approval of State government agencies and the Contractor and with the agreement of stakeholders;

(iv) Construction equipment and vehicles will be regularly maintained shall be provided with muffler silencers;

(v) Reduced speed limits of no more than 20 miles per hour shall be imposed for vehicles travelling through the construction site – this will reduce noise; and

(vi) Track, monitor and investigate complaints through the Project GM.

9.2.4 Communicable Diseases

The Contractor must provide procedures for avoiding the spread of communicable diseases between workers and the community, including HIV/Aids and COVID-19. Including training/awareness raising programs, testing, first aid and other medical treatment and preparedness, and actions to isolate workers and exit the site if an outbreak occurs.

[13] WHO 1999. Guidelines values are for noise levels measured out of doors. Source: Guidelines for Community Noise, World Health Organization

10 Subcontractor Management Plan

10.1 Objectives

The objective of the Subcontractor EHS Management Plan(s) is to:

- Detail the relationship between the Contractor/s in the PRIME Project and the methods by which the PRIME Contractor, will assure the production of quality deliverables from each of its subcontractors and assure environmental, social and health and safety risk mitigation measures are implemented by all parties.

10.2 Strategy

The approach to managing the subcontractors in regard to EHS management is based on the following guiding principles:

a. Effective channels of communications clearly defined and established;

b. A Statement of Work relating to EHS management responsibilities will be developed jointly by the Prime Contractor with each subcontractor;

c. Each subcontractor will have its responsibilities and authorities clearly defined in the Statement of Work;

d. Each subcontractor will have the its EHS responsibilities clearly identified and described in the Statement of Work;

e. All EHS constraints imposed on the subcontractor will be clearly identified in the Statement of Work;

f. Each subcontract will contain appropriate terms and conditions relating to EHS management;

g. Subcontractors will clearly identify persons responsible for EHS management in their organization;

h. Each subcontractor organization will have a single point of contact with the prime contractor for EHS matters. The subcontractors are expected to identify their own single point of contact for EHS matters;

i. Where a significant risk of child labor or forced labor is identified in relation to subcontractor's operations, the subcontractor will be required to identify those risks, and shall set out steps to remedy those risks; and

j. The PRIME Contractor must be kept aware of any EHS, child labor or forced labor issues arising.

Training and awareness of all staff and contractors on the Project GM, Labor GM and relevant EHS Subcontractor Management Plan is to be undertaken by the Prime Contractor during induction and through the Project (e.g., weekly toolbox meetings) as necessary.

11 Monitoring Plan

11.1 Objectives

Monitoring by the Contractor under the PRIME Project the objective of verifying that project environmental, health, safety and social impact mitigation measures are being deployed and are working effectively.

11.2 Strategy

- The inspection of control measures, measurements, interviews and monitoring of impacts are required on a timely and regular basis to ensure they continue to work and that performance standards are not breached.
- Suggested frequency of inspections and monitoring are outlined below, as are check sheets covering what to look for during inspections, maintenance actions and monitoring of impacts.
- If inspections identify areas of non-compliance or improvement you will be advised either verbally or in writing by either the CIU safeguards representative, or if applicable, via a notice to Contractor prepared by the Project Engineer.

11.3 Minimum Inspection Requirements

- The Contractor is to propose monitoring and reporting processes for all impacts. The minimum inspection requirements are outlined in Table 11-1 below.

Table 11-1: Minimum Inspection Requirements.

Action	Frequency	Purpose
Inspection sheets must be completed by the Contractor and provided to the CIU safeguards representative.	At least once a week.	Keep PIU up to date with EHS management onsite.
The Contractor will support the CIU safeguards representative during site inspections.	At least once a month.	Demonstrate compliance with the CESMP and identify areas where improvements can be made or repairs and maintenance are needed. To follow up on previous actions/improvements.
Meetings on site to discuss the results of the weekly inspection and monthly audit with staff and sub-contractors.	At least once a week.	Keep staff and sub-contractors up to date with EHS management onsite and provide opportunity for them to raise issues/ areas for improvement.

11.4 Example Monitoring Plans

The Contractor shall provide monitoring plans for all management plans and significant environmental, health, safety and social risks and impacts. The plans below are examples only, for the purpose of guidance, and are *minimum requirements'* expected for monitoring.

11.4.1 Erosion and Sediment Control

The inspection of erosion and sediment control measures and monitoring of discharge points are required on a regular basis and either side of rainfall events to ensure they continue to work and that performance standards are not breached. Frequency of inspections and monitoring are outlined in Table 11-2 below.

Table 11-2: Erosion and Sediment Control check sheet.

Work Phase	Frequency	Monitoring Actions
Surface is exposed and site is changing frequently.	• Daily. • Before expected rainfall event. • After rainfall event greater than 20 mm/24 hr.	• Inspect all control/mitigation structures (sediment curtain and sump protection are secured in place). • Check discharge points meet performance standards. • Once a week – fill in inspection sheet.
Surface is exposed but not changing.	• Daily. • Before expected rainfall event. • After rainfall event greater than 20 mm/24 hr.	• Inspect all structures and fill in inspection sheet. (culverts clear of debris, structural integrity of control measures is sound, all-weather access to measures is maintained). • Check discharge points meet performance standards.
After stabilisation if vegetation has been used.	• Weekly. • After rainfall event greater than 20 mm. • After vegetation has been established, 3 monthly.	• Inspect whether surface remains stabilized (80% coverage is maintained if vegetated).

A check sheet covering what to look for during inspections, maintenance actions and monitoring of discharge points are provided in Section 12.2.5 below. This should be adapted to each site.

