PCI-SINOPHARMINTL CONSORTIUM

Environmental & Social Assessment and Environmental and Social Management Plan for the Construction of Moruca Hospital in Region No.1

Health Care Network Strengthening (HCNS) in Guyana Project (GY-L1080)

SEPTEMBER 2025

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1. Introduction

1.1. Overview

This document, as part of the contractor's Environmental and Social Assessment / Environmental and Social Management Plan for the Moruca Hospital (hereinafter referred to as ESA/ESMP), applies to the entire project, outlining environmental, social, and occupational health considerations for both the construction of temporary facilities and the construction of the hospital and its operation. Its contents include a general project overview, an overview of the temporary facilities and campsite information, an environmental and social impact assessment, and the environmental and social management plan for the construction phase of the project. An operative ESMP for the hospital operation will be developed at least six months before the completion of the construction activities.

The C-ESMP sets out the expectations of the Ministry of Health (MOH) and the Inter-American Development Bank (IDB) and defines how the Contractor (PCI-Sinopharmintl Consortium) will implement and manage environmental matters.

The construction of the temporary facilities and the hospital involve potentially hazardous activities. Preparing an effective ESA/ESMP and implementing effective measures are crucial to ensure the health and safety of workers, protect the environment, and maintain project security.

PCI-Sinopharmintl Consortium will update this ESA/ESMP based on changes in construction activities, equipment and facilities, the number of residents, and any additional circumstances during the various phases of the project's implementation.

1.2. Purpose

The main objectives of this ESA/ESMP are as follows:

1. To guide environmental and social management matters during the construction and operation of the temporary facilities and the regional hospital,
2. Discuss the related risks and impacts of the above phases and outline practical mitigation measures,
3. Minimize the likely environmental and social impacts that may be caused from the construction of the temporary facilities and the hospital,
4. Ensure that all construction phases comply with Guyana's Environmental Protection and the Amerindian Act,
5. Ensure PCI-Sinopharmintl Consortium fulfils ESHS obligations as per contractual requirements.
6. Ensure that all activities comply with the IDB's Environmental and Social Policy Framework.

1.3. Guiding Principles

PCI-Sinopharmintl Consortium's Environmental and Social Management Plan will follow the Deming Cycle principle, also known as Plan, Do, Check, Act (PDCA). This principle is a continuous improvement methodology that is used to address systemic problems and improve processes.

- The 'Plan' phase involves defining the problem, setting goals, and outlining a plan to address it.
- In the 'Do' phase, the planned changes are implemented and tested.
- The 'Check' stage will involve data collection and analyzing the results to assess the effectiveness of the changes.
- Based on findings in the 'Check' phase, appropriate actions are 'Acted' upon.

By adopting the Deming Principle, PCI-Sinopharmintl Consortium commits to effectively managing environmental and social risks at all stages of the project, ensuring compliance, sustainability, and project efficiency, ultimately contributing to responsible construction and operational practices.

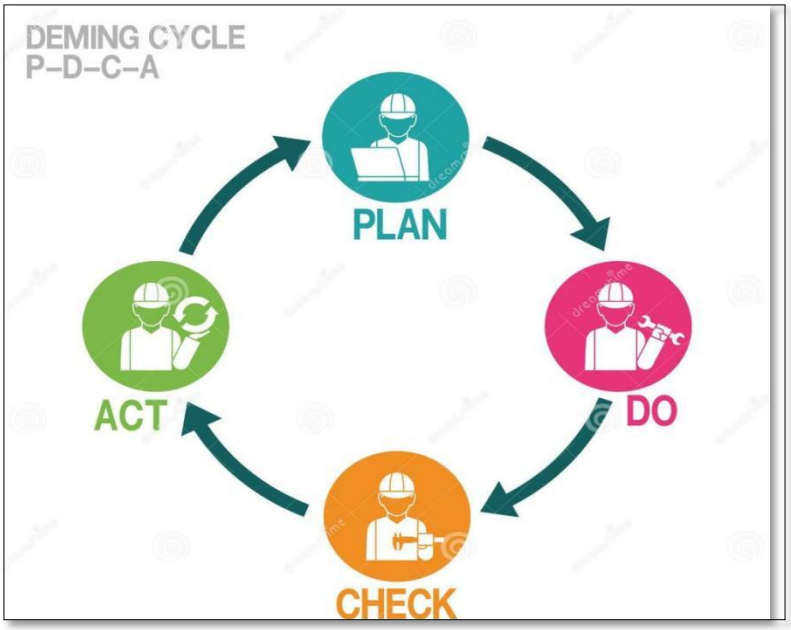


Figure 1: Deming Cycle Principle

1.4. Project Location

The proposed hospital construction project is located at “Three Miles” along the Kumaka–Cabana Road, Kumaka, in the Sub-District of Moruca, the administrative sub-center of Region #1 [Barima-Waini], which is located at UTM: Zone 21N, Latitude: 7.6499972° N, Longitude: -58.9499972° W.

Situated in the northwest of Guyana, the region borders the Atlantic Ocean to the north, the region of Pomeroon–Supenaam to the east, the region of Cuyuni–Mazaruni to the south, and Venezuela to the west.

The site is centrally located among several outlying villages, whose inhabitants are predominantly indigenous Amerindians. The site is located approximately 2–3 km from the main administrative center of Santa Rosa.

The land profile (Moruca) is on an elevated mound with an undulating landscape; the site sits at a general elevation of approximately 40–80 meters.

Figure 2: Project Location

1.5. Project Overview

The basic information of the project employer, contractor, etc. is shown in **Table 1** below.

Table 1: Project Location

Employer	Ministry of Health	
Financing	Inter-American Development Bank	
Engineer	JV JFAMPC-CBA	
Contractor	PCI-Sinopharmintl Consortuim	

The Government of Guyana (GOG), through the Ministry of Health (MOH), has received a loan from the Inter-American Development Bank (IDB) to implement the Health Care Network Strengthening Project in Guyana (GY-L1080 | 5706/OC-GY). The overall objective of the project is to improve the health of the Guyanese population by increasing access to, quality of, and efficiency in health services. The specific objectives of this operation are to:

I. Improve health outcomes associated with low- and high-complexity procedures by expanding the capacity of strategic hospitals,

II. Extend coverage of diagnostic, medical consultation, and patient management services—including in the country's hinterlands—through digital health (DH), and

III. Increase the efficiency of the public health system by strengthening key logistics management, support processes, and inputs.

As part of this project, the MOH launched a bid request for the design and construction of a new regional hospital at Moruca. The proposed hospital design occupies a site area of approximately 67,972 square meters, with a developed land area of about 40,460 square meters. The hospital is designed to accommodate 45 beds and includes functions such as outpatient services, medical technology, wards, and ancillary rooms. The total construction area of the project is 5,375.97 square meters, with an outdoor patient parking lot provided. The project includes the following facilities, outlined in **Table 2** below.

Table 2: Facilities to be Constructed

Facility	Space (Sq. M)
Medical Comprehensive Building (Building A)	4,898.52
Ancillary Rooms (Building B)	414.45
Fire Water Pool (Building C)	
Substation (Building D)	54
Security Guard Room (Building E)	8

The project also includes service and support infrastructure such as roads and landscape design. The Contractor shall not be required to supply and install medical equipment. However, the Contractor is required to provide all attachments and connections necessary to facilitate the installation and connection of medical equipment and accessories. These shall include items such as gas connections and fittings, brackets, anchor bolts, plumbing and electrical works, etc.

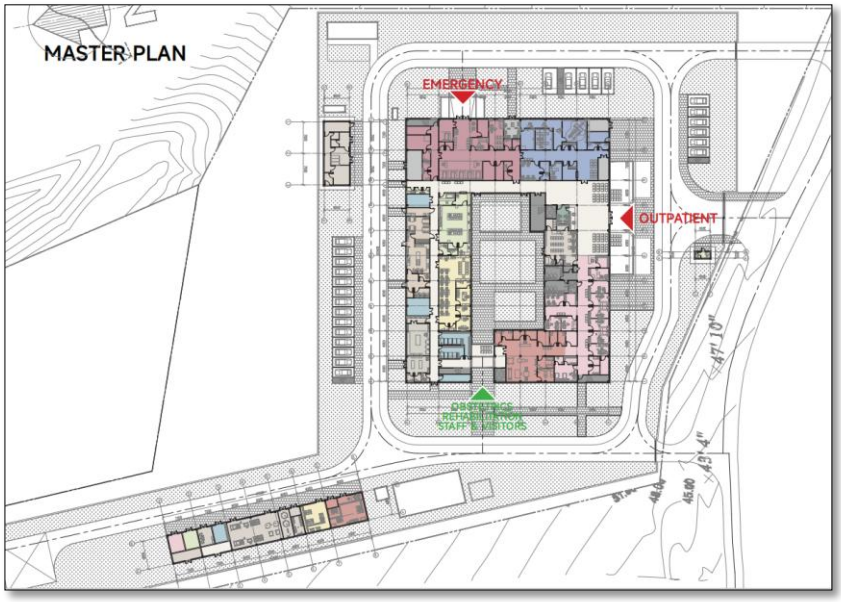


Figure 3: Proposal Design

The hospital has been developed with attention to functional zoning, circulation, resilience and sustainability. While the design is still ongoing and may be subject to change, the following principles currently guide the layout and organization.

The hospital is organized into functional zones, with clear separation of outpatient, inpatient, emergency, and support areas. The Emergency department is located near the main road for rapid ambulance access, while inpatient wards and diagnostic units are positioned centrally to optimize patient flow. Site orientation incorporates solar path and prevailing wind direction to maximize natural

lighting and ventilation, with space reserved for future expansion.

The design incorporates a ring road with separate entrances for vehicles and pedestrians, reducing congestion and minimizing safety risks. Dedicated pedestrian pathways connect outpatient areas, the pharmacy and waiting zones, with ramps and crosswalks included to meet accessibility standards.

To address high rainfall and strong winds typical of the region, a comprehensive rainwater drainage and collection system is integrated into the design. Building floors are elevated above ground level, and roofing structures are designed for resilience against natural hazards.

The hospital's medical circulation separates "clean" and "contaminated" flows, while also distinguishing outpatient, inpatient, staff, and logistics routes to minimize cross-infection risks. Energy efficiency is promoted thorough the use of natural daylighting, photovoltaic systems supplying partial power for non-critical loads, and high efficiency HVAC systems for critical departments such as operating theatres. Landscaping emphasizes the use of drought-tolerant native species to reduce irrigation requirements. Rainwater management incorporates sustainable solutions such as permeable pavements and rain gardens. The electrical design incorporates dual power supply loops, with diesel generators as backup for critical loads. Photovoltaic systems with battery storage are planned to support lighting, IT systems, and cold chain equipment. Electrical switchboards are arranged by functional zones to ensure reliability and ease of maintenance. Wastewater will be managed through a septic tank and sewage treatment system, with provisions for future integration into a municipal sewer network, where available. Stormwater is directed via gravity-based reinforced concrete drains into perimeter collection facilities. Medical gases will be supplied with stainless steel and copper piping, routed through dedicated shafts and labeled in accordance with NFPA/HTM standards.

1.6. Campsite and Temporary Facilities Description

PCI-Sinopharmintl Consortium has selected the location of the temporary facilities and campsite immediately adjacent to the east side of the proposed Moruca Hospital. The site is virgin land with an undulating landscape and shallow depressions, and it was previously used for small-scale domestic agriculture. The plot has an irregular-shaped boundary and is surrounded by similar undeveloped lands—mostly privately owned by the local Amerindian communities.

PCI-Sinopharmintl Consortium has already submitted an application for a permit to the Environmental Protection Agency (EPA). Relevant documents can be found in **Appendix Fourteen**, and the application is currently awaiting EPA's review and approval.

PCI-Sinopharmintl Consortium has signed a land lease agreement with local residents, with the Village Council acting as a witness. The Village Council has granted formal permission for the land to be used as a camp. Please refer to **Appendix Fourteen** for the land use authorization. The land use agreement for the water pipeline is also included in Appendix 14.

The soils at the site are predominantly composed of red clay, with varying concentrations of laterite and sand. From a depth of 3 meters to the termination depth (12 meters), the soil profile transitions into a whitish-grey clay layer with varying concentrations of silt, laterite, and lenses of fine and coarse-grained sand.

The campsite is located close to the road, with only a few scattered residential houses in the vicinity. PCI-Sinopharmintl Consortium has obtained formal permission from the Santa Rosa Village Council to use the land. The hospital layout and detailed arrangement of the temporary camp can be found in **Appendix Fourteen.**

1.6.1. Main Campsite

The campsite covers an area of 2.0 acres, as shown in the map provided in **Appendix Fourteen.** It primarily includes office and living areas, a photovoltaic power station, and a miscellaneous materials storage yard. The camp is also equipped with fuel storage facilities, a waste management system, septic tanks, and a water supply system. The cement warehouse, other material storage yards, and the batching plant are located within the boundaries of the construction site provided by the Ministry of Health.

Figure 4: Main Campsite Land

1.6.2. Temporary Facilities

Prior to the commencement of construction, several temporary facilities will be established to support project management and workers' accommodation. These temporary facilities will be set up in a dedicated area adjacent to the Moruca Hospital and will be zoned according to their respective functions. The functional divisions of the temporary facilities are as follows:

- **Zone A – Temporary Facility One:**

This zone occupies approximately 1,920 square meters and serves as the project office and accommodation area for management personnel. It is equipped with offices, meeting rooms, dormitories, and a canteen. The facility is located near the main entrance, facilitating efficient coordination and daily administrative management.

- **Zone B – Temporary Facility Two:**

Covering an area of approximately 1,680 square meters, this zone is designated as the workers' dormitory area. It is equipped with showers, toilets, rest areas, and an emergency medical room. The layout prioritizes ventilation and safety to accommodate the rotational rest needs of construction workers.

During the construction period, the workforce is expected to consist of approximately 100 workers, including 80 Chinese workers and 20 local workers. Dormitories will be constructed using container-type housing, with brick-built toilets and shower areas, and air conditioning installed in each room. Separate dormitories, toilets, and showers will be provided for female workers to ensure privacy and safety.

The office and living area cover approximately 0.82 acres, accounting for 41% of the total camp area. This area will include 6 offices, 26 living rooms (each accommodating 3 or 5 people), conference rooms, toilets, showers, kitchens, a dining hall, generators, and other facilities.

- **Zone C – Temporary Facility Three:**

This zone is designated for a photovoltaic power station and material storage area. Construction materials such as rebar, cement, and cables will be stored here in a centralized manner. A temporary power generation system will also be installed. The site is located near the main construction access road to facilitate transport and logistics management.

Figure 5; Identified locations of the Temporary Facilities

Overall, *Temporary Facilities* refer to various simple and essential structures established by construction contractors to support project progress and site management. These typically include:

- Temporary work sheds, equipment sheds, material warehouses, offices, lounges, toilets, septic tanks, and water storage tanks
- Temporary internal roads and perimeter walls
- Temporary water supply, drainage, power supply, and other utility pipelines
- Temporary turnover housing
- On-site welfare facilities such as staff dormitories, canteens, bathrooms, and medical clinics

Table 3: Temporary Facilities of the Project

No.	Item	Unit	Area	Remarks
1	Living and Office Facilities			
1.1	Management Dormitory	㎡	200	1–4-person room
1.2	Management Office	㎡	180	
1.3	Management Canteen	㎡	60	
1.4	Employee Dormitory	㎡	400	2–6-person room
1.5	Employee Canteen	㎡	60	
1.6	Employee Toilet	㎡	30	
1.7	Employee Bathroom	㎡	30	
2	Production Auxiliary Facilities			
2.1	Rebar Processing and Storage Yard	㎡	160	
2.2	Steel Structure Storage and Assembly Yard	㎡	120	
2.3	Turnover Material Storage Yard	㎡	200	
2.4	Masonry Material Storage Yard	㎡	120	
2.5	Material Warehouse	㎡	60	

1.7. Construction Phase Activities

1.7.1. Preconstruction and Construction Activities

Outlined below are the main pre-construction activities that will be conducted prior to the undertaking of primary construction activities. Notably, several preconstruction activities may also occur concurrently with some construction activities. Those activities are outlined below:

1.7.2. Land clearing and excavating

Clearing of any secondary vegetation and surface debris within the project site. Segregation and removal of any legacy waste to an approved disposal location. Excavation shall be done to design depths for foundations and site drains. The installation of applicable perimeter silt fencing and sediment basins will be included before breaking ground to protect any nearby watercourses and the community.

1.7.3. Grubbing and leveling of the site

This step will involve the removal of stumps/roots and unsuitable soils; proof-rolling and compacting will be done to a specified density in alignment with engineering considerations

1.7.4. Termite treatment of soil

An application of a soil termiticide barrier will be placed along footings, slab perimeters, service penetrations, grade beams, and at any other necessary location. We will use licensed personnel to conduct this activity in compliance with regulatory best practices.