Once a week the inspection sheet must be completed and provided to the CIU safeguards representative. Once a month the Contractor accompany the CIU safeguards representative during the site inspection. The purpose of the inspection is to demonstrate compliance with the CEMP and identify areas where improvements can be made or repairs and maintenance are needed. It is also to follow up on previous actions/ improvements.

A regular meeting will be held on site by the Contractor to discuss the results of the weekly inspection and monthly audit.

Where inspections identify areas of non-compliance or improvement the contractor will be advised either verbally or in writing by either the CIU safeguards representative or if applicable, via a Notice to Contractor prepared by the Project Engineer.

11.4.2 Noise

Noise testing must be performed to verify the source noise levels used in the design. Sampling to be undertaken by the CIU safeguards representative in accordance with “NZS 6801:2008 acoustics – Measurement of environmental sound by appropriately trained staff” or equivalent.

If monitoring shows that the noise levels used in design are wrong, go through the assessment again, and update the ESMF Screening to reflect any changes in risk. If the project moves into a high risk classification as a result of monitoring a site specific ESMP will be required.

Whenever a new piece of equipment is used or a new type of activity is started the testing has to be repeated.

If complaints are received, noise monitoring may be required and additional mitigation required. The CIU safeguards representative will discuss this with the Contractor if this is the case.

11.4.3 Dust

A dust monitoring program is outlined in Table 11-3.

Table 11-3: Dust Monitoring program.

Monitoring Action	Frequency
Check weather forecasts for strong winds and rainfall to plan appropriate activities and dust management response in advance.	Daily.
Observe weather conditions, wind via observations and data outputs from weather stations, and presence of rain.	Daily, and as conditions change.
Visual inspections shall be made of all active construction areas, whenever there are construction activities.	Daily, and increase to three times daily during dry months.
Inspect land adjacent to the site (including vegetation, residential properties and cars), construction exits and adjoining roads for the presence of dust deposition.	Daily, and as conditions change.
Inspect all exposed soils and unsealed surfaces for dampness and to ensure that surface exposure is minimised.	Daily, and as conditions change.
Inspect stockpiles to ensure enclosure, covering, stabilisation or dampness. Ensure stockpile height is less than 3 m or appropriately stabilised.	Daily, and as conditions change.
Inspect dusty activities to ensure dust emissions are effectively controlled.	Daily, and as new activities commence.
Monitor dust generating activities and controls, including water application rates.	In winds over 5.5 m/s (20 km/h or 11 knots).
Ensure site windbreak fences are intact.	Daily.
inspect wheel wash equipment to ensure effective operation.	Weekly.
inspect watering systems (sprays and water carts) to ensure equipment is maintained and functioning to effectively dampen exposed areas.	Weekly.

Training and awareness of all staff and contractors on the Project GM, Labor GM and SIP is to be undertaken by the Contractor during induction and through the Project (e.g., weekly toolbox meetings) as necessary.

11.4.4 Example Check sheet

The following is an example of a checklist to be used to address environmental monitoring under this Plan.

EXAMPLE MONITORING CHECKLIST

Monitoring date:	
Monitoring undertaken by:	
Weather conditions:	
Photograph taken showing condition of monitoring location (Y / N) Attach relevant photos	

Monitoring standard	**Standard met (Y/N)**	**Comments**
All control structures secured and intact		
Any conspicuous change in the color visualclarity of any water discharge from the site		
All culverts clear of debris		
Any noise complaints in previous week?		
Any dust complaints in previous week		
Dust control measures in place and intact?		
Dust watering systems and wheel washes in place and intact?		

Appendix D Environmental and Social Incident Report Form

ENVIRONMENTAL AND SOCIAL INCIDENT REPORT FORM

Date & Time of Incident:	Report Number:

Department / Personnel Involved:

Location of Incident:

Nature / Description of Incident:

Hazardous Materials / Oil / Fuel Spill:

- ☐ Chemicals
- ☐ Fuel
- ☐ Oil

Type: _____ Concentration: _____ Quantity: ____

☐ Spilt into ground	☐ Contained	☐ Not Contained
☐ Spilt into stormwater drain	☐ Contained	☐ Not Contained
☐ Spilt into waterway	☐ Contained	☐ Not Contained

- ☐ Released into atmosphere
- ☐ Caused fire / explosion

Vegetation:

- ☐ Damage or near miss to trees / vegetation

Community*:

- ☐ Damage or near miss to property
- ☐ Injury or harm
- ☐ Land issue

Other Issues:

- ☐ Landslips
- ☐ Contamination of waterways due to sediment runoff

Immediate corrective action taken:

ENVIRONMENTAL AND SOCIAL INCIDENT REPORT FORM

Results of action taken:

Recommended further corrective / preventative action:

Reported by: Position: Date:

Date report received:

* All community complaints and grievances should follow the Grievance Redress Mechanism, and not this form.

*All labor complaints and grievances should follow the Labor Grievance Mechanism and not this form.

*Occupational health and safety incidents should follow the incident process in the Occupational Health and Safety Plan

Appendix E Grievance Mechanism

1. Grievance Mechanism

1.1.1 Introduction – Functions and Benefits

The FSM PRIME project allows those that have a complaint or those feel aggrieved by the projects to be able to communicate their concerns and/or grievances through an appropriate process. The GM set out below is to be used as part of the PRIME project and will provide an accessible, rapid, fair and effective response to concerned stakeholders, especially any vulnerable individual and/or group who often lack access to formal legal regimes.

While recognizing that many complaints may be resolved immediately, the Complaints Register (CR) and GM set out below encourages mutually acceptable resolution of issues as they arise. The CR and GM has been designed to:

a) Be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a confidential, fair and transparent manner;

b) Allow simple and streamlined access to the CR and GM for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;

c) Provide clear and known procedures for each stage of the GM process, and provide clarity on the types of outcomes available to individuals and groups;

d) Ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is confidential, fair, informed and respectful to a complaint and/or concern;

e) Provide a transparent and confidential approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and

f) Facilitate continuous learning and improvements to the GM. Through continued assessment, the learning's may reduce potential complaints and grievances.

1.2 GM Eligibility Criteria

Local communities and other interested stakeholders may raise a grievance/complaint at any time to the traditional leaders and/or government elected officials. Affected local communities should be informed about the ESMF provisions of both projects, including its grievance mechanism and how to make a complaint. Specific awareness will be conducted with women in local communities associated with the PRIME project on the process of lodging a grievance complaint related to GBV/SEA/SH to the GM, and on how to access other service providers; such as justice, health, counseling, safe accommodation. This will ensure the PRIME project provides a safe, confidential and enabling environment for women to access information and report an GBV/SEA/SH compliant. Eligibility criteria for the GM include:

a) Perceived negative economic, social or environmental impacts on an individual and/or group, or concern about the potential to cause an impact;

b) Clearly specified types of impact that has occurred or has the potential to occur and explanation of how the project caused or may cause such impact; and

c) Individual and/or group filing of a complaint and/or grievance is impacted, or at risk of being impacted; or the individual and/or group filing a complaint and/or grievance demonstrates that it has authority from an individual and or group that have been or may potentially be impacted on to represent their interest.

1.3 Grievance Mechanism (GM) Pathways and Processes

The GM has been designed to be problem-solving mechanism with voluntary good-faith efforts. The GM is not a substitute for the legal process. The GM will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties, while recognizing that for some issues, such as GBV/SEA/SH, a mutually resolution is less likely. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and/or hinder any mutually acceptable resolution. However, the GM also recognizes that for some complaints, such as those of GBV/SEA/SH, the survivor will likely face multiple barriers to making a complaint and access required support. Where such barriers exist, this is not construed as deliberate attempts to delay or hinder the resolution process.

The PRIME GM process includes two distinct grievance pathways which include a project general GM and a GBV/SEA/SH specific GM. The two pathways are detailed below.

1.4 General GM

The process for the GM is as follows:

The GM for the PRIME Project is scaled to the risks and adverse impacts anticipated for the Project. If promptly addressed using an understandable and transparent process that is gender responsive, culturally appropriate and at no costs and without retribution, the concerns and complaints of potentially affected people will usually be resolved.

The GM process is not a substitute for, or meant to impede access to, regular legal process but provides a simpler mechanism for complaint resolution. The GM will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times in good faith and should not attempt to delay and/or hinder any mutually acceptable resolution.

If an Aggrieved Person (AP) is not satisfied with, or has a complaint about, an aspect of the Project (e.g. such as the mitigation or assistance provided) they have the right to lodge a grievance. While every effort should be made to resolve conflicts by mutual agreement of the parties involved, in some cases, arbitration and adjudication on disagreements and conflicts by an external mediator will be required.

For consistency, the GM for the PRIME Project is in-line with other GM instruments implemented in FSM under WB funded projects. This GM process is set out in **Error! Reference source not found.** for grievance redress of social and environmental matters relating to the PRIME Projects.

Table 1-1: PRIME Project Grievance Mechanism Process

Step	Process	Duration
1	The Aggrieved Party (AP) takes their grievance to the PRIME Project Implementation Unit (PIU) State Focal Point, PIU Director,	Any time

Step	Process	Duration
	national DoTC&I office, Contractor, or contact through the FSM DoFA website or email. Relevant case information is recorded (e.g., Grievance Form, maps, notes of meetings, photos, etc). All grievances (both construction and non-construction related, and those related to SEA/SH/GBV) are to be forwarded to the PIU State Focal Point for screening and record keeping.	
2	Upon receipt of the grievance the PIU State Focal Point pro PIU Director is to screen the grievance to assess whether it is related to the PRIME Project, and environmental and social issues. Non-eligible grievances (i.e. those not Project related) are then to be referred to the relevant agency to follow up, if appropriate.	Within 3 days of grievance lodged
3	The PIU State Focal Point will endeavor to resolve any complaint/issue immediately, both construction and non-construction related grievances. If satisfactorily resolved the incident and resultant resolution/corrective action will be logged and reported to the PIU Project Manager, and copied to the Centralized Implementation Unit (CIU) (Program Manager and Safeguards Team).	Within 2 weeks of grievance lodged
4	If unsuccessful (i.e., AP is not satisfied), the PIU State Focal Point will refer the AP to the PIU Project Manager and the CIU Program Manager and Safeguards Team to address and resolve the complaint. The proposed corrective action is to be reported back to the AP for agreement.	
5	Where the complaint has not been resolved, the PIU Project Manager will refer the grievance to the DoTC&I Project Management Unit (PMU) Manager for his/her action/resolution. The PIU Project Manager will log the details of issue and resultant resolution status (copy CIU Program Manager and Safeguards Team).	
6	If the matter remains unresolved, or the AP is not satisfied with the outcome, the DoTC&I PMU Manager refers the matter to the Project Steering Committee (PSC) for a resolution, copying the PIU Project Manager. The PIU Project Manager will log details of issue and resultant resolution status (copy CIU Program Manager and Safeguards Team).	Within 1 month of grievance lodged
7	Once the agreed corrective actions are implemented, and the PIU Project Manager notifies the claimant of the result in writing.	Within 1 week of resolution
8	If it remains unresolved or the complainant is dissatisfied with the outcome proposed by the PSC, the AP may refer the matter to the appropriate legal or judicial authority. A decision of the Court will be final.	Within 3 months of grievance lodged (where possible) or otherwise as agreed between parties during the process.