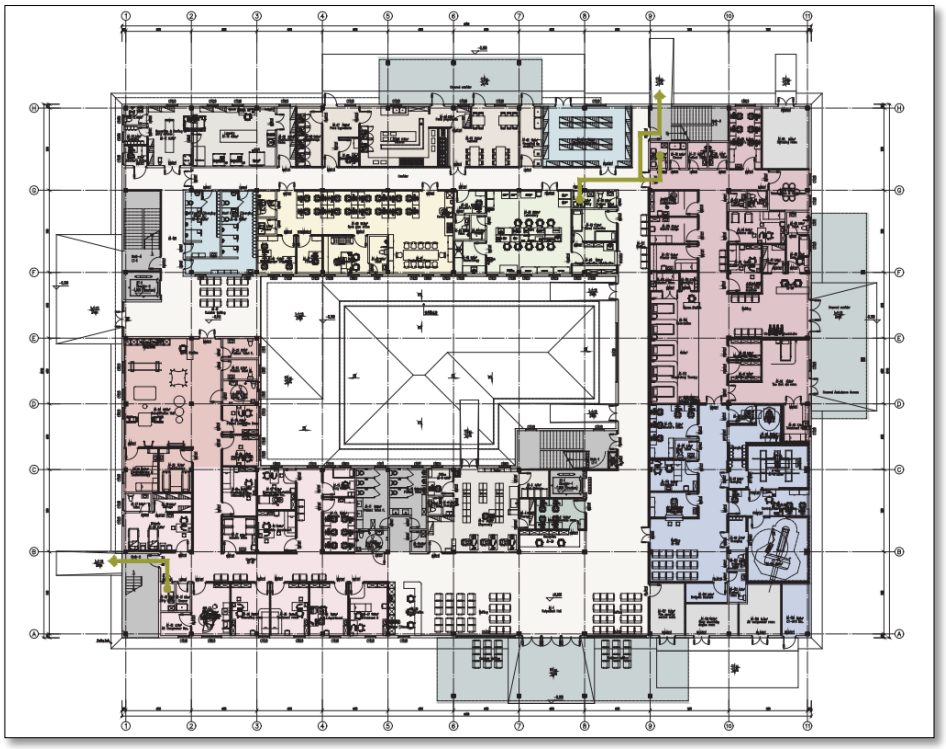


Figure 6: Proposed design of the floor plan of the ground floor of the Hospital

1.7.5. Installation of temporary hoarding

Hoarding will be placed around the active worksite, along with reflective warning, site access restriction signs, and general safety signage. Additionally, the placement of debris netting will be installed, along with efforts to maintain vegetation as a buffer where feasible, to minimize noise/dust toward Santa Rosa/Moruca settlements.

1.7.6. Stockpiling of materials and equipment

The materials storage yard will be primarily used for storing miscellaneous materials. Most of the materials will be stored within the boundaries of the construction site provided by the Ministry of Health. Most of the materials are procured from other countries, shipped by sea to Georgetown, and then transported to the camp site.

1.7.7. Drainage works to manage rainfall runoff

Construction will include the creation of permanent and temporary interceptor drains, diversion swales, and sumped outlets ahead of major excavation. This activity will be aligned with the hospital's engineered designed stormwater system for strategic long-term erosion control at outlets. Any updates in this regard will be communicated to the necessary stakeholders.

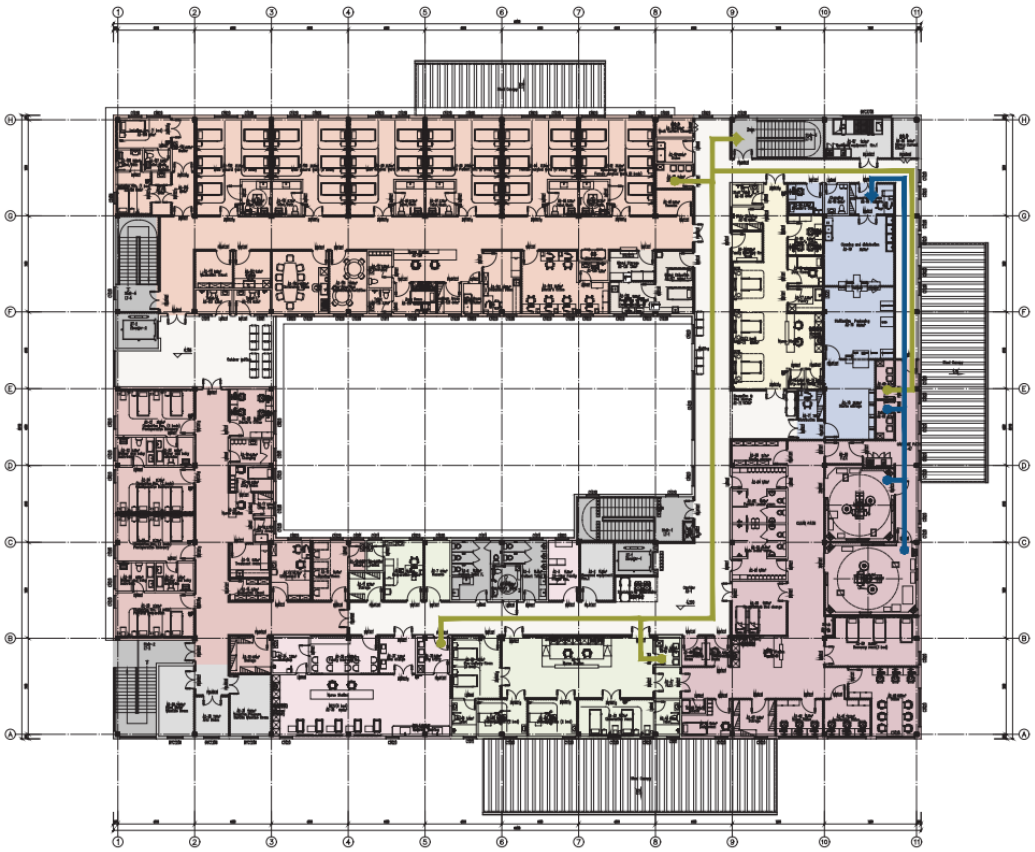


Figure 7: Proposed design of the floor plan of the first floor of the Hospital

1.7.8. Foundation Treatment and Shallow Foundation Work

Some related activities for this have already been mentioned, such as excavating and leveling the site. This step involves any preparation and improvement of the ground before placing the foundation. It includes activities such as removing unsuitable soil, compacting or stabilizing the subgrade, applying termite treatment, or using soil replacement and chemical additives to strengthen the bearing capacity of the ground. The goal is to ensure a stable, uniform base that can safely carry the loads of the structure.

Where the existing soil shows insufficient bearing capacity, it will be replaced and compacted to meet the design requirements for structural support. The new medical complex building adopts a shallow foundation system.

1.7.9. Construction of the Medical Complex

The new medical complex building adopts a steel structure system, and the floor slabs are made of reinforced concrete. The main construction processes will include the placement of the following: -

- Steel structure installation
- Casting of reinforced concrete floor slabs
- Masonry works for internal and external walls
- Roof structure and covering installation
- Installation of water, power and control, firefighting, air-conditioning and ventilation, medical gas pipeline, activities of which are included in the Mechanical, Electrical, Plumbing (MEP) step.

1.7.10. Mechanical, Electrical, and Plumbing (MEP)Installation

The MEP activities will include the installation of the following systems within the facility, specifically electrical systems, HVAC (Heating, Ventilation and Air Conditioning), plumbing, intelligent systems, firefighting systems, elevators, and medical gas pipelines.

1.7.11. Landscaping and Decorative Finishing

Finishing and decoration activities will include masonry and plastering, painting and tiling, ceiling installation, and interior finishing. For landscaping activities native species will be used (no invasive species).

1.7.12. External Works

External works to be completed will include the construction of roads, installation of utility pipelines, landscaping, installation of streetlights, construction of a car parking lot, and general site cleaning.

1.7.13. Decommissioning of the Workers' Camp

This will be outlined in further detail when final decisions are made about post-construction use of the Workers' Camp and other temporary facilities in the compound.

Figure 8: Effective Drawing of the Moruca Regional Hospital

1.8. Supporting Facilities

1.8.1. Warehouse

A storage warehouse will also be placed on site and primarily used for storing miscellaneous materials in the early stages. At a later stage, the warehouse will be used as a storage facility for bulk materials.

1.8.2. Power Supply

The camp's living and office areas will use solar photovoltaic panels for power generation, while the construction site will rely on diesel generators for electricity supply. Additionally, a backup diesel generator will be installed at the camp to ensure uninterrupted power supply in case of insufficient solar power or emergencies.

1.8.3. Water and Sanitation

As there is no municipal water supply system in the Moruca area, the entire village relies solely on a well and a basic water storage system. Based on site conditions, a phased water supply plan will be implemented for the camp at different stages of development.

The Guyana Water Incorporated (GWI) recently installed pipelines near the site. The Contractor will utilize these pipelines for the construction of the temporary facilities and for domestic use, and construction use.

No other water source will be used at this time. If this changes and the need for more water arises, this document will be updated to reflect any risks and mitigation measures for approval before ultimately

selecting any other water source. Bottled water will be purchased to meet drinking water needs. Any permits required for any additional sources of water will be mentioned and included in the document.

The camp and hospital will be equipped with necessary sanitation facilities, including toilets, showers, handwashing stations, and a wastewater sedimentation tank (septic tank). Organic sludge from the septic tank will be used as fertilizer for local crops. The sedimentation tank will be inspected regularly to prevent leakage.

Wastewater will be discharged into a nearby natural drainage ditch after undergoing sedimentation and anaerobic treatment by the septic tank. Following tertiary treatment in the septic tank, the effluent will flow into a small sewage treatment system, and the treated water will be reused for purposes such as construction site maintenance and dust suppression on roads.

All wastewater discharged into public water bodies will be tested to ensure compliance with industrial effluent discharge standards. Before the camp is decommissioned, all solid waste in the septic tank will be properly cleaned and disposed of in accordance with environmental regulations to prevent pollution.

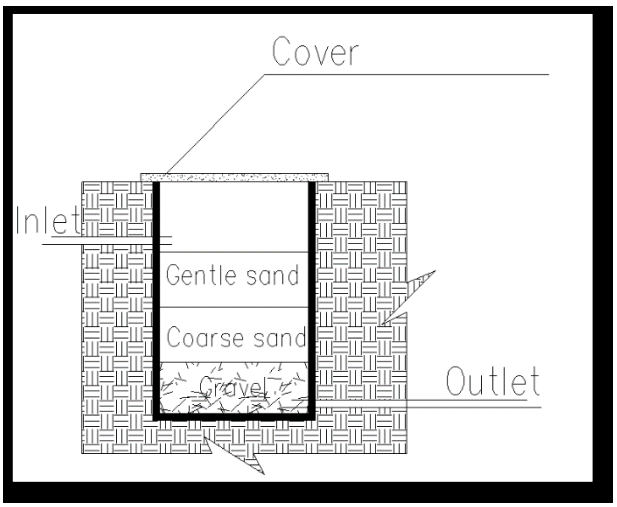


Figure 9: Water Treatment Tank

1.8.4. Fuel Storage

Fuel storage will be located in a designated, fenced zone on a concrete base to prevent soil contamination. After the construction site is completed, the concrete will be dismantled and repurposed to improve local muddy roads.

Tanks will be labeled, covered, and protected from direct sunlight and precipitation. Emergency spill kits, fire extinguishers, and appropriate signage will be provided. Refueling will only take place in designated areas and will be carried out by trained personnel.

The fuel tank will be enclosed within a double-walled retention basin to ensure additional containment and environmental protection. The fuel tank will be a locally procured prefabricated unit, and a concrete containment barrier will be constructed around the storage area to prevent leakage. The layout

plan of the temporary facilities will be submitted for approval by the Village Council prior to construction.

1.8.5. Hazardous Material Storage

Hazardous material storage will include paints, solvents, oils, and chemical additives used in construction. These materials will be stored in ventilated, locked containers within a covered hazardous materials shed. Each item will have a corresponding Material Safety Data Sheet (MSDS) available on site. Secondary containment trays will be used to prevent leakage and ensure environmental protection.

1.8.6. Emergency Preparedness

Staff will be trained in spill response and fire control. Training will be organized upon worker mobilization to the site and conducted every six months thereafter. Emergency arrangements will be regularly kept under review and amended when necessary. For example, as building work progresses and the site layout changes, fire exit routes and muster points might need to be repositioned. A spill response protocol is included in the Emergency Response Plan in **Appendix Five**. All incidents will be logged and reported to the site HSE (Health, Safety, and Environment) Officer.

1.8.7. Solid Waste

Construction and domestic waste will be sorted at the source. Separate bins for recyclable, hazardous, and general waste will be placed on site.

As there are no licensed waste handlers in the area, the Contractor will coordinate directly with the Village Council to manage waste disposal. Waste will be transported to a local disposal site designated and approved by the Village Council for centralized treatment, in accordance with agreed environmental protection measures. The designated site approved by the Village Council is located approximately 3km to the southeast of the hospital premises.

1.8.8. Hazardous Waste

Hazardous waste will be placed in sealed containers for temporary storage in a covered, bunded area. Collected oils, paints, and chemicals shall be disposed of either through certified third parties where available, or through locally approved disposal methods in coordination with the Village Council.

1.8.9. Construction Debris

Waste will be sorted and temporarily stockpiled in designated zones. Non-recyclable materials will be disposed of at an approved location. Detailed requirements shall be followed in accordance with the Waste Management Plan in **Appendix Nine**.

1.9. Associated Facilities

The construction of housing for doctors and nurses by the Government of Guyana (GoG) is considered an associated facility of the project. This hospital construction project currently occupies only 60% of the approved land. Depending on the future presence and accommodation needs of medical staff, additional dormitories and related supporting facilities may be constructed on the remaining land. However, such associated facilities are not included in the scope of the current hospital project tender, nor are they covered under the construction contract. If this changes, the necessary updates will be made to the ESA/ESMP document. To help ensure that the environmental and social aspects of these associated facilities is addressed this ESA/ESMP document will be made available to the GoG so that it can be incorporated into the works.

1.10. Surrounding Communities

Approximately seven local residential houses are located within 600 meters of the hospital site, and a spring is located about 300 meters to the northwest. To the east, the Moruca River lies 3.9 km away, and the Santa Rosa Village administrative center is approximately 3 km away.

Therefore, the camp and construction of the hospital is expected to have minimal physical impact on surrounding residents. Due to the distance, construction activities at the camp and the hospital will have limited environmental or noise impact. However, the influx of approximately 70 workers may introduce potential social impacts. These may include conflicts with local residents, alcohol consumption, increased pedestrian and vehicle traffic, social disruption, harassment or abuse, and threats of physical harm.

To effectively prevent and address the potential social risks associated with the influx of workers during the construction and operation phases of the camp, the following mitigation measures will be implemented. These actions aim to ensure harmonious coexistence with the local community while maintaining social stability and cultural respect in the village.

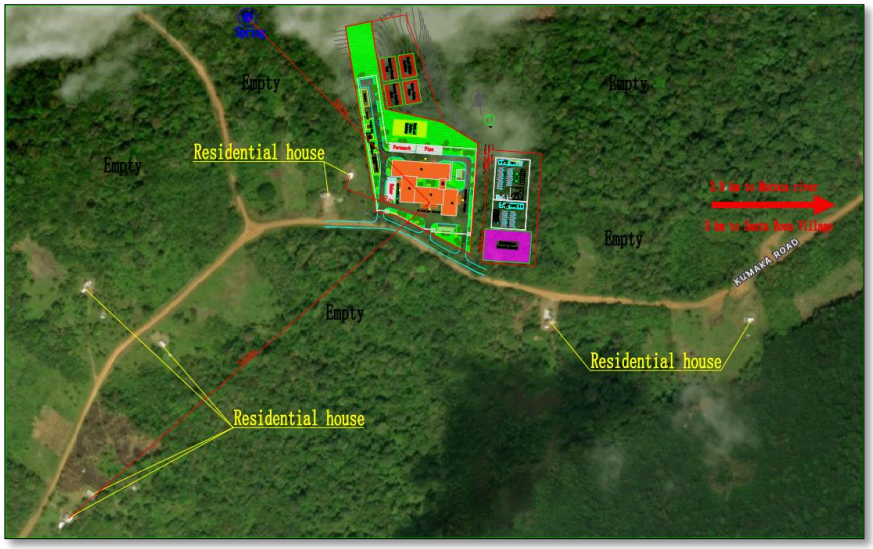


Figure 10: Map of Camp Location

1.10.1. Worker Code of Conduct and Behavior Management

A formal Code of Conduct is developed and included in **Appendix Six,** and will be enforced. All workers must receive training and sign the code before starting work. It will include rules prohibiting harassment, alcohol abuse, discrimination, and require respect for local customs.

Inappropriate interaction between workers and local residents—especially women and minors—will be strictly prohibited and subject to disciplinary action.

Physical boundaries between the camp and the village will be clearly defined, with restrictions on workers moving into the community during non-working hours.

A Workers Influx Management Plan included at **Appendix Thirteen** below ensures that the introduction of workers into an Amerindian village respects the **Amerindian Act 2006**, maintains community control over land access, protects local customs, and safeguards against social disruption, including **community conflict and gender-based violence (GBV)**. Though the Santa Rosa Village Council does not have defined, formal village rules to be incorporated into the Workers, Influx Management Plan, the Contractor will follow the necessary measures as outlined in the plan.

1.10.2. Community Engagement and Communication

A regular communication mechanism will be established with the Village Council, with monthly coordination meetings to share updates on construction activities, workforce numbers, and respond to community concerns.

A Community Liaison Officer will be appointed to facilitate communication and coordination between the project and the community.

Project contact information, grievance channels, and village contact persons are already posted at the construction site, and made available to the Village Council to ensure timely response to complaints

or issues.