Steps 1 to 5 should be undertaken immediately (i.e., as soon practicable). Where the matter is referred to the PIU Project Manager, a resolution should be sought within two weeks. If unsuccessful and the matter is referred to the Project Steering Committee (PSC), this should occur within a month. The PIU Project Manager shall report back the outcome of the resolution to the AP within one week total of the corrective action occurring.

The PIU State Focal Point will be the grievance focal point and receive, record and report on Project related concerns. If the complaint/grievance relates to a Contractor activity, the Project will ensure the Contractor remedies any damage, pays compensation for damage or loss, etc. Use of community leaders and customary methods of conflict resolution is encouraged and utilized if and when appropriate – on a case-by-case basis.

A complaints register will be maintained and will show the details and nature of the complaint, the complainant's name, the date and actions taken as a result of the investigation (outlined further below).

Each record is to be allocated a unique number, reflecting year and sequence of received complaint (for example 2022-01, 2022-02 etc.). Complaint records (letter, email, record of conversation) should be stored together, electronically or in hard copy.

Any grievance related to corruption or another criminal offence, with the exception of complaints relating to GBV/SEA/SH (which should follow the GBV/SEA/SH specific GM outlined below), needs to be managed confidentially through the following process.

a) The aggrieved party/ies take their grievance to the relevant Municipal, State and/or National Police and notifies the PRIME Project Manager.

b) The PRIME Project Manager notifies the PIU, the Secretary of DoTC&I and CIU (Program Officer and Safeguard Team).

c) If the grievance includes an alleged crime, with exception of GBV/SEA/SH, the PRIME Project Manager will notify the state and national legal offices (e.g., police or Department of Justice) and report the incidence.

d) Resolution of these grievances will be the responsibility of the legal systems within each state and/or national agencies as dictated by state and national law. In these cases, the projects grievance mechanism will ensure the above due diligence is enacted and due process is documented with the grievance given a complaint number and recorded. Confidentiality associated with all criminal cases must be compliant and follow State and National laws.

1.5 GBV, SEA or SH specific GM

Survivor-centered guiding principles will be systematically applied through all steps and actions. These guiding principles are as follows:

- The safety of the survivor shall be ensured at all times. Potential risks to the survivor will be identified and action taken to ensure the survivor's safety and to prevent further harm including ensuring that the alleged perpetrator does not have contact with the survivor. If the survivor is an employee, reasonable adjustments may be made to the survivor's work schedule and work environment to ensure their safety.
- All actions should reflect the choices of the survivor.
- All information related to the case must be kept confidential and identities must be protected. Only those who have a role in the response to an allegation should receive case-level

information, and then only for a clearly stated purpose and with the survivor's specific consent.

- The survivor must provide informed consent to progress with each stage of the complaints process. Survivors may withdraw their consent during the process at any time.

Any grievance related to a complaint of GBV, including but not limited to SEA and/or SH, or domestic violence needs to be managed confidentially through the following process:

Step 1: Receive the complaints of GBV/SEA/SH

a) Complaints of GBV/SEA/SH can be received by:

- The existing channels of the GM.
- The GBV service providers / trainers / women's rights advocates who are women and experienced in responding to GBV.

b) If the person making the complaint is the survivor (the person who the alleged violence was directed towards) and the complaint relates to SEA or SH, the person who received the complaint will:

- Tell the survivor about the closest GBV service providers including justice, health, safe accommodation and / or counseling.
- Document and register the allegation. The level of detail recorded including details that could identify the individual will be subject to the permission of the survivor.
- Explain the GM complaints and reporting process to the survivor including:
    - The process.
    - That they (the survivor) can choose whether they want to make a formal complaint to the project.
    - That if they choose to make a formal complaint to the project:
        - They control whether and how information about the case is shared with other agencies or individuals.
        - All information will be kept confidential. Only those who will respond to the case will be told about their complaint / situation.
        - If they agree, another person will contact them to talk with them more about their complaint and explain that they can choose whether this is a man or a woman. It should also be identified who these people are in case there are concerns about speaking to a specific person (for example, if they are related to / close to the alleged perpetrator).
        - They can change their mind and withdraw their consent at any time and the process will stop.
- Information about the complaint will be kept confidential. Information captured should not identity the survivor, perpetrator or include any other information that will identify the survivor of specific situation.
- If the survivor chooses to make a formal complaint to the GM, communicate the allegation to PRIME Project Manager of Operations.
- If the survivor chooses not to make a formal complaint to the GM, they should be reminded about the closest GBV service providers and told that if they change their mind, or if something else happens, they can always make a complaint in the future.

c) If the survivor of the alleged violence is a child, under the age of 18 years of age, while mandatory reporting does not apply to FSM PRIME project, it is considered good practice for any suspected or known harm to children to be reported to the police or a welfare officer for further investigation. Where the alleged abuse is criminal, such as physical or sexual violence or neglect by parents or caregivers it should be reported to the police with the consent of the child and/or their guardian.

d) If the person making the complaint is the survivor (the person who the alleged violence was directed towards) and the complaint relates to other forms of GBV, the person who received the complaint will:

- Tell the survivor about the closest GBV service providers.

- Document and register the allegation using.

1. If the person making the complaint is a third party (not the person who the alleged violence was directed towards such as a family member, community member, colleague, friend), the person who received the complaint will:

   - In cases of **GBV/SEA/SH:**
     - Document and register the allegation using Form A in Annex 2.
     - Explain that the project cannot receive third-party complaints because we need to make sure the survivor is safe and that we are acting in their best interests.
     - Ask them to tell the survivor about the available options for reporting or accessing support services.

Step 2: Communicate with the Survivor – Ongoing

a) PRIME Project Manager should be the only person to communicate with the survivor. Where the survivor has chosen to speak to a woman, a woman (who has been trained in handling complaints of GBV – SEA/SH) will be delegate this role by the PRIME Project Manager.

b) This communication should include:

- Responding to any questions or concerns from the survivor.
- Ensuring that the survivor has received appropriate support.
- Asking for the survivor's consent at each stage in the process.
- Gathering any further information that may be required from the survivor.
- Explaining that where the allegation involved a criminal offence the survivor should consider going to the police.

c) The survivor will be provided ongoing feedback on the development and outcome of their case but especially when:

- The complaint is received.
- The case is referred to the PRIME Project Manager.
- The verification process commences or when a determination is made that there is an insufficient basis to proceed.
- The outcome of the verification process and any disciplinary action.
- When disciplinary action has been.

Step 3: Assess if the Allegation is likely linked to the project

a) The PRIME Project Manager will determine the likelihood of the allegation being linked to a project.

b) If the allegation is determined to be likely linked to a project, the PRIME Project Manager will:

- Inform PIU and Secretary of DoTC&I within 48 hours of the determination being made sharing only the following information:
  - The nature of the allegation;
  - If the alleged perpetrator is, to the survivor's best knowledge, associated with the project (yes/no);
  - The survivor's age and/or sex (if available); and
  - If the survivor was referred to services.
- DoTC&I must notify the World Bank (WB) Task Team immediately sharing only the same information. No further information, including name and contact details of the survivor or alleged perpetrator should be shared with the World Bank Task Team (or anyone else, except in the context of referral for services or verification, with the consent of the survivor). While any kind of GBV case could be brought to the attention of a project implementation unit, allegations only need to be reported to the World Bank if they involve SEA or SH.

Step 4: Verify and Act

a) If an allegation is determined to be likely to be linked to a project, the PRIME Project Manager will convene the ad hoc GBV Grievance Committee who will:

- Convene a meeting to review the complaint and decide on the verification process within 48 hours of the determining that the allegation is likely linked to the project. The goal of the verification is to:
  - Determine the likelihood that the incident occurred.
  - Recommend disciplinary measures towards the alleged perpetrator of SEA and SH.
- Interview all the people involved to gather as much information as possible about what happened. This will usually include interviewing:
  - The survivor.
  - Any witness(es).
  - If there are people that the survivor has been informed about the incident.
  - Review any other evidence, if available, like text messages or social media posts.
  - The alleged perpetrator.
  - Sometimes there will only be limited information.[14] Building trust with the survivor is very important because the more that they trust the project, the more that they might share about what happened which will help with the verification.
- After gathering the available information, the GBV Grievance Committee should determine whether it is likely that the incident did or did not occur within and completed within 14 days of starting the verification process. It is not the role of the adhoc GBV Grievance Committee or the project to investigate an allegation and determine if it did or did not happen. This is the role of the police and courts. The role of the adhoc GBV Grievance Committee is to determine the likelihood that the incident occurred given the information available.
- If it is determined that it was likely to occur, disciplinary action should then be agreed.
- All verification steps and meetings must be documented with information kept confidentially.
  - The survivor can report the allegation to the police at any time and does not need to inform the PRIME Project Manager or GBV Grievance Committee that they are doing or have done this. If the survivor chooses to make a complaint to the police this process is separate to the GM verification.
  - The GBV Grievance Committee may decide to suspend the alleged perpetrator from their employment while the police are investigating / court is hearing the case. However, in FSM the average time to resolve a sexual offences case is 2 years so this will likely not be practical in most situations.

b) If the ad hoc GBV Grievance Committee decides that is it likely that the allegation occurred, the employer of the perpetrator implements the recommended disciplinary

[14] In most SEA and SH cases:

- Often there are no witnesses to the alleged incident. Often the alleged perpetrator makes sure that no one sees or knows about the incident but this did not mean that the incident did not happen. Someone making a complaint of SEA or SH does not need to provide a witness or 'evidence' to prove their claim. Survivors face multiple barriers to reporting SEA and SH. When people overcome so many barriers to report SEA and SH, it is unlikely that they are lying. When people come forward, they are supported even if there is not clear evidence one way or another.
- The person alleged of the violence will often deny that they did what was/is alleged or might they will say it was consensual. Just because the person denied the allegation does not mean it did not happen.
- The survivor may not tell the whole story straight away. They might leave out parts of the story of what happened because they are afraid that they might not be believed or that they will be blamed for what happened. This does not mean the incident did not occur.

action, that is proportional to the nature and severity of the incident; in accordance with local legislation, the employment contract and the code of conduct.