1.10.3. Security and Traffic Management

The proposed hospital site in Moruca is located in a rural, low-density area where traffic volumes are minimal and do not present the risks typically associated with urban or peri-urban health facilities. According to the Guyana Revenue Authority (GRA), approximately 600 vehicles are registered within the sub-district. However, traffic circulation is sparse, and there are no major roadways or intersections in the immediate vicinity of the hospital site that would generate congestion or require formalized traffic management.

Given this context, a comprehensive Traffic Management Plan is not considered necessary. Instead, proportionate measures will be adopted to ensure safety and orderly movement of vehicles associated with the project. These include:

i) Implementing speed limits for project vehicles in and around the construction zone.

ii) Designating safe delivery schedules and access routes for construction materials;

iii) Ensuring separation of pedestrian pathways from vehicular access areas; and

iv) Coordinating with the local authorities and Village Council to notify residents of any exceptional transport activities, such as movement of heavy equipment.

These context-specific measures are considered sufficient to manage the limited traffic risks at the Moruca hospital site. Should traffic conditions change significantly in the future, the project will revisit the need for additional traffic management provisions and update this document accordingly.

Construction routes and schedules will be optimized to avoid peak community traffic hours (e.g., school or work commutes). All construction vehicle operators will be certified; speed limits and warning signage will be strictly enforced. Traffic marshals or signage will be provided at village entrances and areas with high pedestrian activity.

1.10.4. Camp Life and Recreation Management

Recreational areas will be provided within the camp to discourage workers from wandering into the community during off-hours. Alcohol consumption will be strictly regulated inside the camp; alcoholic beverages will be prohibited in work and residential zones.

Basic medical services will be provided in the camp to reduce pressure on local health facilities.

1.10.5. Gender-Based Violence (GBV) and Vulnerable Group Protection

Gender sensitivity and anti-harassment training will be conducted to raise awareness among workers, as outlined in Socio-Cultural Analysis (SCA) and Indigenous Peoples Plan (IPP). **See Appendix Sixteen.**

The PEU has established and operationalized a Grievance Redress Mechanism (GRM) to allow for any victim of GBV/SEA/SH protection through anonymity. The GRM Form can be accessed here: https://health.gov.gy/wp-content/uploads/2025/06/HCNS-PROJECT-GRIEVANCE-REPORT-FORM-test.pdf. In addition, the GRM also allows for oral complaints, where literacy is low.

The project ensures that children are protected from child labour and other vulnerable groups from forced labour through due diligence processes of subcontractors and suppliers. In addition, the Contractor hereby commits to follow all Guyanese labour laws, as outlined in the Labour Management Procedures (**See Appendix Six).**

1.10.6. Worker Registration and Access Control

All non-local workers will be registered by name, with records maintained both at the camp and shared with the Village Council to ensure traceability.

Access to the camp will be strictly controlled. External visitors must apply in advance and obtain approval before entering.

2. Legislative Framework

This section evaluates the existing Guyanese institutional and regulatory frameworks, as well as the IDB's Environmental and Social Policy Framework, which together govern the execution of this project.

2.1. *Environmental Protection Act (1996)*

In 1996, the Environmental Protection Act was enacted to implement the environmental provisions of the Constitution. The Act is Guyana's most significant piece of environmental legislation, as it articulates national policy on key environmental issues such as pollution control, the requirements for environmental review of projects that could potentially impact the environment, and penalties for environmental infractions. It also provides for the establishment of an Environmental Trust Fund.

Most importantly, the Act authorizes the establishment of the Environmental Protection Agency (EPA) and designates it as the lead agency on environmental matters in Guyana. The Act further mandates the EPA to oversee the effective management, conservation, protection, and improvement of the environment. It requires the EPA to take necessary measures to prevent and control pollution, assess the environmental impact of economic development, and promote the sustainable use of natural resources.

As mandated by the Environmental Protection Act (1996), the PCI-Sinopharmintl Consortium is required to apply for an environmental permit for the construction of the Moruca Hospital. The consortium has submitted a permit application covering the entire project and is currently awaiting the EPA's due diligence process. As of now, the EPA has not yet conducted its review for permit issuance. **Annex Three** will include the construction permit, and this document will be updated accordingly once it becomes available.

2.2. *Environmental Protection Water Quality Regulations (2000)*

These regulations require, among other provisions, the registration and environmental authorization of any person or entity whose construction, installation, operation, modification, or expansion of a facility may result in the discharge of effluents.

They establish that the EPA may, at any time after the commencement of the regulations, set parameter limits for effluents that may be discharged into any inland or coastal waters or land within Guyana.

Guidelines on the discharge of effluents and the disposal of waste are detailed within these regulations. The legislation also includes reporting requirements, penalties for violations of environmental standards, and permit requirements for effluent discharges.

In addition, drinking water quality standards have been developed and are maintained by the Guyana National Bureau of Standards (GNBS).

2.3. *Environmental Protection Noise Management Regulations (2000)*

Under the Environmental Projection Noise Management Regulations (2000), operations that emit noise in the execution of various activities such as construction, transport, industry, commerce and any institution are required to apply to the Agency for an environmental authorization. The regulation establishes general provisions for noise avoidance and restrictions from multiple commercial and industrial sources including sound-making devices, nightclubs, equipment, tools, and construction activities.

EPA and the Guyana National Bureau of Standards (GNBS), together with other relevant agencies, developed Guidelines for Noise Emission into the Environment. The regulation includes reporting requirements, penalties for violations of standards, and permitting requirements for operations that emit noise.

2.4. *Environmental Protection Air Quality Regulations (2000)*

This regulation establishes that the EPA shall, at any time after the commencement of the Regulation, and establishes limits for any of the contaminants specified in the Regulation. It sets the ambient air quality standards, reporting requirements, penalties for violations of standards, and permitting requirements for stationary and mobile sources of air emissions.

2.5. *Sexual Offences Act (2010) (Amended 2013)*

The Sexual Offences Act of 2010 reforms and consolidates the laws relating to sexual offences. The Act makes provisions for the prosecution of acts of sexual offences, and provides the framework for various measures to be implemented including establishing a National Plan for the Prevention of

Sexual Offences that aims to prevent and bring awareness to sexual offences in Guyana. The Sexual Offences Act outlines the avenues available to the victim to redress by the justice system.

2.6. *Amerindian Act (2006)*

The Amerindian Act (2006) provides for the recognition and protection of the collective rights of Amerindian Villages and Communities, mechanisms for good governance within Amerindian villages and communities and the granting of land to these villages and communities. The Act recognizes the rights of indigenous peoples and communities and provides for participatory governance. The Act supports and encourages their right to preserve a traditional culture, cultural landscapes and traditional knowledge and languages as a minority group. Further, the Act makes provision for the self-governance and administration of lands that have been demarcated Amerindian territories, and therefore, controls the land use and planning within the areas. The Act also established the National Toshaos Council (NTC) and Village Councils, which are the main governing bodies, and are concerned with the overall well-being and development of the collective and individual indigenous communities. The Act also provides additional guidelines and procedures for Amerindian communities and their interaction with other industries, as well as stipulates measures of offences and redress.

2.7. *IDB's Environmental and Social Policy Framework*

The IDB requires its projects to apply the set of ten Environmental and Social Performance Standards (ESPS) presented in their Environmental and Social Policy Framework (2020). The ESPS are summarized in **Table 4**.

Table 4: IDB's Environmental and Social Performance Standards that apply to this project

ESPS	Objective
ESPS 1 **Assessment and Management of Social Risks and Impacts**	• To identify and evaluate environmental and social risks and impacts of the project. • To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, affected communities, and the environment. • To ensure that grievances from project-affected people are responded to and managed appropriately. To promote and provide engagement with project-affected people and other stakeholders throughout the project cycle and disclose environmental and socially relevant information.
ESPS 2 **Labor and Working Conditions (Project will have direct and indirect workers on site)**	• To promote the fair treatment, non-discrimination, and equal opportunity of workers. • To establish, maintain, and improve the worker-management relationship. • To promote compliance with national employment and labor laws. In addition, a workers' code of conduct will be used and contracts for all workers will be used. • To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain. • To promote safe and healthy working conditions, and the health of workers. • To avoid the use of child labor and forced labor. • To ensure accessible and effective means to raise and address workplace concerns. To support the principles of freedom of association and collective bargaining of project workers.
ESPS 3 **Resource Efficiency and Pollution**	• To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.

ESPS	Objective
Prevention (Project will consume resources and will produce waste and emissions)	• To promote more sustainable use of resources, including energy and water. • To reduce project-related GHG emissions. • To minimize and manage the generation of waste and impacts of pesticide use.
ESPS 4 **Community Health, Safety and Security (There are communities and foot traffic in the Project's area of influence)**	• To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances. • To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities. To anticipate and avoid adverse impacts on the project itself from natural hazards and climate change during the project life cycle.
ESPS 5 **Land Acquisition and Involuntary Resettlement**	• To avoid, and when avoidance is not possible, minimize displacement by exploring alternative project designs. • To avoid forced eviction. • To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement cost116 and transitional hardships; (ii) minimizing disruption to their social networks and other intangible assets; and (iii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected. • To improve or restore the livelihoods and standards of living of displaced persons. To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure, and safety at resettlement sites.
ESPS 6 **Biodiversity Conservation and Sustainable Management of Living Natural Resources**	• Maintain ecosystems and the variety of species they support • Prevent adverse impacts on critical habitats and species at risk. • Safeguard natural processes that provide benefits to people such as water regulation, soil fertility, pollination, and climate regulation. • Ensure that renewable resources (forests, fisheries, wildlife, etc.) are managed in a way that maintains their long-term viability. Prevent or control the spread of non-native species that may harm ecosystems, native biodiversity or community livelihoods.

ESPS	Objective
ESPS 7 **Indigenous Peoples**	• To ensure that the development process fosters full respect for the human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples. • To anticipate and avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not possible, to minimize and/or compensate for such impacts. • To promote sustainable development benefits and opportunities for Indigenous Peoples in a culturally appropriate manner • To establish and maintain an ongoing relationship based on Informed Consultation and Participation (ICP) with the Indigenous Peoples affected by a project throughout the project's life cycle. To ensure the Free, Prior, and Informed Consent (FPIC) of the Affected Communities of Indigenous Peoples when the circumstances described in this Performance Standard are present.
ESPS 8 **Cultural Heritage**	• To protect cultural heritage from the adverse impacts of project activities and support its preservation. • To promote the equitable sharing of benefits from the use of cultural heritage.
ESPS 9 **Gender Equality**	• To establish actions to prevent or mitigate risks and impacts, including sexual and gender-based violence (SGBV). • To achieve inclusion from project-derived benefits of people of all genders, sexual orientations, and gender identities. • To promote safe and equitable participation in consultation and stakeholder engagement processes regardless of gender, sexual orientation, and/or gender identity. • To meet the requirements of applicable national legislation and • International commitments relating to gender equality.
ESPS 10 **Stakeholder Engagement and Disclosure**	• To assess the level of stakeholder interest and enable stakeholder's views to be considered in project design and E&S Performance. • To promote engagement with project people on issues that could affect or benefit them from the project • To ensure environmental and social risks and impacts of the project are disclosed to stakeholders

3. Analysis of Alternatives

As part of the ESMP process, alternatives pertaining to the project were examined. The alternatives considered were:

- No project alternative
- Use of an alternative source of funding
- Construction of new hospitals instead of improving the existing hospitals
- Alternative interventions/designs
- Off-site construction
- Phased construction
- Construction with low-impact materials

These alternatives are examined in the Table below.

Table 5: Analysis of Alternatives

Alternatives	Description	Potential Benefits	Possible Challenges	Additional Comments
No Project Alternative	Consideration of the 'no project' scenario is important in order to evaluate the implications of not undertaking the Project. This simply means that the hospital construction will not proceed.	- No further environmental disturbance to land, air, or water upon the present active site of the hospital - Avoidance of temporary disruption to the community (noise, traffic, etc.).	- Continued inadequacy of healthcare infrastructure in Region 1. - Exacerbation of existing public health challenges, especially in remote and Indigenous communities. - Long-term social cost outweighs short-term environmental benefits.	Not a viable long-term option due to significant social and public health implications
Use of Alternative Source of Funding	Explore other funding mechanisms (e.g., public-private partnerships, private partnerships, international donors, health grants) rather than relying on the current source.	- Reduced financial burden on national/local government. - Possibility of accessing modern technologies and international expertise. - Increased stakeholder involvement and accountability.	- Potential delays in securing alternative funding. - Donor requirements may conflict with national priorities or construction timelines. - New funding source may lack the high standards to effectively monitor project objectives	Viable and potentially beneficial but may require project schedule adjustments and new monitoring documents

Alternatives	Description	Potential Benefits	Possible Challenges	Additional Comments
Construction of New Hospitals instead of Improving the Existing Hospitals	Build entirely new healthcare facilities at different locations in Region 1 instead of expanding or modifying existing ones like Kumaka District Hospital.	- Opportunity for state-of-the-art designs tailored to specific health service needs. - Potential to decentralize services and reduce patient load on the current facilities.	- Higher cost implications and resource needs (land acquisition, utilities, road access). - Possible duplication of services or underutilization of new facilities. - Larger environmental footprint due to extensive construction around the region.	Could be complementary in the long term, but not a substitute for the Moruca project's immediate goals.
Alternative Interventions/Designs	Modify the design to include climate-responsive architecture, modular units, or sustainable systems like rainwater harvesting and solar power.	- Reduced long-term operational and environmental costs. - Greater climate resilience - Opportunity to create a health facility aligned with green building principles for long-term sustainability within the region	- May require specialized materials or expertise not readily available locally. - Slightly higher upfront design and construction costs. - Longer design considerations and review to ensure the right decisions are made, incorporating green building principles	Highly recommended—promotes sustainability, resilience, and efficiency

Alternatives	Description	Potential Benefits	Possible Challenges	Additional Comments
Off-site Construction (Modular Construction)	Use prefabricated modules built off-site and have them assembled on location	- Reduced environmental disturbance at the Kato site. - Faster construction timeline, improving healthcare delivery sooner. - Improved quality control and worker safety. - Sustainable designs can be incorporated into the modular construction approach	- Logistics of transporting modular units to the remote Kato/Region 8 area. - A limited, skilled local workforce to prepare modular units may limit/reduce the involvement of the community and the economic benefits.	Technically feasible, especially for components like staff housing or clinics, if the transport infrastructure can support it
Phased Construction	Implement construction in multiple phases over time to reduce impacts and maintain continuity of services.	- Less disruption to existing healthcare services. - Easier management of environmental and social impacts such as dust, noise, and traffic - Better budget management.	- Longer total construction period is expected - Requires detailed coordination by the project management to avoid inefficiencies or design conflicts.	Recommended for active hospital sites; ensures continued health service provision and controlled impact.
Construction with Low-Impact Materials	Use materials with lower carbon footprints or sourced sustainably	- Reduced GHG emissions and construction waste. - Improved energy efficiency throughout the construction phase. - Promotes sustainable construction practices in Guyana.	- May be costlier or less available in the Kato/Region 8 area. - The Project Team may have to be adjusted to have experience with alternative and sustainable materials.	Where feasible, this concept can be integrated into the present designs, especially for components like walls, flooring, lighting and roofing

4. Description of the Environment

This section provides a detailed overview of the physical environment. To understand the potential environmental impacts that may arise from the operations within the campsite and the construction activities, it is essential to generate baseline environmental data for the area. This data will offer valuable insights into potential significant impacts and inform the development of appropriate environmental safeguards.

In this assessment, the environmental characteristics of the project area were identified through a literature review and data interpretation. Secondary data (e.g., climate, topography) were obtained from a variety of existing sources.

4.1 Guidance Standards

Both international and national guidelines and standards—including those of the Guyana National Bureau of Standards (GNBS) — will be referenced when reviewing the retrieved secondary data. When specific environmental components are discussed, the applicable standards or guidelines will be stated in that section. As such, the environmental components assessed included topography, biodiversity, soils, climate, air, water, and noise.

4.2 Climate

Moruca is located in Region 1 (Barima-Waini) of northwestern Guyana, along the Atlantic coastline. It features a tropical humid climate, heavily influenced by the Inter-Tropical Convergence Zone (ITCZ) and northeasterly trade winds from the Atlantic Ocean. The region experiences high temperatures, humidity, and rainfall throughout the year, with relatively low wind speeds.

Average annual temperatures in the Moruca region typically range between 24°C to 31°C, with coastal proximity moderating extreme heat. Due to its low elevation and nearness to the sea, daily temperatures remain warm and humid, but not as extreme as in the interior savannah areas.

Moruca follows two distinct wet seasons — from April to July and November to January — during which precipitation is intense and prolonged, often exceeding 2,500 mm annually, higher than the national average due to orographic lift and maritime air masses. The dry seasons occur from February to March and August to October, although short, intense showers may still occur.

During the wet periods, relative humidity often reaches 100%, especially in early mornings, leading to frequent fog and low-lying cloud cover. In contrast, the dry season brings higher sunshine hours, though overall cloud cover remains common year-round due to the tropical marine influence.

The region is also affected by El Niño and La Niña climate cycles, which cause variations in rainfall and temperature. El Niño years tend to bring drier conditions and higher temperatures, while La Niña events contribute to increased rainfall and flooding risk.

Due to the flat terrain and proximity to rivers and wetlands, flooding during the rainy season is

common, and drainage and moisture control are important considerations for construction and infrastructure planning in the Moruca region.