- Sanctions applied by the perpetrator's employer may include:
  - Informal warning.
  - Formal warning.
  - Additional training.
  - Loss of salary for a period of time.
  - Suspension of employment (without payment of salary), for a period of time.
  - Termination of employment.
  - Referral to the police or other authorities as warranted, with the consent of the survivor.

c) Once it is confirmed that disciplinary action has been taken by the employer of the perpetrator the case is resolved.

d) In cases of GBV related to the project, compensation will not be paid to the survivor or anyone else (i.e., their relatives or community) as such processes are most often not administered using a survivor-centered approach.

e) In cases of GBV related to the project, community leaders and customary methods of conflict resolution will not be used as such processes are most often not administered using a survivor-centered approach.

Step 5: Document and Monitor Complaints of GBV

a) Each individual complaint of GBV will be documented and registered.

b) Informed consent will be captured using Form C.

c) Each record is to be allocated a unique number, reflecting year and sequence of received complaint (for example 2022-01, 2022-02 etc.).

d) The PRIME Project Manager will compile quarterly reports to DoTC&I including:

- The number of complaints related to GBV disaggregated by the number of complaints where:
  - That the survivor was referred to GBV services.
  - The case was referred to authorities (with the participation and consent of the survivor).
  - The survivor chooses not to make / withdraw a formal complaint.
  - The project investigated and:
    - It was not linked to the project (but the survivor was referred to GBV services).
    - Did not determine that there was a breach of the Code of Conduct.
    - Took disciplinary action against the alleged perpetrator.

    These reports should be numerical only and not contain any information with the potential of being identifying, including names and contact details of survivors, their families, or of alleged perpetrators.

e) All complaint records (letter, email, record of conversation) should be stored together, electronically or in hard copy in a confidential and secure location.

1.6 How to Get in Touch with the Project

Anyone can ask for information on the project, express a concern, make a complaint (grievance) or get in touch with the project for any reason. Complaints/concerns can be anonymous, treated confidentially and the various ways to get in touch are provided in the tables below:

Table 1: FSM National Contacts	
General GM:	FSM PRIME Project Manager All correspondence to: Mr. Trevor De Landro PRIME Project Manager **Phone:** (691) 320- 2080 **Email:** trevor.delandro@tci.gov.fm copy to Kwame.shiroya@dofa.gov.fm and wilmer.kilmete@dofa.gov.fm **Mail:** Post Office Box PS-2, Palikir, Pohnpei, FSM 96941 **In Person:** Department of Transportation, Communication and Infrastructure, National Government, Palikir, Pohnpei, Federated States of Micronesia. Given to the Department's Office Secretary. **Website:** www.tci.gov.fm
	Department of Transportation, Communication & Infrastructure (DoTC&I) All correspondence to: Secretary, Mr. Carlson Apis, Department of Transportation, Communications and Infrastructure. **Phone:** (691) 320- 2865 **Email:** carl@tci.gov.fm and copy to Kwame.shiroya@dofa.gov.fm and wilmer.kilmete@dofa.gov.fm. **Mail:** Post Office Box PS-2, Palikir, Pohnpei, FSM 96941 **In Person:** Department of Transportation, Communication and Infrastructure, National Government, Palikir, Pohnpei, Federated States of Micronesia. Given to the Department's Office Secretary. **Website:** www.tci.gov.fm
GBV specific GM:	All correspondence to: Mr. Stuart Penias Assistant Secretary of Social Affairs FSM Department of Health & Social Affairs (DHSA) **Phone:** (691) 320-4682 **Email:** SPenias@fsmhealth.fm **In Person:** C/o Department of Health & Social Affairs, Room 5, Capital Suite, FSM National Government, Palikir, Pohnpei. OR Mr. Lino Amor Assistant Secretary, Division of Anti-Human Trafficking

	FSM Department of Justice (DoJ) **By Phone:** (691) 320-4577 **By Email:** lino.amor@doj.gov.fm **In Person:** C/o Department of Justice, FSM National Government, Palikir, Pohnpei. OR Mr. Kwame Shiroya Program Coordinator, Central Implementation Unit (CIU) FSM Department of Finance and Administration (DOFA) **Phone:** (691) 320-2639 **Email:** kwame.shiroya@dofa.gov.fm **In Person:** C/o Department of Department of Finance and Administration, FSM National Government, Palikir, Pohnpei.
Table 2: FSM State Contacts	
Pohnpei State	
General GM:	All correspondence to: Mr. Trevor De Landro. PRIME Project Manager **Phone:** (691) 320- 2865 **Email:** trevor.delandro@tci.gov.fm copy to Kwame.shiroya@dofa.gov.fm and wilmer.kilmete@dofa.gov.fm **Mail:** Post Office Box PS-2, Palikir, Pohnpei, FSM 96941 In person: Department of Transportation, Communication and Infrastructure, National Government, Palikir, Pohnpei, Federated States of Micronesia. Given to the Department's Office Secretary. **Website:** www.tci.gov.fm OR Mr. John Adolph Administrator – Office of Transportation and Infrastructure (T&I) **Phone:** (691) 320-2411 **Email:** isonalaimw@gmail.com **In Person:** Office of Transportation & Infrastructure, Pohnpei State Government Building
GBV specific GM:	All GBV grievance correspondence to: Ms. Canita R Nakamura GBV Counsellor **Phone:** (691) 320-2112 **Email:** rilometoc@prel.org **In Person:** C/o PREL Office, Dolonier, Nett.

Chuuk State	
General GM:	All correspondence to: Mr. Tos Nakayama Director Department of Transportation & Public Works Chuuk State Government **Phone:** (691) 330-2592 **Email:** renomw1965@gmail.com **In Person:** Department of Transportation & Public Works Office, Weno Chuuk
GBV specific GM:	All GBV grievance correspondence to: Ms. Courtney Corky S. Benito Acting President – Chuuk Women Council **By Phone:** (691) 330-8397 **By Email:** corkbenito@gmail.com **In Person:** CWC, Tongen Inepwinepw Counseling Center OR Ms. Achipen Martinez Anti-Human Trafficking Focal Point-Chuuk FSM Department of Justice (DoJ) **By Phone:** (691) 330-5977 **By Email:** martinezachipen.fsm@gmail.com **In Person:** FSM National Police Office, Weno
Yap State	
General GM:	All correspondence to: Mr. Theophilus Thinnifel Director Department of Public Works & Transportation **Phone:** (691) 350-2175 **Email:** pwtactingdirector@gmail.com **In Person:** Department of Public Works & Transportation, Yap State Government
GBV specific GM:	All GBV grievance correspondence to: Ms. Paula Mitmow Women Interest Officer Women Interest Office

	By Phone: (691) 350-5973 **By Email:** pmitmow@gmail.com **In Person:** Women Interest Office, Yap State Government. OR Ms. Linda Teteth Anti-Human Trafficking Focal Point - Yap FSM Department of Justice (DoJ) **Phone:** (691) 350-2126 **Email:** lmteteth@gmail.com **In Person:** FSM National Police Office, Colonia, Yap
Kosrae State	
General GM:	All correspondence to: Mr. Hairom Livaie Director Department of Transportation and Infrastructure **Phone:** (691) 370-3011 **Email:** hlivaie64@gmail.com **In Person:** Department of Transportation and Infrastructure, Kosrae State Government Building
GBV specific GM:	All GBV grievance correspondence to: Ms. Beverly Wabol Council Member Kosrae Women's Association **Phone:** (691) 370-3008/3208 **Email:** beverlywabol@gmail.com **In Person:** Department of Education, Kosrae State Government, Tofol. OR Mr. Lenson Taulung Jr. Acting Assistant Coordinator/AHT Focal Point - Kosrae FSM Department of Justice **By Phone:** (691) 370-2348 **By Email:** lensontaulung01@gmail.com **In Person:** Kosrae Anti-Human Trafficking Office, Tofol.

1.7 Roles and Responsibilities

The following are persons involved in the complaints process and their supporting roles and responsibilities. All parties are expected to disclose conflicts of interest or potential

conflicts of interest as new complaints arise, and recuse themselves accordingly. Should there be a conflict of interest with anyone in the following list, that individual will be placed with a designated alternative.

General GM:

- Focal Point for managing the FSM PRIME projects Complaints Process: Mr. Trevor De Landro, Project Manager for the FSM PRIME Project (trevor.delandro@tci.gov.fm).
- Person who will manage the database and record keeping: Mr. Wilmer Kilmete (National Safeguard Coordinator) and Mr. Kwame Shiroya (Program Manager) at the Central Implementation Unit (CIU) of the FSM Government Department of Finance & Administration (DoFA).
- Person who will answer simple queries and manage simple complaints: Mr. Trevor De Landro, Project Manager for the FSM PRIME Project (trevor.delandro@tci.gov.fm).
- Person who will manage difficult complaints or grievances: Mr. Trevor De Landro, Project Manager for the FSM PRIME Project (trevor.delandro@tci.gov.fm) and Mr. Carlson Apis, Secretary DTC&I with support from CIU.
- Person/organization who will prepare report/s for World Bank reporting: CIU (DoFA) team.
- Grievance Committee will be formed on an ad hoc basis for complex or significant grievance management. This will be made up of appropriate senior officials (Assistant Secretary level or above) from the following:
  - Department of Finance & Administration (DoFA) with support from CIU Safeguards Specialist;
  - Department or Office managing the project at which the complaint is aimed (FSM DoCT&I); and
  - Department of Justice FSM National Government and/or State departments of Justice.

GBV Specific GM:

For all GBV (SEA/SH) grievance related issues the following are persons involve in the complaints process and their supporting roles and responsibilities.

Focal point for managing the PRIME projects complaints process: Mr. Trevor De Landro, Project Manager for the FSM PRIME Project or a designee (who has been trained in handling complaints of GBV and HT) where there is a conflict of interest.

Person who will manage the database and record keeping: Mr. Wilmer Kilmete (National Safeguard Coordinator) in coordination with Mr. Kwame Shiroya (Program Manager) at the Central Implementation Unit (CIU) of the FSM Government Department of Finance & Administration (DoFA).

Person(s) who will answer simple queries and manage simple complaints:

- Mr. Trevor De Landro, PRIME Project Manager;
- The GBV service providers / trainers / women's rights advocates who are women and experienced in responding to GBV.

Person who will communicate with the survivor: Mr. Trevor De Landro, PRIME Project Manager or where the survivor has chosen to speak to a woman, a woman (who has been trained in handling complaints of GBV) will be delegate this role by the PRIME Project Manager.

Person who will assess if the allegation is likely linked to the project: Mr. Trevor De Landro, PRIME Project Manager.

Person who will inform DTC&I and DoJ of the allegation: Mr. Trevor De Landro, PRIME Project Manager.

Person who will inform the World Bank Task Team of the allegation: Mr. Trevor De Landro, PRIME Project Manager**.**

Person(s) who will verify the allegation: GBV Grievance Committee, led by Trevor De Landro, PRIME Project Manager**.**

Person(s) who will determine disciplinary action: GBV Grievance Committee, led by Mr. Trevor De Landro, PRIME Project Manager.

Person(s) who will take disciplinary action: Employer of the perpetrator.