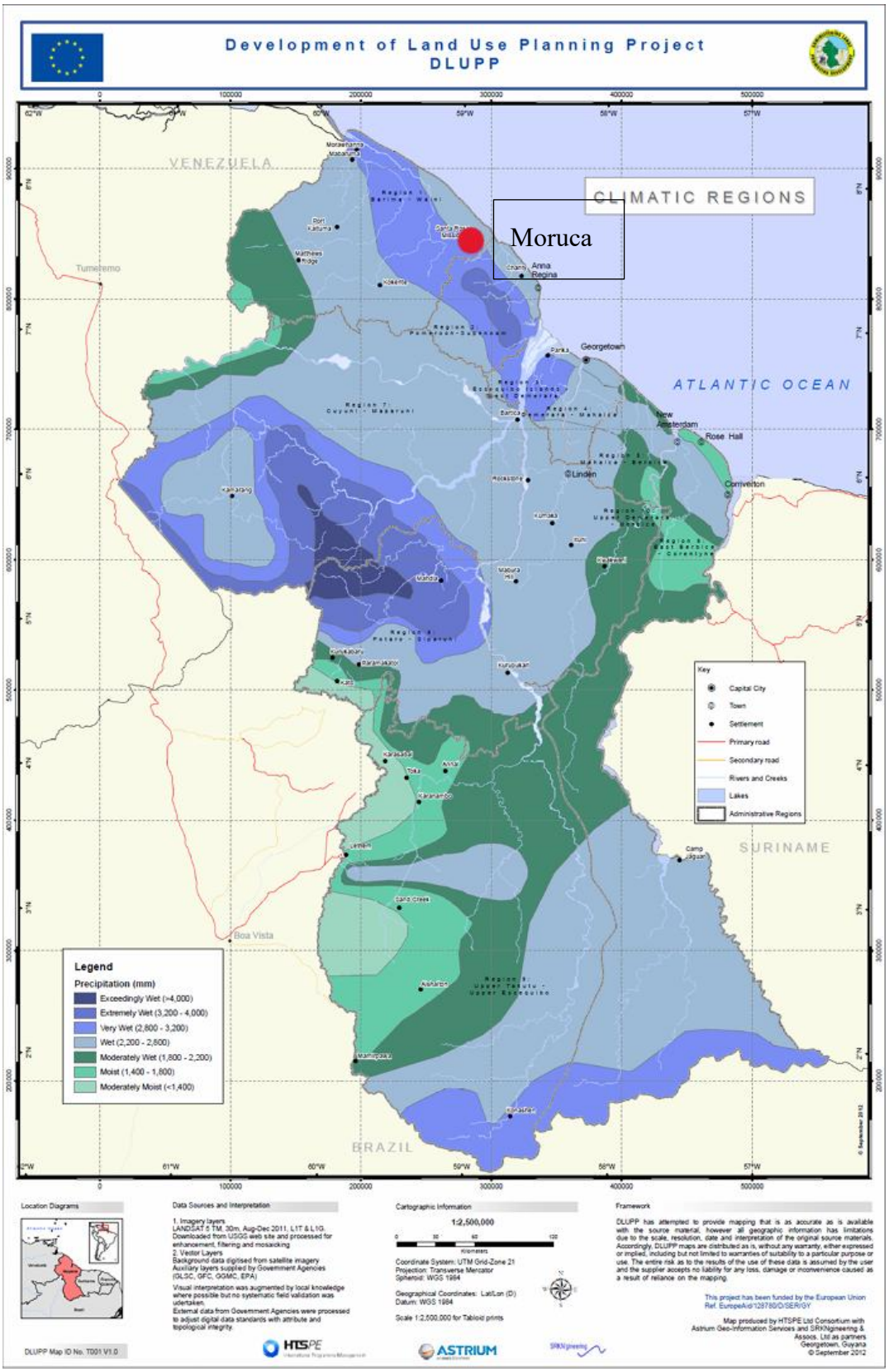


Figure 11: Climatic Regions of Guyana

4.3 Topography

The Moruca site is generally flat, with gradual undulations emerging toward the northwestern section, where the terrain transitions into slightly rolling hills. The overall elevation change across the site is approximately 30 feet (about 9 meters).

According to the geotechnical investigation, the surface layer consists of red clay soils extending to about 3 meters deep. These soils contain significant concentrations of iron and aluminum oxides, indicative of lateritic soils, which are typical in tropical environments with high temperatures and heavy rainfall. The lateritic soils in Moruca are reddish-brown to deep red in color, due to the high iron oxide content.

Beneath this layer, the soil transitions into a whitish-gray clay stratum containing intermittent layers of silt, fine sand, and coarse sand. Standard Penetration Test (SPT) results revealed dense sand layers below 12 meters, which presented resistance to in-situ testing equipment such as the shear vane.

Although lateritic soils are typically low in nutrients and not suitable for intensive agriculture, they are well-drained and structurally stable, supporting the growth of dense tropical vegetation, including trees, shrubs, palms, and endemic plant species.

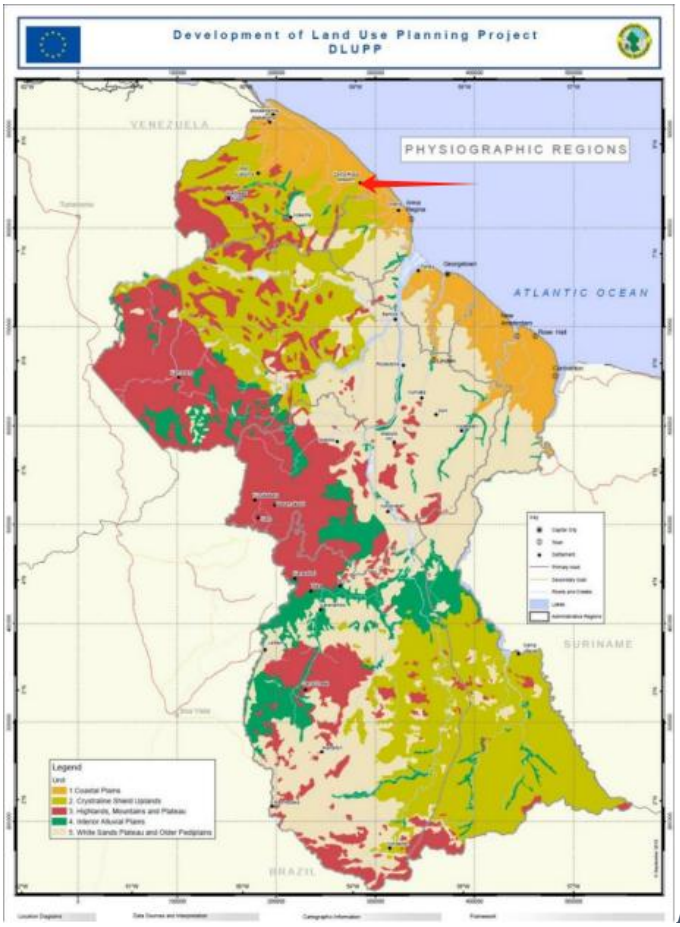


Figure 12: Physiographic regions of Guyana

4.4 Soils

The soil in the Moruca region of Guyana, located along the coastal lowlands in the northwest of the country, is predominantly lateritic and clay-rich due to prolonged tropical weathering. Specifically:

Soil Types: The soil in Moruca is typically reddish-brown to grayish clay, with high concentrations of iron oxides, silt, and fine sand. These lateritic soils are common in tropical regions and are firm but nutrient-poor, requiring soil enhancement for sustained agriculture.

Drainage: The clayey composition and low-lying terrain result in poor natural drainage, especially during the long wet seasons. Seasonal waterlogging is common, which limits the types of crops that can be successfully cultivated unless drainage systems are implemented.

Soil Acidity: Moruca soils are generally moderately to strongly acidic, a condition that may necessitate pH adjustment, such as the addition of lime, for optimal plant productivity, particularly for sensitive crops.

Organic Matter: While the natural forest and wetland vegetation contribute organic material to the topsoil, the nutrient content is often insufficient for intensive farming without supplementation. However, shallow organic-rich topsoil can support traditional or small-scale cultivation.

Land Use: The soils in Moruca are suitable for low-intensity agriculture, including cassava, plantain, banana, and other hardy tropical crops, especially those that are moisture-tolerant. Agroforestry and permaculture practices are also viable, given the soil's characteristics and the environmental context.

4.5 Hydrological Situation

The Moruca region is characterized by a humid tropical climate with abundant rainfall throughout the year, which significantly influences its hydrological conditions. Below is an overview of the area's key hydrological features:

4.5.1. High Rainfall

Annual rainfall typically exceeds 2,500 mm. Most precipitation occurs during the wet seasons, generally from May to August and December to January. The high volume of rainfall contributes to frequent flooding, especially in low-lying and coastal areas.

4.5.2. River and Creek Systems

The Moruca River is the main watercourse in the area, eventually discharging into the Atlantic Ocean. Numerous creeks and channels branch off from the main river, forming an interconnected water network. These waterways are vital for transportation and daily life in the local Indigenous communities.

4.5.3. Wetlands and Mangroves

The landscape is dominated by extensive wetlands, which serve as natural flood buffers. Mangrove forests along the coast and estuaries help prevent shoreline erosion, support biodiversity, and protect against storm surges. These ecosystems also help regulate groundwater levels and provide natural water purification functions.

4.5.4. Seasonal Flooding

Due to flat topography and poorly drained peaty and clayey soils, the region is prone to seasonal waterlogging and flooding.

This impacts agriculture and infrastructure, making flood-resilient design essential for development projects.

4.5.5. Groundwater

Shallow groundwater tables are common, particularly in swampy areas.

Water quality may vary, and saline intrusion can occur near coastal zones, especially during dry spells or due to sea-level rise.

4.6 Noise Quality

Noise pollution is the regular exposure to elevated sound levels that can possibly lead to adverse effects in humans or other living organisms (Environmental Pollution Centers, 2017). As such, the intensity of the sound generated by various activities is a key health concern. Prolonged exposure to sounds louder than 80 dB is considered hazardous to hearing (EPA Guyana, 2017); therefore, human hearing is only receptive to certain sound levels.

The existing sound environment is characterized as an empty grassland zone. The Interim Guidelines for noise in specific environments are referenced in **Table 5** below and were used as the guidelines for assessing the noise quality within the project area. These included limits for categories like night-time 80 dB (18:00-06:00 hrs) and residential (60 dB at night-time (18:00 – 06:00 hrs.)

Table 6: GNBS Interim Guidelines for Noise in Specific Environments

Categories	Daytime Limits in dB (06:00 – 18:00h)	Night-time Limits in dB (18:00 – 6:00h)	
Residential	75	60	
Institutional	75	60	
Educational	75	60	
Industrial	100	80	
Commercial	80	65	
Construction	90	75	
Transportation	100	80	
Recreational	100	18:00- 01:00hr	100
		01:00- 08:00hr	70

A study conducted in the project area in March 2023, by a previous consultant, presents results detailed in the table below. The report does not specify whether the noise readings were conducted during the day or night; for this write-up, we will assume the readings were conducted during the day. This assumption is practical, as these hours align with the working hours of the contracting team.

Table 7: Comparative Results from a previous noise assessment within the project area

Sample Location	Results (dB)[1]	GNBS Guidelines (dB)	
		Residential (Day)	Construction (Day)
Sample Point #1	60.2	75	90
Sample Point #2	77.3	75	90

In comparison to the GNBS guidelines, it was observed that only one sample point recorded values slightly exceeding the residential standards. This variance can be attributed to the specific location of that sample point. However, when assessing the results against the construction limits established by the GNBS, the findings within the project area were found to be significantly lower.

Furthermore, it should also be reiterated that there has been minimal development in the project area over the last two years that would likely influence the readings. Consequently, it can be inferred that the current environmental conditions are generating noise levels at safe limits with no effect on or from biodiversity and/or the community.

4.6.1. Ambient Noise Environment

The Moruca sub-district is predominantly rural and a low-density area characterized by natural soundscapes. Baseline ambient noise levels are generally low, consisting mainly of natural sources such as wind, rainfall, bird calls, and other wildlife. Intermittent human-generated noise arises from small-scale community activities, riverine transport, motorcycles, and occasional vehicular movement, though overall volumes are minimal given the absence of major road networks or industrial operations near the site.

During construction, temporary increases in noise levels may occur due to the use of machinery, vehicle movement, and material handling. However, these activities are expected to be localized, intermittent and of short duration, given the rural setting and the limited scope of traffic and construction intensity in Moruca.

During the operation phase, noise levels are expected to remain consistent with existing ambient conditions. Hospital activities are not anticipated to generate significant noise, aside from occasional ambulance use, which will remain infrequent in this rural context.

[1] Baseline Assessment Report of the Four Hinterland Hospitals, March 2023

4.7 Air Quality

Air pollution is contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere (World Health Organization 2012). This is becoming an increasingly significant problem to the growth and development of cities and communities. The air pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulphur dioxide, and metals, like lead (Hedges 2004, World-Health-Organization 2012).

Particulate Matter (PM) - This is a mixture of solid particles (dust, dirt, soot, and smoke) and liquid droplets suspended in the air. These PM emissions originate from a variety of sources, such as vehicles, factories, industrial sites, construction sites, tilled fields, unpaved roads, stone crushing, and burning of wood (Hedges, 2004). Particulate matter comprises both coarse and fine particles. The coarse particles (PM10) have an aerodynamic diameter between 2.5μm and 10μm and are formed by mechanical disruption (e.g., crushing, grinding, abrasion of surfaces), evaporation of sprays, and suspension of dust. Fine particles have an aerodynamic diameter less than 2.5μm (PM2.5). These particles are formed from gas by chemical reactions; and condensation of high-temperature vapors during combustion (Fierro, 2000).

Total Suspended Particulates (TSP) - This refers to all particles in the atmosphere that are less than 100 micrometers. The amount of PM10 and PM2.5 are related to the amount of total suspended particulates (TSP) in the air (Alias, Hamzah, and Kenn 2007).

Particulate Matter Guidelines and Standards are instituted (4.8.1.1) due to short-term and long-term health effects including premature mortality, chronic respiratory disease, acute respiratory systems, decreased lung functions and aggravated asthma, persistent cough, phlegm, wheezing and physical discomfort (Fierro 2000, Alias, Hamzah and Kenn 2007). These health effects are especially associated with PM10 and PM2.5. The PM10 fraction from TSP can reach the lower regions of the respiratory tract. On the other hand, PM2.5 can absorb more toxic and carcinogenic compounds than larger particles and penetrate more easily deep into the lungs (Alias, Hamzah and Kenn 2007). Additionally, there is increased harm to the environment as PM is a major source of haze that reduces visibility, causes changes to nutrient and chemical balance of the soil and aquatic environment, erosions and staining of structures (residential, commercial, or cultural monuments) (Hedges 2004).

The purpose of the Ambient Air Quality Standards is to establish maximum limits on parameters of air quality considered desirable for the preservation and enhancement of the quality of air resources and health (Mecklenburg-County-NC 2012). Air quality standards are set by each country to protect the public health of their citizens and as such are an important component of national risk management and environmental policies. National standards will vary according to the approach adopted for balancing health risks, technological feasibility, economic considerations, and various other political and social factors, which in turn will depend on, among other things, the level of development and national capability in air quality management (World-Health-Organization 2006).

Air quality data in Guyana is extremely limited, given the constraints relating to the unavailability of equipment and costs associated with this type of data collection. However, advancements in the last

two years have made data more accessible via Environmental Impact Assessments and real-time monitoring systems that were developed by the EPA. This system can be accessed online on IQ Air.

Table 8: World Health Organization Air Quality Guidelines

Pollutant	Averaging Time	2021 AGQs
$PM_{2.5}$ µg/m³	Annual	5
	24-hour[5]	15
PM_{10} µg/m³	Annual	15
	24-hour	45
O_3, µg/m³	Peak season[6]	60
	8-hour	100
NO_2, µg/m³	Annual	10
	24-hour	25
SO_2, µg/m³	24-hour	40
CO, µg /m³	24-hour	4

The Project area is largely pristine and undisturbed; the natural environment outweighs any form of development. The main activities within the community are farming and working in the public/ private sector. An assessment of the environment in 2023 revealed the following results for air quality in the area: -

Table 9: Air Quality Readings for the location obtained in 2023

Parameter	Readings (µg/m³)
Particulate Matter ($PM_{2.5}$)	5.2
Particulate Matter (PM_{10})	48.7

Source: https://www.who.int/publications/i/item/9789240034228/

The data did not specify the monitored period, but the readings ($PM_{2.5)}$ were below the World Health Organisation (WHO) Ambient Air Quality Guidelines, 2021, while PM_{10} was slightly above the Guidelines. PM_{10} is a product of agricultural practices, unpaved roads, and even simple transportation use on roadways, all of which are common factors in the project area.

Due to the minimal development activities in the area, not much has changed since the assessment in 2023. Therefore, it can be assumed that if the environment is sampled now, it will yield data similar to that obtained two years ago.

4.7.1. Ambient Air Quality

The ambient air quality in Moruca is generally high due to the rural, forested environment and the absence of significant industrial activity. Air conditions are typically influenced by natural factors such as vegetation cover, seasonal rainfall, and wind patterns. Localized emissions are limited to small-scale household cooking (Wood fires or gas stoves), riverine and motorcycle transport, and occasional use of small generators. Vehicular emissions are minimal given the low density of registered vehicles and sparse road networks in the sub-district.