GBV Grievance Committee will be formed on an ad hoc basis where verification and action is required. This will be made up of the following:

- Mr. Trevor De Landro, PRIME Project Manager
- Senior officials (Assistant Secretary level or above) or designee from:
  - Department of Finance & Administration (DoFA) with support from CIU Safeguard Team;
  - Department or Office managing the project at which the complaint is aimed (DoTC&I);
  - Department of Justice FSM national Government and/or State department of Justice.
- Representative of the employer of the alleged perpetrator;
- GBV service provider / trainer specialist.

1.8 Disclosure of Grievance Mechanism

It is important to ensure that all stakeholders including local authorities and community members in the vicinity of the identified works are informed of the Project 's GM process throughout the full duration of the PRIME Project including construction and non-construction components such as during preparation of any works specific management/land access plans, and prior commencement of any civil works.

This information should include their rights regarding potential land/asset impacts and environmental degradation, the grievance process, and guidance on relevant steps to lodge a complaint.

The Grievance Process is to be introduced during all stakeholder engagement activities and on websites including stakeholder consultation meetings to ensure that all relevant stakeholders are aware of this procedure and the specific steps to be taken for lodging a complaint.

The GM, along with key E&S documents (such as frameworks, land access plans, management plans, ESIAs) prepared for the Project will be publicly disclosed on relevant websites (www.worldbank.org and www.dofa.gov.fsm), in draft and final.

Prior to the start of construction activities, signs will be erected at the work sites (in the appropriate local language) providing the public with updated Project information and summarizing the GM process including contact person details.

1.9 Record Keeping and Reporting of Grievances

All complaints or grievances submitted will require the completion of a Grievance Claim Form which will include the following information:

(i) Name of the complainant;

(ii) Address (including village name);

(iii) Name of the person filling in the Grievance Claim Form (if not the complainant);

(iv) Full description of complaint issue, including background, sketches and maps where appropriate;

(v) Description of the requested corrective action;

(vi) Date of grievance submission; and

(vii) Signature of complainant, the person filling in the form and the person who received the form.

If assistance is required, the claimant can request help with a verbal grievance to complete the form from the Contractor or PIU State Focal Point (where appropriate). Grievances claim forms can also be submitted electronically through the FSM DoFA website or email.

Personal details can remain anonymous.

Each grievance record is to be allocated a unique number, reflecting year and sequence of received complaint (e.g. 2022-01, 2022-02 etc). Complaint records (letter, email, record of conversation) should be stored together electronically or in hard copy. Each complaint/grievance is assigned a specific person responsible for its management and close out.

All grievances (both construction and non-construction related, and those related to SEA/SH/GBV) are to be either directly received by the PIU State Focal Point or forwarded to the PIU State Focal Point (i.e., should grievances be received by the Contractor for construction related complaints).

Upon receipt of the grievance the PIU State Focal Point is to screen the grievance to assess whether it is related to the PRIME Project or environmental and social issues. Non-eligible grievances (i.e. those not Project related) are then to be referred to the relevant agency to follow up, if appropriate. If the complaint is related to SEA/SH/GBV, the relevant GM (once developed) is to be followed including the involvement of local GBV service providers.

Language barriers and insufficient literacy levels shall also not prevent any persons from lodging a complaint. The Grievance Claim Form shall be written in English and the appropriate language for that FSM State, and disclosed during consultation.

Complaints or grievances are to be recorded in a Complaints Register held locally by the PIU State Focal Point with a copy also kept centrally by the CIU Safeguards Team. The register is to clearly indicate whether an issue has been resolved or is still outstanding. The following records generated by this procedure will be stored in hard copy at the PIU State Focal Point office and in electronic format:

- Grievance Claim Forms;
- Letters of request;
- Memorandums of field investigations, consultations and meetings; and
- Photographs, maps, drawings.

If an issue has been resolved, the register will include the following information:

- Completed Grievance Resolution Form;
- Action taken (including evidence of action taken, i.e. photographs, receipts, etc.);
- Date of resolution; and

- Signature of complainant and person responsible for issue resolution.

1.10 Reporting and Evaluation

Complaints shall be reported in the regular project reporting to the World Bank. It should contain:

- Total number of complaints/grievances received.
- Total number resolved.
- Total number under investigation/not yet resolved.
- Total number not yet resolved and also exceeds the recommended close out time of 1 month or 3 months.
- Short paragraph on any significant grievances currently not yet resolved and any risks to project implementation.

In the case of GBV/SEA/SH, reporting to the World Bank is required only after it has been determined if the allegation is related to the project.

If an allegation is determined to be likely to be linked to a project, DoTC&I must notify the World Bank Task Team of the anonymized incident as soon as it becomes known to DoTC&I. Only the following key pieces of data should be shared with the World Bank Task Team:

- The nature of the allegation;
- If the alleged perpetrator is, to the survivor's best knowledge, associated with the project (yes/no);
- The survivor's age and/or sex (if available);
- If the survivor was referred to services.

If there are more than 30 complaints/grievances recorded, the PRIME Project Manager may decide to investigate any patterns or repetition of issues that need addressing. The PRIME Project Manager may decide to get an independent consultant to review and provide advice.

In the case of third-party complaints of GBV, if there is a substantial number of consistent third-party complaints registered in relation to a specific incident or an alleged perpetrator or survivor the PRIME Project Manager may decide to investigate but this must be done in a way that ensure the safety and confidentiality of the survivor, ideally through a GBV service provider who will be able to safely and sensitively contact the survivor involved.