Construction air quality impacts (dust generation, exhaust emissions) are expected to be temporary and localized to the immediate construction zone.

In the operations phase, air quality impacts are expected to remain minimal. The hospital will generate negligible emissions, limited to occasional use of backup diesel generators, which will be mitigated by proper maintenance and positioning exhaust outlets away from sensitive receptors.

4.8 Biological Environment

4.8.1. Fauna

Guyana has one of the most notable aspect of faunal diversity. There have been some efforts over the years to document the species, such as those by researchers and local organizations like the Guyana Amazon Tropical Bird Society. Based on research conducted in 2017, a total of 98 species were documented but as many as 198 are likely to occur locally (Narine 2018). This diversity is due primarily to the presence of green spaces, whether managed or unmanaged, and canals and waterways, which support important aspects of their biology, such as breeding and foraging. The following species were commonly observed within the Main Camp and Sub Camp surroundings: greater kiskadee (*Pitangus sulphuratus*: Conservation status-Least Concern 7), smooth-billed ani (*Crotophaga ani*: Conservation status-Least Concern), cattle egret (*Bubulcus ibis*: Conservation status-Least Concern), *wattled jacana* (Jacana: Conservation status-Least Concern), snail kite (*Rostrhamus sociabilis*: Conservation status-Least Concern) and Carib grackle (*Quiscalus lugubris*: Conservation status-Least Concern). *Psittacidae* such as the Orange-winged parrot (*Amazona amazonica*: Conservation Status-Least Concern) were observed close to the water bodies and drainage canals.

The Moruca region in northwestern Guyana is home to a rich and diverse array of fauna, largely due to its mosaic of ecosystems—including tropical rainforests, wetlands, mangroves, rivers, and savannahs. This biodiversity holds significant ecological, cultural, and economic value, particularly

for the Indigenous communities residing in the area who rely on local species for subsistence, traditional knowledge, and cultural practices.

The following provides an overview of faunal species that may be present on or near the project site, though none were sighted:

- **Birds:** Harpy Eagle – One of the most powerful eagles in the world, occasionally seen in dense forest (Vulnerable)

- Macaws, Parrots, and Toucans – Brightly colored and vocal, commonly found in treetops. (Least Concern)

- Trumpeters and Tinamous – Ground-dwelling birds that are part of the dense forest ecosystem. (Least Concern for Trumpeters, Vulnerable for some Tinamous).

- **Insects and Invertebrates:** Butterflies and Moths – The area is home to hundreds of species, especially during the rainy season.

- **Tarantulas and Other Spiders –** Common in the forest floor and tree hollows.

- **Beetles and Ants –** Very abundant, playing crucial roles in decomposition and the food chain.

4.8.2. Flora

The terrestrial vegetation at the camp sites project is relatively sparse, with only tropical savanna grasses present and no other types of plants. In the surrounding area, the broader landscape is characterized by mixed vegetation typical of the North Pakaraimas / North Rupununi transition zone. This includes patches of savanna interspersed with gallery forests along watercourses, and secondary forest regrowth in less disturbed areas. These habitats support a range of biodiversity and are utilized by local communities for subsistence activities such as farming, hunting and gathering of non-timber forest products.

Figure 13: Savanna Grasses at the Campsite

4.8.3. Natural Hazards

The project site and surrounding area are subject to a range of natural hazards common to the interior savanna and forest regions of Guyana:

- **Flooding:** seasonal rainfall can result in localized flooding, particularly in low-lying areas adjacent to rivers, creeks, and poorly drained depressions. While the immediate construction site is not situated in a high-risk floodplain, heavy rainfall events may temporarily affect site access and surface water drainage.

- **Drought:** extended dry seasons can occur periodically and may reduce availability of surface water, affecting water supply for construction and camp use. Drought conditions can also increase vulnerability to wildfires.

- **Wildfire:** In the savanna environment, grass-fires, whether natural or human-induced, are a recurrent hazard during the dry season.

4.8.4. Social Setting

Please refer to the SCA/IPP in **Appendix 16** for the social characteristics.

5. Environmental and Social Assessment Methodology

5.8. General Methodology

The primary purpose of an Environmental and Social Assessment (ESA) is to predict the impacts resulting from the construction and use of the campsite. Impacts can be direct, indirect, or induced, as defined in **Table 9.**

Table 10: Impact Designation Definitions

Designation	Definition
Direct	Impacts that result from a direct interaction between the Project and a resource/receptor (e.g., between disturbance of a plot of land and the habitats on that plot of land that are affected).
Indirect	Impacts that follow from the direct interactions between the Project and its environment as a result of subsequent interactions within the environment (e.g., viability of a species population resulting from loss of part of a habitat as a result of the Project occupying a plot of land).
Induced	Impacts that result from other activities (which are not part of the Project) that happen as a consequence of the Project (e.g., influx of camp followers resulting from the presence of a large Project workforce).

The assessment of impacts proceeds through an iterative process that considers four questions as illustrated in **Figure 14.**

Figure 14: Impact Prediction and Evaluation Process

These questions are expanded in Steps 1 through 4 below.

5.8.1. Step 1: Predict Impacts

An ESA evaluates potential project impacts by predicting and quantifying to the extent possible the magnitude of impacts on resources (e.g., water and air) or receptors (e.g., people, communities, wildlife species, habitats). Magnitude is a function of the following impact characteristics:

- Type of impact (i.e., direct, indirect, induced).
- Nature of the change (what is affected and how).
- Size, scale, or intensity.
- Geographical extent and distribution (e.g., local, regional, international).

Duration and/or frequency (e.g., temporary, short term, long term, cyclic, permanent). Magnitude describes the actual change that is predicted to occur in the resource or receptor. The magnitude of an impact considers all the various dimensions of a particular impact in order to make a determination as to where the impact falls on the spectrum (in the case of adverse impacts), from negligible to large. Some impacts can result in changes to the environment that may be immeasurable, undetectable, or within the range of normal natural variation. Such changes can be regarded as essentially having no impact and are thus characterized as having a negligible magnitude. In determining the magnitude of impacts on resources and receptors, embedded controls (i.e., physical or procedural controls that are planned as part of the project design) are taken into consideration (e.g., the magnitude of impacts on stream water quality from construction takes into consideration the effectiveness of proposed sediment and erosion control measures).

In addition to characterizing the magnitude of impact, the sensitivity/vulnerability/importance of the impacted resource/receptor is characterized. A range of factors is considered when defining the sensitivity/ vulnerability/importance of the resource/receptor:

1. Where the resource is physical (e.g., a waterbody), its sensitivity to change and extent (on a local, national, and international scale) are considered.
2. Where the resource/receptor is biological or cultural (e.g., the riverine environment), its importance (e.g., its local, regional, national, or international importance) and its sensitivity to the specific type of impact are considered.
3. Where the receptor is human, the vulnerability of the individual, community, or wider societal group is considered, including if they are vulnerable groups or minorities (i.e., Indigenous peoples, African descendants). Other factors may also be considered when characterizing sensitivity/vulnerability/importance, such as legal protection, government policy, stakeholder views, and economic value.
4. As in the case of magnitude, the sensitivity/vulnerability/importance designations themselves are universally consistent (i.e., Low, Medium, and High), but the definitions for these designations would vary on a resource/receptor basis.

5.8.2. Step 2: Evaluate Impacts

An ESA evaluates the significance of a potential project impact by considering, in combination, the magnitude of the impact and the sensitivity/vulnerability/importance of the impacted resource or receptor. The assignment of a significance rating facilitates decision-makers and stakeholders in understanding how much weight should be given to the issue in their process. In the case of positive impacts, the significance is assigned as Positive. Significance was assigned for each impact using the matrix shown in **Table 10.** This matrix applies universally to all resources/receptors.

Table 11: Evaluation of Significance of Impacts

Impact Significance Matrix		**Sensitivity/Vulnerability/Importance of Resource/Receptor**		
		Low	**Medium**	**High**
Negative Impacts				
Magnitude of Impact	**Negligible**	Negligible	Negligible	Negligible
	Small	Negligible	Minor	Moderate
	Medium	Minor	Moderate	Major
	Large	Moderate	Major	Major
Positive Impacts				
Magnitude of Impact	**NA**	Positive	Positive	Positive

In terms of what the various significance designations represent, the following considerations are provided:

An impact of ***Negligible significance*** is one where a resource/receptor (including people) would not be affected by a particular activity, or the predicted effect is deemed to be imperceptible or is indistinguishable from natural background variations.

An impact of ***Minor significance*** is one where a resource/receptor would experience a noticeable effect, but the impact magnitude is sufficiently Small (with or without mitigation) and/or the resource/receptor is of Low sensitivity/vulnerability/importance. In either case, the magnitude should be well within applicable standards.

An impact of ***Moderate significance*** has an impact magnitude that is within applicable standards but falls somewhere in the range from a threshold below which the impact is Minor, up to a level that might be just short of breaching a legal limit. To design an activity so that its effects only just avoid breaking a law and/or cause a major impact is not best practice. The emphasis for Moderate impacts is, therefore, on demonstrating that the impact has been reduced to a level that is as low as reasonably practicable. This does not necessarily mean that impacts of Moderate significance have to be reduced to Minor, but rather that Moderate impacts are being managed effectively and efficiently.

An impact of ***Major significance*** is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resources/receptors.

An impact of ***Positive significance*** is one that has been identified as having a positive effect on the receptor/resource.

The goal of an impact assessment is to get to a position where the project does not have any Major residual impacts (i.e., after management measures are considered), certainly not ones that would endure into the long term or extend over a large area. However, for some aspects, there may be Major residual impacts after all practicable management options have been exhausted. An example might be the visual impact of a facility. It is then the function of the decision-makers and stakeholders to weigh such negative factors against the positive ones, such as employment, in coming to a decision on a project, and to promote offsets or compensation.

5.8.3. Step 3: Management and Enhancement

An ESA process aims to ensure that project decisions are made in full knowledge of their likely impacts on the environment and society. A vital step within the ESA process is therefore the identification of measures that could be taken to mitigate potential impacts of the project being assessed. This process involves identifying where potentially significant impacts could occur and identifying ways of mitigating those impacts as far as reasonably possible. The mitigation hierarchy was used for this ESA, in which preference was given to trying to avoid or minimize the impact before considering other types of mitigation (i.e., remedy, compensate, offset):

1. Avoid — remove the source of the impact
2. Minimize — reduce the magnitude of the impact
3. Mitigate — “repair” the results of the impact after it has occurred
4. Compensate/offset — address the loss or change to a resource by replacing the loss/change in kind or with a different resource of equal value.

5.8.4. Step 4: Residual Impacts

Once management measures are determined, the next step in the impact assessment process is to determine the residual impact significance. Residual impacts are the impacts that are predicted to remain after both embedded controls and committed management has been taken into consideration. In most cases, the sensitivity/vulnerability/importance of a receptor is unaffected by proposed

management measures: the management measure is typically intended to reduce the magnitude of a predicted impact, thereby reducing its overall significance.

5.9. Environmental and Social Assessment Objectives

The objective of the environmental and social assessment is to evaluate the potential environmental and social risks and impacts during the construction and use of the campsite, along with the construction phase of the hospital. The results of this assessment will allow us to formulate corresponding environmental and social management plans based on the results.

The environmental and social management plan will comply with the requirements of the IDB's E&S policy framework, enhance the positive impacts of the activities throughout the various phases, and avoid, mitigate, manage, and monitor potential adverse impacts and risks. This ESA has the following main objectives:

1. Identify areas of environmental and social impacts caused by the construction and use of the campsite and the construction phase of the hospital and operation phase (the ESMP for the operation will be developed 6 months before the end of construction)

2. Evaluate various activities that may cause environmental and social impacts

3. Evaluate possible environmental and social impacts and their levels

4. Provide a basis for developing an environmental and social management plan.

5.9.1. Environmental and Social Assessment Scope

This ESA considers the construction phase and the use phase (operational) (and decommissioning) of the campsite and the hospital, and focuses primarily on the existing physical, biological, and social environment. For the operational phase of the campsite, workers will be housed in temporary, weather-resistant structures with adequate space, lighting, and ventilation. Sleeping quarters will be gender-segregated where applicable and designed to prevent overcrowding. The campsite will be managed as a self-contained facility, providing safe and healthy living conditions while minimizing environmental and social impacts.

However, in the case of certain impacts, such as air quality and noise, impacts may extend beyond the campsite and project area. As such, both a Direct Area of Influence and an Indirect Area of Influence are defined for the project:

A. Direct Area of Influence

The Direct Area of Influence (DAI) for the campsite and the hospital is defined as within the boundaries of the specified location, where the majority of the environmental and social impacts are expected to occur and/or be experienced most acutely, namely:

- Campsite construction area (area to be used after completion).
- Hospital construction area

▪ Roads access to the campsite and/or hospital construction area

▪ Utilities: Electricity poles, drainage structures, and underground water pipes outside the campsite.

Please see **Figure 11** below for DAI.

B. Indirect Area of Influence

The Indirect Area of Influence (IAI) for the campsite is defined as within a 500M radius surrounding the campsite, where some impacts such as dust and noise disturbance could occur, but generally with a lower level of intensity than in the Direct Area of Influence. Please see **Figure 11** below for IAI.

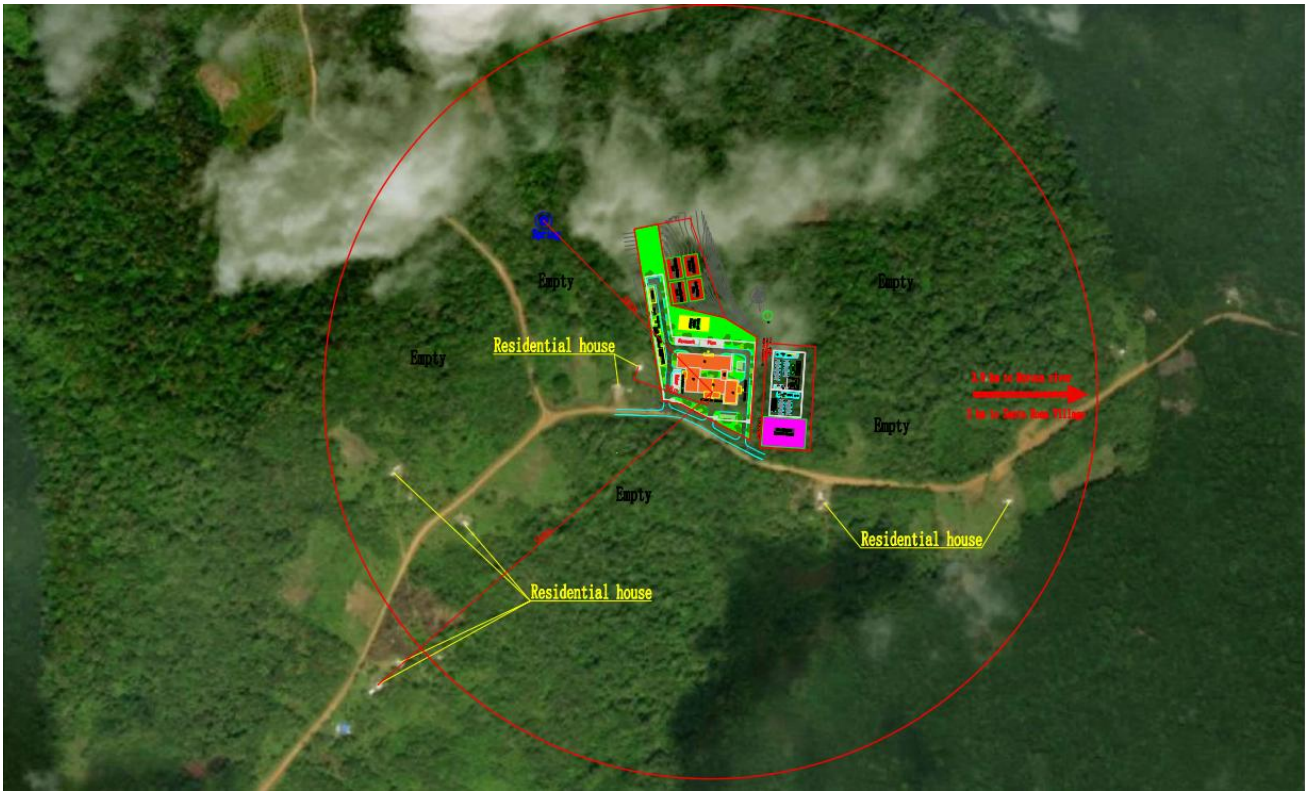


Figure 15: DAI and IAI of the Camp

5.10. Environmental and Social Assessment

This chapter will summarize and draw conclusions from the environmental and social assessment of the campsite based on the content of the previous chapters.

Since the construction and use of the campsite will take place in fixed areas (within the camp boundaries), no impacts on biodiversity or cultural resources are expected.

However, Chapter 6 will be used to summarize and determine impacts and mitigation measures for the construction phase of the project, which focuses on the construction activities for the regional hospital.

5.10.1. Social Assessment

This section mainly describes the social impact, including the activities that may cause social impact, the magnitude of impact, and details. Please see **Table 13.**

5.10.2. Environmental Assessment

This section mainly describes the environmental impact, and identifies the activities that may cause environmental impact, the magnitude of impact, and details. The conclusion of the environmental impact assessment is shown in **Table 14.**

6. Environmental and Social Impact Assessment of the Temporary Facilities and Campsite

This chapter assesses the environmental and social impacts that are likely to occur during the construction of temporary facilities and the use of the campsite at the Moruca project site. The construction of any temporary facilities and use of the camp will have various impacts on the physical environment and the local community. As such, the tables and sections that follow outline those impacts and the related proposed mitigation measures.

Table 12: Environmental and Social Impacts and Mitigation Measures – Temporary Facilities and Campsite

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
Community Relations	Unauthorized movements of construction workers (during and after working hours) could result in trespassing, damage to local land and property, and create amongst local residents a sense of their privacy being invaded. Residents may feel vulnerable, and there may be increasing incidents of crime and or violence, and threats to the safety of community members. Disparity of pay, increase in disposable income, and potential availability of illegal substances, illicit or culturally inappropriate lifestyle choices, leading to increased tension between local communities and the workers at camps.	Contractor will enforce a 'closed' camp policy unless otherwise agreed by Contractor. Workers will be strictly prohibited from leaving camps for non-work-related activities and interacting with the local community unless agreed by the Contractor. The Contractor will implement suitable measures to maintain the closed camp policy, which may include perimeter security fences, security controls, and guard houses, monitoring transfer of goods into and out of camps for contraband and stolen goods. The Contractor, as appropriate, will provide adequate recreation facilities for workers to reduce the need for leaving camps during leisure time. If community members or local businesses express grievances in relation to camp-related activities/operations, the Project will respond to the grievance in accordance with the GRM and SEP. The Village Council may request that camp-related activities/operations be amended to address community grievances. Contractor shall comply with these requests The Project will be cognizant of the environment in which it works and shall,	Continuous monitoring; Monthly training	Contractor

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
		where practicable, respect local cultural events such as religious events, funerals, and the like The Project will provide training for all workers, nationals and expatriates, on camp management, including: • A briefing on camp rules, including closed camp policy, behaviour between fellow workers and the community; • Procedures for dealing with camp-related complaints, worker issues, and community issues (as per Stakeholder Engagement Plan, SEP); and • Community relations orientation. The objective of this orientation will be to increase awareness about the local area and cultural sensitivities		
Health	Potential interaction between workers, persons engaged in illicit activities, and the community increases the risk of spreading communicable diseases, particularly in more remote communities	Contractor will comply with the Minimum Health Requirements for Project Execution and the Community Health and Safety Management Plan, which sets out requirements and management measures on controlling communicable diseases within camps and outside communities.	Monthly health inspections; Ongoing surveillance	Contractor

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
Waste Management, Pollution and Environmental Impacts	Camp has the potential to have off-site pollution impacts from waste disposal, emissions, and spills. Camp operations may also cause environmental issues, including deteriorating water quality, erosion, sedimentation, noise, and air quality issues. These factors have the potential to affect the community if not adequately managed.	Contractor will exercise all reasonable due diligence to conduct its operations in a manner that will minimize pollution. Contractor will comply with the Waste Management Plan and Hazardous Materials Management Plan, which define requirements to contain, transport, handle, and dispose of camp wastes and hazardous materials to avoid impacts to human health and the environment	Weekly inspections; Quarterly audits	Contractor
Camp location	Setting up of the campsite may restrict or impede access to areas for the local community. Construction camps may result in a noticeable increase in traffic, noise, air emissions, and light intrusion, which could negatively affect the amenity and lifestyle of nearby communities and pose a potential safety issue.	The potential camp location will be selected after consulting with the Village Council, and the affected community will be subsequently consulted. The Project will refer to those Environmental Management Plans (EMP) that include mitigation/avoidance measures that relate to the local community, including: • Noise Level monitoring • Air Emissions monitoring • Waste Management Plan	Pre-construction consultation; Annual review	Contractor & Village Council
In-Migration	There is a strong likelihood of immigration into areas around the construction camps. Immigrants being new to the area can result in disputes and sometimes violence between the new settlers and the resident community. Migrants moving into existing villages may increase demand and inflate prices for housing,	The contractor will strictly adhere to the protocols of the worker influx management plan for workers assigned to the construction of the hospital. While there may be immigration of people looking for work, the contractor will enforce identification requirements for those non-	Quarterly assessments as needed	Contractor with Local Authorities

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
	goods, and services. Increased population and development of new and uncontrolled settlements increase pressure on infrastructure, services and resources. The increased traffic from in-migration may also result in greater theft and smuggling of goods.	residents and foreign nationals contracted to the construction works. Where there are incidents not related to individuals not contracted to the project, the matter will be referred to village authorities and local authorities.		
Worker Welfare and Living Conditions	Construction workers living in camps may encounter stresses and discomforts that negatively impact their health and welfare. These stressors or discomforts may be caused by: -Poor living conditions (accommodation, ablution and sanitary, health, recreation, catering, and laundry). -Cultural issues (nationality, religion, discrimination and harassment, etc.). -Personal security (crime and emergencies).	Where there is a difference in camp accommodation, the Contractor will manage these issues openly and transparently. No reduction in standards shall be allowed because of a worker's race, gender, or nationality, although distinctions may be appropriate based on the seniority of individuals and job classifications. *Contractor may provide facilities, as necessary and to an extent practicable, to satisfy the religious needs and customs of its workforce*	Monthly facility checks; Ongoing	Contractor
Quality and Safety	Construction defects (e.g., substandard materials, workmanship errors) or safety incidents (e.g., worker injuries, equipment failures) may lead to structural failures or casualties. Ensure compliance with ASTM/OSHA standards for materials and processes, achieving zero major incidents and a defect rate <1%.	- Third-party certification and lab testing prior to material delivery. - Daily inspections and documentation of critical milestones (e.g., rebar tying, concrete pouring). - Mandatory PPE use and safety training.	Daily inspections; Monthly audits	Contractor

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
Environmental Responsibility	Waste pollution, carbon emissions, or water misuse may damage ecosystems, triggering community protests or legal disputes. Achieve 90% waste recycling rate, reduce carbon emissions by 20%, and protect biodiversity in affected areas.	- Implement waste segregation and recycling programs. - Use solar-powered equipment and low-emission machinery. - Conduct ecological restoration (e.g., replanting native vegetation).	Weekly monitoring; Quarterly audits	Contractor
Reporting and Documentation	Missing records or delayed reporting may lead to accountability gaps, compliance risks, or project delays. Establish a real-time, transparent documentation system to ensure traceability and audit compliance.	- Use cloud platforms (e.g., BIM 360) for synchronized logs and reports. - Require daily submission of inspection, safety, and environmental data. - Monthly backups and encrypted archives.	Real-time logging; Monthly backups	Contractor
Conflict Resolution	Internal disputes (e.g., labor conflicts) or external stakeholder conflicts (e.g., community protests) may disrupt project timelines and reputation. Resolve all conflicts promptly, ensuring ⩾90% employee satisfaction and <48-hour response time to community complaints.	- Establish anonymous grievance channels and mediation committees. - Hold regular community meetings to preemptively address concerns. - Develop escalation protocols (e.g., third-party arbitration).	On-demand resolution; Quarterly feedback surveys	Contractor
Risk for the solar panels forced labor	supply chain of raw materials and manufacturing	Solar companies are required to map their supply chains thoroughly to track where materials (especially polysilicon) originate. Block chain and digital product passports are emerging as tools for enhancing transparency.	Pre-construction audit	Contractor
Sourcing of materials	Unauthorized use of sand pits and forestry concessions for lumber may result in grievances	Establish written agreements with the village council and local authorities and obtain permits where applicable.	Pre-construction and annually	Contractor

Source of Impact	Potential Impact and Relevant Management Plan Objective	Mitigation & Management	Frequency	Responsibility
	with local authorities.			

Table 13: Social Impact Assessment

Area	Impact-Causing Activities	Details of Impact	Mitigation Measures	Category (Positive/Negative)	Magnitude
Construction	-Housing construction -Drainage structure construction -Other construction activities	-During the construction of the camp, PCI-Sinopharmintl Consortium will recruit a certain number of local employees, ranging from 10 to 15. These construction activities provide job opportunities for local workers and promote local employment. -When PCI-Sinopharmintl Consortium builds camp, PCI-Sinopharmintl Consortium will purchase construction materials such as rive sand, stone, etc. from the local area, which to a certain extent has promoted the development of the local economy.	Economic benefits: -Job creation: PCI-Sinopharmintl Consortium will hire local workforce and help to grow local business during the lifetime (2.5 years) of the project. -Local hire plan -Worker's influx plan	Positive	
Use of Camp	-Production activities in the camp -Campsite cleaning -Kitchen-related activities -Other activities that require participation of local employees	-During the use phase after the camp is built, because the camp not only has living areas but also production areas (such as concrete mixing plants, Doors and Windows Workshop etc.), a certain number of local employees (such as construction workers, cleaners, etc. The number of people will be around 10) need to be hired. Therefore, these activities also provide employment opportunities for local workers and promote local economic development.			
Workers' Health and Safety	-Movement of machinery -Operation of asphalt and concrete plants -General construction activities	-Employees are at risk for machinery mishaps and exposure to particulate matter from the concrete plants. -Heat exhaustion from construction activities, among other incidents -Excavation of the trenches for the water pipeline (if needed)	-PI-Sinopharmintl Consortium will ensure that appropriate PPE is provided for employees and that employees receive training on how to use PPE, and how to handle emergencies for the project. -Ensure that signage is visible throughout the compound. -Follow and implement the Workers' Health and Safety Plan, including training	Negative	Major

Area	Impact-Causing Activities	Details of Impact	Mitigation Measures	Category (Positive/Negative)	Magnitude
			and drills.		
Community Health and Safety	-General construction activities -Influx of workers	-The construction activities contribute to the release of dust and the emission of noise to neighboring communities -Influx of workers can increase exposure in the community to diseases -Social conflicts	-Dust suppression mitigation measures should be used where applicable. Regular consultation should be conducted to understand the impact. -Monitor air quality. -Community health and safety plan Code of conduct Workers influx management plan	Negative	Moderate
Labour Conditions	Campsite living and short deadlines to complete project.	-Living spaces for the campsite can deteriorate, causing discomfort to employees. -Tight deadlines can pressure employees to work overtime or work under stressful conditions.	-Ensure that employees are trained and informed on how to maintain living spaces and practice good housekeeping. -Ensure that if employees work overtime, they are adequately compensated for their efforts. -Ensure all workers have contracts -Ensure workers have access to GRM in native language -All labour condition guidelines should be followed to ensure the safety of employees.	Negative	Moderate
Gender-based Violence	Gender-based violence with the influx of workers	-The workforce will consist of a male-dominated environment with a lower ratio of women. -Employers would need to take complaints of how genders speak to each other and sexual	-Strictly implement and enforce the Community Health and Safety Plan. - Strictly enforce the workers code of conduct	Negative	Moderate

Area	Impact-Causing Activities	Details of Impact	Mitigation Measures	Category (Positive/Negative)	Magnitude
		assault seriously.	-Institute measures to ensure the safety of female workers (e.g. housekeeping duties should be conducted in pairs)		
Racial Violence	Diversity in culture and skin tone among people working together	-People working with diverse groups that do not appreciate their workmates, look down at them, and are racially motivated can have negative impacts on the employee and the execution of tasks.	-Conduct awareness and educational sessions with employees to sensitize them on racial issues and how to handle it. -Strictly adhere to the Workers' Code of Conduct and Labour Management Procedures. - Discourage the use of derogatory name calling or false names.	Negative	Moderate
Demonization of the Camp	Removal of equipment, Removal of buildings	-The removal of existing equipment and buildings generates waste.	-Machinery can be reused for future projects. -Materials can be recycled for future projects or sold to other entities. -Materials for disposal should be handled by a professional waste management company or local village council. -The land should be revegetated if there are no other uses. -Adherence to the Decommissioning Plan	Negative	Moderate
Sourcing of materials	Sourcing of sand, rock wood	Can have social conflict over the sourcing of materials.	Identify forestry concessions in collaboration with village council and have agreements with village council and permits where applicable., Materials Sourcing Management Plan		

Camp Name	Phase	Impact-Causing Activities	Impact	Details of Impact	Mitigation Measures	Category of Impact (Positive/Negative)	Magnitude of Impact
Air quality							
		-Site filling and leveling -Construction material -Transportation	Generates dust and pollutes the air/Decreased air quality	-Construction materials such as sand and soil will generate dust. -Short-term duration, just a few.	-Apply wet suppression to the process. -Avoid work that generates dust during periods of heavy winds.	Negative	Minor
		Building a fence and house	Air pollution	**Dust generation:** -Earth Works. -Materials handling: delivery and construction. -Cement Mixers	**-Water Spraying:** Regularly spray water on construction sites. **-Cover Materials:** Store materials like sand and cement. **-Material Handling:** Clean up and stockpile high (3 m). **Employer/subcontractor:** Must ensure that appropriate PPE is used	Negative	Minor
		-Use of machinery and equipment -Excavation and construction of drainage structures -Installation of large facilities (e.g., Concrete mixing plants)	Air pollution	-Exhaust gas generated during the use of machinery will cause air pollution. -The camp construction only uses a small amount of mechanical equipment (possibly including 1 excavator, 1 grader, 1 roller, 2 dump trucks, and 1 loader), so there will be very little exhaust gas. But trucks will come to the site with sand, stone	-Ensure that machinery does not idle for prolonged periods. -Also, vehicles will be serviced regularly to ensure they are in good working condition.	Negative	Minor

Camp Name	Phase	Impact-Causing Activities	Impact	Details of Impact	Mitigation Measures	Category of Impact (Positive/Negative)	Magnitude of Impact
		-Construction material transportation		and other construction materials. There will be gaseous emissions from these vehicles.			
		-Other construction activities -Storing materials	-Air pollution/ decreased air quality	-Construction activities using sand, cement, soil and machinery may cause different levels of air pollution.	-Monitor air quality and check in with neighbors on the impact of dust. -For stockpiles be stored to ensure: -**Cover Materials:** Store materials like sand and cement -**Material Handling:** Clean up and stockpile high (3 m). -**Water Spraying:** Regularly spray water on the stockpile when needed.	Negative	Minor
		-Construction material transportation	-Air pollution	-Dump trucks transport construction materials (Sand, gravel, etc.) to the silo in the camp. (Silo will be used to store cement, sand and stone). -Loaders are used to transport construction materials in the camp.	Ensure that trucks are covered with a tarpaulin during the transport process to prevent raw materials from falling or blowing.	Negative	Minor

Camp Name	Phase	Impact-Causing Activities	Impact	Details of Impact	Mitigation Measures	Category of Impact (Positive/Negative)	Magnitude of Impact
Camp	Operational Phase	-Use of machinery and equipment -Operation of batching plant etc.	Air pollution	-Exhaust gas generated during the use of machinery will cause air pollution. -The main machines are loaders (commonly used, 1 to 2 loaders) and cranes (not commonly used, 1 Crane).	-Ensure that machinery does not idle for prolonged periods. -Regular servicing and maintenance of vehicles according to the manufacturer's specifications.	Negative	Negligible
		-Dump trucks entering and leaving the campsite	Air pollution	-Dump trucks daily entering and leaving the camp will generate dust.	-Ensure that wet suppression is used to control the dust on the roads.	Negative	Moderate
		-Daily mixing construction (Concrete mixing, asphalt mixing)	Air pollution	-The mixing plants are equipped with spray washing devices, so there is almost no dust.	Ensure the spraying washing mechanism is always functional	Negative	Negligible
Water quality							
Camp	Construction Phase	-Mechanical refueling -Construction of access road	Contamination of the surface water	-During refueling, diesel or gasoline accidentally leaked onto the ground.	-Ensure that the spill kit is close by and properly used to clean up the spill	Negative	Minor
		-Cement construction		-The random discarding of cement packaging tape may pollute surface water.	- Eliminate the improper disposal of cement packaging. Waste Management Plan	Negative	Negligible

Camp Name	Phase	Impact-Causing Activities	Impact	Details of Impact	Mitigation Measures	Category of Impact (Positive/Negative)	Magnitude of Impact
		-Contamination of Water by sediments	Contamination of surface water	-Raw materials will be stockpiled. The presence of heavy rainfall can cause materials to run off into close by waterways.	-Ensure that materials are stockpiled for an extended period of time. -Create breaks in the soil to slow down the flow of sediments to waterways.	Negative	Minor
Camp	Operation Phase (Residence, production)	Fuel/Oil storage	Contamination of surface water	-Fuel/Oil leakage to the ground due to damage to the storage tank or improper operation.	-Storage tanks should be contained within a bond wall of 110% of its capacity. -Use a spill kit to clean up spills. Rain shelters will be constructed for fuel storage areas and tanks.	Negative	Moderate
		-Daily work and residence	-Contamination to surface water	-Water pollution caused by the littering of kitchen and household garbage. -Water pollution caused by,kitchen, washroom facilities	-Ensure that the kitchen and garbage is cleaned daily. -Segregation of waste. -Appropriate disposal of waste. -Liquid waste will be directed to the septic tank. -Waste Management Plan -Oil Spill Prevention Plan	Negative	Negligible

Camp Name	Phase	Impact-Causing Activities	Impact	Details of Impact	Mitigation Measures	Category of Impact (Positive/Negative)	Magnitude of Impact
Camp	Use phase (Residence, production)	-Fuel and Oil storage	-Groundwater contamination	-Damage to fuel/oil storage tanks caused fuel/oil to seep into the ground.	-Ensure that fuel/oil storage area is inspected daily. -Remove pollution source, explore remediation of soil.	Negative	Moderate

Table 14: Environmental Impact Assessment

		-Septic tank	-Groundwater contamination	-Leakage caused by septic tank damage.	-Inspect the septic tank regularly. -Water effluent to public drainage will be tested (quarterly) to meet the industrial effluent discharge guidelines.	Negative	Moderate
Camp	Use phase (Residence, production)	-Fuel and Oil Diesel storage	-Pollution of nearby freshwater rivers	-Damage to fuel/oil storage tanks caused diesel to seep into the ground.	-Ensure that fuel/oil storage area is inspected daily. Remove pollution source, explore remediation of soil.	Negative	Moderate
	Use phase	-Use of GWI water	-Reduced water resources	-Overuse of water resources	-Meter to monitor use -Coordination with GWI regarding water usage, so there are not water shortages for the community	Negative	Moderate

Noise							
Camp	Construction Phase/ Operation phase/Use phase	-Power supply	Noise	-During the use of the campsite, the use of the generator will make noise.	House generators in an enclosed space.	Negative	Minor
		-Use of mechanical equipment	Noise	-Noise from the operation of machinery and equipment.	-Operate equipment between 6:00hrs and 18:00 hrs. Monitoring of noise will be done monthly. Limit worker exposure to high noise activities.	Negative	Minor
		Noise from Trucks	Noise	Noise from the movement of trucks.	-Operate equipment between 6:00hrs and 18:00 and try not to arrange transportation operations at night? -Enforce speed limit. Horns use management. Take off truck engines when not in use	Negative	Minor

Soil Quality							
Camp	Land preparation	Land Clearing	Destruction of species habitat	-The land to be cleared of all types of species to develop the campsite. Any grass that can be a buffer for dust protection has been removed. -Fauna has been displaced, which forces them to find new habitats or be killed during the process.	If dust generation is excessive, grass can be replanted in spaces that can accommodate vegetation should be done.	Negative	Moderate
	Operation	Spillage of oil/fuel, Septic tank leakage	Soil contamination	-Soil can be contaminated due to oil/fuel spillage and a delayed clean-up response. -Unfiltered water leaking into the soil can affect groundwater sources.	-Inspect regularly and act immediately when leaks are observed. -Implement the spill prevention and clean-up procedure via training	Negative	Moderate
		Poor drainage system, heavy rainfall	-Flooding of Land	-Poor drainage system and heavy rainfall leave the campsite vulnerable to flooding. This can damage ground-level equipment, make living quarters uncomfortable for employees, and slow down the progression of work, especially for the concrete plants.	-Ensure that the booth campsite has adequate drainage at the perimeters of the compound. -Ensure that ditches/trenches are cleaned regularly.	Negative	Major

6.1. Environmental and Social Impacts of the Campsite Decommissioning

The decommissioning of the campsite can have both environmental and social impacts. Addressing these impacts is crucial for ensuring that the process is managed responsibly and that long-term consequences are minimized.

6.1.1. Environmental Impacts and Mitigation Measures

1. Land degradation

Impact: The demolition process may cause soil erosion, surface damage and vegetation loss. **Mitigation measures:**

-Control the movement of construction vehicles: Limit the use of construction vehicles to reduce compaction and damage to the land.

-Vegetation protection: Try to protect existing vegetation and transplant it when necessary. Soil cover: Use soil cover during the demolition process to reduce erosion.

2. Waste generation

Impact: The demolition process will generate a large amount of waste, including construction waste, waste and possible hazardous materials.

Mitigation measures:

-Waste classification: Classify waste and separate recyclables, hazardous waste and general garbage.

-Waste treatment: Organic Waste Small-scale composting (pits or bins) Eco-friendly and useful for farming; Combustible waste closed small incinerators reduces toxic emissions; Recyclables community sorting & collection reduces pollution, some economic value; Hazardous waste village-level collection points to be transported for safe disposal.

-Resource recovery: Try to recycle and reuse demolition materials such as wood, metal and concrete.

6.1.2. Noise pollution

Impact: The noise generated by demolition operations may cause interference to nearby residents and wildlife.

Mitigation measures:

-Noise control: Use low-noise equipment and arrange demolition work within the specified time to reduce the impact on the surrounding environment.

-Noise barriers: Set up noise barriers around the demolition area to reduce noise transmission.

6.1.3. Air pollution

Impact: Dust and exhaust gas during the demolition process may affect air quality.

Mitigation measures:

-Spray dust suppression: Regularly spray water mist during demolition work to reduce dust.

-Cleaning equipment: Regularly clean and maintain equipment to reduce exhaust gas missions.

6.1.4. Water pollution

Impact: Waste and chemicals during the demolition process may flow into water bodies, causing water pollution.

Mitigation measures:

-Anti-leakage measures: Set up anti-leakage devices during the demolition process to prevent waste or chemical leakage.

-Wastewater treatment: Treat and clean up wastewater generated during the demolition process to ensure that it meets emission standards (Establishment of a Sedimentation Tank for Wastewater Treatment).

6.1.5. Ecological impact

Impact: Demolition may affect local ecosystems and biological habitats.

Mitigation measures:

-Ecological assessment: Conduct an ecological assessment before demolition to understand the potential impact of demolition on the local ecology.

-Conservation measures: Take measures to protect affected plants and animals, and relocate or restore them when necessary.

6.1.6. Social Impacts and Mitigation Measures

Economic Impacts:

Impact: The closure of camp can impact local economies, especially if the camp were a major source of income for local businesses or workers.

Mitigation measures: Work with local stakeholders to develop economic transition plans.

Consider initiatives such as job creation programs.

6.1.7. Health and Safety:

Impact: The decommissioning process can pose health and safety risks to workers and nearby communities.

Mitigation measures: Implement stringent health and safety measures, including proper training and

protective equipment for workers. Monitor and manage any potential health risks to the surrounding community.

6.1.8. Community Relations:

Impact: The decommissioning process can affect relationships with local communities, especially if they are not properly engaged.

Mitigation measures: Engage with the community throughout the decommissioning process; Provide transparent information about the project and address any concerns promptly; Establish channels for ongoing communication and feedback.

Strategies for Mitigation

-Develop a Comprehensive Decommissioning Plan: Include environmental and social impact assessments as part of the plan. Address potential issues proactively and implement mitigation measures as needed.

-Engage Stakeholders: Work with local communities, regulatory agencies, and other stakeholders to ensure that their concerns are considered and addressed.

-Monitor and Report: Implement a monitoring program to track the environmental and social impacts of decommissioning. Provide regular reports to stakeholders and regulatory bodies.

-Provide Support: Offer assistance to displaced workers and affected communities to facilitate a smooth transition.

-Educate and Train: Ensure that all personnel involved in the decommissioning process are trained on environmental and social impact mitigation strategies.

By proactively managing these impacts and implementing effective mitigation strategies, PCI-Sinopharmintl Consortium can minimize the negative consequences of decommissioning workers' campsite and contribute to sustainable and responsible project completion.

7. Environmental and Social Assessment – Construction Phase

7.1. Impact Identification and Assessment

The construction phase of the Moruca Regional Hospital represents a critical stage in advancing healthcare access for communities in Region 1, but it also carries a range of environmental and social implications that must be carefully managed. Conducting an Environmental and Social Assessment is essential at this stage, as it ensures that activities such as land clearing, excavation, material stockpiling, and drainage works are carried out in a manner that minimizes negative impacts on the fragile hinterland ecosystem, local water resources, and surrounding settlements. This section provides a structured framework for identifying potential risks, establishing mitigation measures, and integrating regulatory requirements into the construction activities.

The table below outlines the primary activities that will be undertaken throughout the construction phase toward the completion of the hospital facility. The rankings of the impact assessment were previously discussed in *Chapter 4-Environmental and Social Assessment Methodology* and will be referenced in this section as well.

Table 14: Construction Phase – Impact Identification and Assessment For Hospital Construction

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
CONSTRUCTION PHASE										
Site Clearing										
Clearing of Vegetation	Workers could be hit by Equipment	HSE	Negative	Direct	Short Term	Localised	Major	Unlikely	N	Medium
	Equipment can topple due to unstable ground.		Negative	Direct	Short Term	Localised	Major	Unlikely	N	Medium
	Increase in dust (PM_{10})	Air	Negative	Direct	Short Term	Extended	Minor	Likely	Y	Medium
Foundation Treatment and Shadow Foundation										
Backfilling & compaction	Sand particles blown into the employee's face	Air HSE	Negative	Direct	Short Term	Localised	Minor	Almost Certain	N	Medium
	Being struck or squeezed by Equipment	HSE	Negative	Direct	Short Term	Localised	Major	Unlikely	N	Medium
	Increase in dust (PM_{10})	Air	Negative	Direct	Short Term	Extended	Negligible	Likely	Y	Low
	Noise from the Operating equipment	Noise	Negative	Direct	Short Term	Extended	Minor	Likely	Y	Medium
Casting cushion concrete	Contact with the employee's skin, exposure to cement dust	HSE	Negative	Direct	Long Term	Localised	Minor	Likely	N	Medium
	Slips and falls	HSE	Negative	Direct	Long Term	Localised	Moderate	Likely	N	Medium
	Poor ergonomics	HSE	Negative	Direct	Long Term	Localised	Minor	Unlikely	N	Low

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
	Contaminated water/ unused cement entering the waterway/ or from water from washing concrete equipment	Water	Negative	Indirect	Long Term	Regional	Moderate	Likely	Y	Medium
Reinforcement and formwork	Injury to employees (Cuts, Scratches)	HSE	Negative	Direct	Long Term	Localised	Minor	Likely	N	Medium
	Poor ergonomics (back pains)		Negative	Direct	Long Term	Localised	Minor	Unlikely	N	Low
Installation of embedded parts	Trip and fall; handling of parts. Employees can be impaled and have cuts and bruises	HSE	Negative	Direct	Long Term	Localised	Minor	Likely	N	Medium
	Poor ergonomics (back pain)	HSE	Negative	Direct	Long Term	Localised	Minor	Unlikely	N	Low
Concrete casting for the foundation structure	Contact with the employee's skin, causing skin irritation	HSE	Negative	Direct	Short Term	Localised	Minor	Likely	N	Medium
	Scrapes and Bodily Injury due to slip & fall and poor ergonomics	HSE	Negative	Direct	Short Term	Localised	Minor	Unlikely	N	Low
	Contamination of waterways with unused cement/ or from water from	HSE	Negative	Indirect	Long Term	Regional	Moderate	Likely	N	Medium

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
	washing concrete equipment									
Steel member Installation	Being struck by Equipment causing injuries to employees	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	While working at heights, employees can fall	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Lifting Hazards, the collapse of the Crane	HSE	Negative	Direct	Short Term	Localised	Extreme	Unlikely	N	High
	Dropped objects, causing injuries to employees	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Generation of noise from equipment	Noise	Negative	Indirect	Short Term	Extended	Minor	Almost Certain	N	Medium
Using pesticides to prevent termite damage	Exposure to toxins by inhalation Fumes in the Air	HSE Air	Negative	Direct	Short Term	Localised	Moderate	Unlikely	N	Medium
	Contamination of Soil and water through washing of chemical containers or spills on the ground	Water Soil	Negative	Indirect	Long Term	Extended	Moderate	Unlikely	Y	Medium
Construction of the Medical Complex										
Steel structure installation	Being struck by Equipment causing injuries to employees	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
Steel structure installation	While working at heights, employees can fall	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Lifting Hazards, the collapse of Crane	HSE	Negative	Direct	Short Term	Localised	Extreme	Unlikely	N	High
	Dropped objects, causing injuries to employees	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Generation of noise from equipment	Noise	Negative	Indirect	Short Term	Extended	Minor	Almost Certain	Y	Medium
Floor slab construction	Contact with the employee's skin, causing skin irritation	HSE	Negative	Direct	Short Term	Localised	Minor	Likely	N	Medium
	Poor Ergonomics resulting in strains and pains	HSE	Negative	Direct	Long Term	Localised	Minor	Unlikely	N	Low
	Contamination of waterways with unused cement/ or from water from washing concrete equipment	HSE	Negative	Indirect	Long Term	Regional	Moderate	Likely	N	Medium
Masonry of walls	While working at heights, employees can fall	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Contamination of waterways with unused cement	HSE	Negative	Indirect	Long Term	Regional	Moderate	Likely	N	Medium
	Contact with the employee's skin,	HSE	Negative	Direct	Short Term	Localised	Minor	Likely	N	Medium

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
	causing skin irritation									
Roof installation	Dropped objects, causing injuries to employees	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	While working at heights, employees can fall	HSE	Negative	Direct	Long Term	Localised	Major	Unlikely	N	Medium
	Generation of Wood Waste	HSE Soil	Negative Positive	Indirect	Short Term	Extended	Minor	Likely	Y	Medium
Installation of water (plumbing), power, firefighting equipment, air-conditioning, and ventilation fixtures, and a medical gas pipeline	Electrical shocks during power installation	HSE	Negative	Direct	Short Term	Localised	Minor	Unlikely	N	Low
	Poor ergonomics. Cuts and buses to employees, back pain and strains	HSE	Negative	Direct	Long Term	Localised	Minor	Unlikely	N	Low
Using pesticides to prevent termite damage	Exposure to toxins by inhalation Fumes in the Air	HSE Air	Negative	Direct	Short Term	Localised	Moderate	Unlikely	Y	Medium
	Contamination of Soil and water through washing of chemical containers or spills on the ground	Water Soil	Negative	Indirect	Long Term	Extended	Moderate	Unlikely	Y	Medium
External Works										
Landscaping & cleaning of	Scrapes and bruises to hand. Nail bore from removing	HSE	Negative	Direct	Short Term	Localised	Minor	Likely	N	Medium

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
construction material	construction material									
Finishing work, tiling and painting	Exposure to toxic fumes	Air, HSE	Negative	Direct	Short Term	Localised	Minor	Likely	Y	Medium
	Potential for spills on soil and water	Soil Water	Negative	Indirect	Short Term	Extended	Moderate	Unlikely	Y	Medium
OPERATIONAL PHASE										
Environmental – Dust, Particles, and Air Emissions	During hospital operations, emissions from generators, HVAC systems, sterilization processes, and vehicular traffic can contribute to localized air pollution. Dust and particulate matter may also arise from ongoing maintenance works, affecting air quality for staff, patients and nearby communities.	Air,	Negative	Direct	Long-term	Localised	Moderate	Likely	N	Low
Environmental – Soil Erosion and Water Runoff	Hospital activities, particularly maintenance of landscaping, stormwater	Water and Soil	Negative	Direct	Long-term	Localised	Moderate	Unlikely	N	Low

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
	management, and wastewater discharges, may cause soil erosion or contaminate runoff. Poor drainage systems can increase sedimentation and pollutants in nearby water bodies, impacting local ecosystems.									
Environmental – Waste Management of Medical Waste	Operational phases of hospitals generate hazardous waste and infectious medical waste, including sharps, contaminated materials, and pharmaceuticals. Improper segregation, storage, handling or disposal poses risks of infection, environmental contamination, and public health hazards.	HSE, Community Health and Safety, OHS, soil, water, air, biodiversity	Negative	Direct	Long-term	Localised	Moderate	Unlikely	Y	Low

Impact-causing activities	Details of Impact	Factor	Impact Identification				Impact Assessment		Cumulative	Risk Level
			Positive/ Negative	Direct/ Indirect	Long/short -term	Localised/ Extended /Regional	Significance	Likelihood		
Social – Community Impact and Stakeholder Engagement	Hospital operations directly affect surrounding communities, requiring continuous engagement to address concerns related to service delivery, safety, noise, waste management, and access. Poor communication or lack of engagement can lead to mistrust, grievances and reputational risks.	Community Health and Safety	Negative	Direct	Long-term	Localised	Moderate	Unlikely	N	Low

7.2. Mitigation Measures

The following table outlines the mitigation measures for the impacts identified in the Impact Identification and Assessment Table. It does not address any impacts that were rated as "low." Instead, it focuses on those with a risk rating of "Medium" and above. The team will designate personnel to monitor these measures to ensure they are implemented correctly. Once implemented, the company will then be able to assess its effectiveness and make any necessary adjustments to the measures needed.

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
Clearing of Vegetation	Workers could be hit by Equipment	HSE	• Cordon off the area to only allow authorised persons in the area. • Inform employees through informative sessions and safety signs	• Safety Signs
	Equipment can topple due to unstable ground.		• Conduct daily checks of the equipment. • Perform a ground stability test before placing equipment in the area. • Ensure operators are properly trained in operating equipment.	• Daily Equipment checklist • Operator certificate
	Increase in dust (PM_{10})	Air	• Where possible, use a wet suppressant	Site Report
Excavation			• Excavate only within designated boundaries and during dry season where possible to minimize runoff. • Properly stockpile, cover, and stabilized excavated soil. • Reuse suitable excavated material for backfilling where possible. • Implement dust suppression measures • Install protective barriers, signage, and restrict unauthorized access around excavation sites. • Ensure excavation walls are properly shored/sloped to prevent cave-ins	• Health and Safety Plan for Workers • OHS Plan • Consult with relevant authorities (EPA, Ministry of Labour) for best practices.
Backfilling & compaction	Sand particles blown into the employee's face	Air HSE	• Ensure all employees wear appropriate PPE such as eye protection.	• HSE Plan
	Being struck or squeezed by Equipment	HSE	• Cordon off the area to only allow authorised persons in the area. • Inform employees through informative sessions and safety signs	• Safety Signs • Accident reports
	Increase in dust (PM_{10})	Air	• Where possible, use a wet suppressant	• HSE Plan
	Noise from the Operating equipment	Noise	• Provide Employees with appropriate ear protection • Inform nearby residents of the activity • Only operate equipment during the day	• HSE Plan

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
Casting cushion concrete	Contact with the employee's skin, exposure to cement dust	HSE	• Ensure employees working with cement wear appropriate clothing to protect their skin. • Inform employees of the hazards of handling cement and what to do if there is contact with skin or eyes.	• SDS for Cement
	Slips and falls	HSE	• Ensure employees wear nonskid footwear. • Use safety signs to inform employees of trip hazards. • Conduct weekly site inspections to determine trip hazards on site	• Health and Safety Plan for Workers • Weekly site Inspection form
	Poor ergonomics	HSE	• Train employees in good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• OHS Plan
	Contaminated water/ unused cement entering the waterway	Water	• Prohibit the washing of excess cement (or cement from equipment) into the waterway. • Conduct random tests of waterways to ensure • Follow the Waste Management Plan to manage the cement waste.	• Waste Management Plan
Reinforcement and formwork	Injury to employees (Cuts, Scratches)	HSE	• Ensure first aid kit is available • Ensure all employees are aware of the Emergency Response Plan and what to do if they have a first aid or medical emergency case	• Emergency Response Plan
	Poor ergonomics (back pains)	HSE	• Train employees in good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• None Health and Safety Plan for Workers
Installation of embedded parts	Trip and fall; handling of parts. Employees can be impaled and have cuts and bruises	HSE	• Ensure employees wear nonskid footwear. • Use safety signs to inform employees of trip hazards. • Use caps to cover any exposed steel rods	• Health and Safety Plan for Workers
	Poor ergonomics (back pain)	HSE	• Train employees on good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• OHS Plan

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
Concrete casting for the foundation structure	Contact with the employee's skin, causing skin irritation	HSE	• Ensure employees working with cement wear appropriate clothing to protect their skin. • Inform employees of the hazards of handling cement and what to do if there is contact with skin or eyes.	• SDS for cement • Health and Safety Plan for Workers
	Scrapes and Bodily Injury due to slip & fall and poor ergonomics	HSE	• Ensure first aid kit is available • Ensure all employees are aware of the Emergency Response Plan and what to do if they have a first aid or medical emergency case • Train employees on good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• Emergency Response Plan • Health and Safety Plan for Workers
	Contamination of waterways with unused cement	HSE	• Prohibit the washing of excess cement into the waterway. • Conduct random tests of waterways to ensure • Follow the Waste Management Plan to manage the cement waste.	• Waste Management Plan
Steel Member Installation	Being struck by Equipment causing injuries to employees	HSE	• Conduct daily checks to ensure horns and alarms are working properly. • Stay in a safe area to ensure equipment does not strike employees when working • Inform all employees of the activity. Ensure employees follow the instructions of the banksman.	• Equipment Checklist
	While working at heights, employees can fall	HSE	• When working at heights, if no rails are present harness must be used • Ensure the harness is in good condition and used correctly • Ensure ladders and scaffolding are properly assembled and secured before using.	• OHS Plan

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
			• Use a basket when lifting and lowering items from the ground	
	Lifting Hazards: The collapse of the Crane	HSE	• Conduct Risk assessment before commencing lifts • Inspect slings and cables before every use • Ensure the lift does not exceed the capacity of the equipment • Erect safety signs and inform employees of the lift • Restrict entry to persons in the lift area and do not allow persons to stand under the suspended load.’	• Risk Assessment • Sling Inspection sheet
	Dropped objects, causing injuries to employees	HSE	• Never touch the load, and also use cables to guide the load	• OHS Plan
	Generation of noise from equipment	Noise	• Provide Employees with appropriate ear protection • Inform nearby residents of the activity • Only operate equipment during the day	• OHS Plan
Using pesticides to prevent termite damage	Exposure to toxins by inhalation Fumes in the Air	HSE Air	• Ensure employees are equipped with appropriate PPE when handling pesticides • Ensure all persons are familiar with SDS and the response to follow in the event of a medical emergency • Have showers and eye wash stations if an employee becomes contaminated.	• MSDS for pesticide
	Contamination of Soil and water through washing of chemical containers or spills on the ground	Water Soil	• Ensure all employees are aware of the Waste Management Plan • Enforce the Waste Management Plan • Conduct Random Water Quality testing of surrounding waterways to ensure there is no pollution as a result of the project’s activities.	• Waste Management Plan • Hazardous Material Management Plan

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
Floor slab construction	Poor Ergonomics resulting in strains and pains	HSE	• Train employees on good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• OHS Plan
	Contamination of waterways with unused cement	Water	• Ensure all employees are aware of the Waste Management Plan • Enforce the Waste Management Plan • Conduct Random Water Quality testing of surrounding waterways to ensure there is no pollution as a result of the project's activities	• Waste Management Plan
Masonry of walls	While working at heights, employees can fall	HSE	• When working at heights, if no rails are present harness must be used • Ensure the harness is in good condition and used correctly • Ensure ladders and scaffolding are properly assembled and secured before using. • Use a basket when lifting and lowering items from the ground	• Health and Safety Plan for Workers • Permits for high risk activities (such as working at heights)
	Contamination of waterways with unused cement	Water	• Ensure all employees are aware of the Waste Management Plan • Enforce the Waste Management Plan • Conduct Random Water Quality testing of surrounding waterways to ensure there is no pollution as a result of the project's activities.	• Waste Management Plan
	Contact with the employee's skin, causing skin irritation	HSE	• Ensure employees are equipped with the necessary PPE when in with cement • Consult SDS as necessary	• SDS for Cement
Roof installation	Dropped objects, causing injuries to employees	HSE	• Use a basket when lifting and lowering items from the ground	• OHS Plan
	While working at heights, employees can fall	HSE	• When working at heights, if no rails are present harness must be used	• Health and Safety Plan for Workers

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
			• Ensure the harness is in good condition and used correctly • Ensure ladders and scaffolding are properly assembled and secured before using.	• Permits for high risk activities (such as working at heights)
	Generation of Wood Waste	HSE Soil	• Any unwanted wood could be given to the nearby residents for any household project rather than discarding it as waste. This is minimising waste generation. • Consult the Waste Management plan for managing any wood waste	• Waste Management Plan
Installation of water (plumbing), power, firefighting equipment, air-conditioning, and ventilation fixtures, and a medical gas pipeline	Electrical shocks during power installation	HSE	• Ensure all necessary equipment is earthed; Use tag tag-out system to isolate electricity. • Complete all necessary permits and JSAs before starting the job. Only qualified persons are allowed to conduct electrical jobs on the project site.	• OHS Plan
	Poor ergonomics. Cuts and buses to employees, back pain and strains		• Train employees on good ergonomics, including using the correct tools for the job, taking occasional breaks, and avoiding overreaching	• OHS Plan
Landscaping & cleaning of construction material	Scrapes and bruises to hand. Nail bore from removing construction material	HSE	• If employees receive nail bore, ensure they receive their tetanus shots • Ensure First kits are available to assist any injured person. Consult the Emergency Response plan.	• Tetanus vaccine card
Finishing work and painting	Exposure to toxic fumes	Air HSE	• Ensure all employees wear appropriate PPE when handling Toxic material. • After painting a room, allow the room to ventilate after painting before doing any further work	• OHS Plan
	Potential for spills on soil and water	Soil	• Ensure spill pads are necessary to clean up any spilt material.	• Waste Management Plan

Table 15: Construction Phase - Mitigation Measures**mpact Causing Activities**	**Details of impact**	**Factor**	**Mitigation measures**	**Applicable Documents**
		Water	• Consult the SDS and Waste Management Plan for clean-up of spills • As much as possible, prevent any spilt material from reaching drains using booms	
OPERATIONAL				
Medical waste generation	Increased medical waste (infectious, sharps, pharmaceuticals	Human health	• Continuously implement Waste Management Plan beyond project completion. • Train staff on safe handling and PPE use.	Waste Management Plan
Energy and resource consumption	Operations will now require more energy and resource consumption	Natural resources, climate change	• Install energy-efficient lighting, equipment and solar PV (GHG emissions) Implement water conservation measures (rainwater harvesting)	NA

8. Environmental and Social Management Plan

8.1. Introduction

This section presents a general overview of the Environmental and Social Management Plans (ESMP) based on the likely environmental and social impacts outlined for phase 1 activities of the Temporary Facilities and Campsite, in addition to the likely impacts outlined for the construction phase.

This ESMP includes the relevant plans for mitigating environmental and social impacts that PCI-Sinopharmintl Consortium will adhere to. This ESMP will be continuously updated based on changes in activities that may occur during the various phases. Additionally, the following plans are included as part of the ESMP for the campsite at Moruca:

1. Environmental Management Plan
2. Decommissioning Plan for the Campsite
3. Stakeholder Engagement Plan
4. Grievance Redress Mechanism
5. Occupational Health and Safety Plan
6. Labour Management Plan
7. Workers' Influx Management Plan
8. Community Health and Safety Plan
9. Emergency Response Plan
10. Drainage Management Plan
11. Waste Management Plan
12. Oil Spill Plan
13. Driver Safety Management Plan
14. Socio-Cultural Analysis (to be included as part of the overall ESA/ESMP)
15. Indigenous People's Plan (to be included as part of the overall ESA/ESMP)

8.2. Guiding Principles of the ESMP

This ESMP follows the general principles of the "Plan, Do, Check, Review" cycle as described below, and outlined in **Figure 16.**

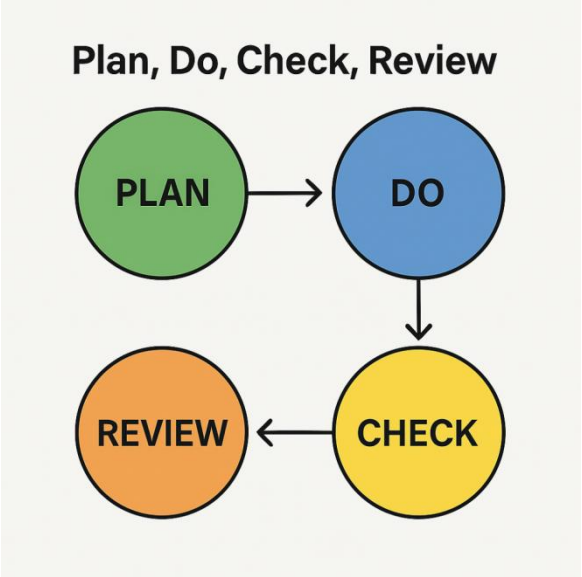


Figure 16: Plan, Do, Check, Review Cycle

Plan:

- Define the objective and scope.
- Identify problems or opportunities.
- Analyze current conditions and root causes.
- Develop a strategy or action plan with timelines and responsibilities.

Do:

- Implement the plan on a small scale (pilot or trial phase if needed).
- Train the people involved and allocate resources.
- Collect data during the implementation.

Check:

- Monitor and evaluate the results.
- Compare the outcomes to the plan.
- Identify any deviations or issues.
- Gather feedback and data for analysis.

Review

- Decide whether to adopt, adjust, or abandon the plan.
- Standardize the successful solution or revise the plan if results were unsatisfactory.

- Share lessons learned and apply improvements on a larger scale.

8.3. Mechanisms for Auditing, Reporting, and Adjustments

Auditing and adjustment are essential parts of a successful ESMP. Auditing systems include inspections and monitoring to confirm proper implementation of the ESMP, as well as the effectiveness of management measures. Corrective actions include responses to out-of-control situations, non-compliances, and non-conformances. Actions also include those intended to improve performance.

The parties involved in overseeing the day-to-day activities of project implementation will conduct continuous monitoring to ensure that all project personnel (PCI-Sinopharmintl Consortium and its subcontractors) are fulfilling their obligations under this ESMP. Monitoring will be conducted to ensure compliance with the commitments in this document and to evaluate the effectiveness of operational controls and other measures intended to mitigate potential impacts.

8.4. Environmental Management Plan

This section presents a summary of the environmental risks and controls that have been identified for the various phases of campsite installation and the expected activities for the hospital's construction. Please see **Table 16**.

Table 16: Environmental Management Plan

AIR QUALITY AND DUST MANAGEMENT			
Objective(s)	To ensure the impacts of air quality and dust are prevented and/or minimized.		
Management Strategy	Air quality and dust issues are managed principally by emission controls at source, and administrative controls during works.		
		Responsibility	**Timing**
Control(s)	The air quality impacts could be minimized using the following measures: ▪ Maintain all construction equipment in accordance with the manufacturer's specifications. ▪ Where dust is identified as an issue, dust control measures will be implemented. These will primarily use a wetting/sprinkling system around the site ▪ Avoid burning non-vegetative waste (refuse, etc.) at the construction site. ▪ Avoid unnecessary idling of construction equipment or delivery trucks when not in use. ▪ Keep work vehicles clean (particularly tires) to avoid tracking dirt around and off the site. ▪ Cover work vehicles while transporting materials ▪ Implement the external grievance mechanism to follow up on dust and/or exhaust emissions complaints being received by the community and workers. ▪ Use of dust masks by workers. ▪ Keep machinery and equipment turned off when not in use to reduce exhaust gas generation. ▪ Keep a certain distance between the production area and the working and living area in the camp to reduce the impact of dust on the working and living areas.	-Maintenance manager -Site Engineer -HSE Officer -Truck drivers	-Daily inspection during camp construction and use -Quarterly assessments to compare against baseline. - As mandated by an issued EPA Permit

AIR QUALITY AND DUST MANAGEMENT			
	▪ Use water suppression to reduce dust from dirt roads. ▪ Cover Stockpiled materials. ▪ Revegetate certain parts of the yard if possible.		
Performance Indicator(s)	-No complaints from adjacent premises, workers and/or community. -Air quality tests -No worker incidents related to excessive exposure to dust and air contaminants		
Monitoring	Daily inspection of worksites to occur, including: • Visual check for dust crossing the project boundaries. • Visual check of high potential dust areas, such as haul roads, stockpiles and operational areas. • Conduct air quality monitoring every 6 months or as mandated by an EPA Permit	HSE Officer	Daily routine inspections as mandated by an EPA Permit
Reporting	Any complaints or incidents are to be reported to the project manager.	HSE Officer	When available
Corrective Action(s)	• Investigate the cause of excessive dust and/or air contaminants • Implement controls immediately (e.g., water carts, corrective maintenance of potentially malfunctioning equipment). • Implement preventative measures prior to the commencement of site works. • Implement administrative controls if required, such as appropriate scheduling of dust-generating activities to more favorable weather conditions.	HSE Officer	As needed

NOISE MANAGEMENT			
Objective(s)	1. To minimize the impacts of noise on the amenity of the surrounding areas from project-related activities 2. Construction activities undertaken in accordance with best practice controls.		
Management Strategy	- Noise is to be managed primarily through administrative and equipment controls		
		Responsibility	**Timing**
Control(s)	Noise impacts associated with project-related activities could be minimized using the following measures: • Maintenance of all construction equipment in accordance with the manufacturer's specifications. • If possible, schedule construction and rehabilitation work during daylight hours when increased noise levels are more tolerable. • If possible, schedule construction and rehabilitation work to minimize activity during peak periods of tourism and recreation (weekends, holidays, etc.). • Avoid unnecessary idling of construction equipment and trucks. • Include communications regarding construction as part of the external communication mechanisms to stakeholders to inform adjacent receptors (e.g., commercial and industrial businesses) of construction activities. • Pre-start checks and maintenance schedules to ensure equipment performance as required. • Noise-dampening equipment to be used on equipment with excessive noise-generating characteristics. • Implementation of grievance mechanism. • Keep machinery and equipment turned off when not in use to reduce noise.	-Maintenance Manager -Site Engineer -HSE Officer -Truck Drivers	-Daily inspection during camp construction and use. -Quarterly noise monitoring - As mandated by an issued EPA Permit
Performance Indicator(s)	- Noise levels are within range		

	- No complaints from adjacent premises, workers, and/or community.		
Monitoring	• Daily inspection of worksites to occur. • Service logs for equipment/machinery used on site. • Noise monitoring	HSE Officer	Daily routine inspections or as mandated by an issued EPA Permit
Reporting	Any complaints or incidents are to be reported to the project manager.	HSE Officer	When available
Corrective Action(s)	• Investigate the cause of excessive noise. • Implement preventative measures prior to the recommencement of site works. • Reschedule of noise-generating activities to reduce noise annoyance.	HSE Officer	When incidents occur

OIL USE AND STORAGE MANAGEMENT			
Objective(s)	Any oil spill is prohibited. Protecting surface water and groundwater resources.		
Management Strategy	-Use new and/or serviced equipment and facilities, which will not result in oil and fuel spills -Build bunded oil storage areas that meet EPA's regulations -Implement effective management measures and strengthen daily inspections of high-risk zones		
		Responsibility	**Timing**
Control(s)	Oil use and storage management measures are as follows: • Use oil tanks that meet safety and storage requirements, generally provided by the diesel manufacturer, and check the certificate before installation. • Use good fuel pumps and fuel pipes, which are usually provided by diesel manufacturers. Check the certificate of conformity before installation and use. • The oil storage area and its use are under the responsibility of a dedicated person (usually the manager of the Material and Equipment Department). Other personnel are prohibited from entering to prevent leakage due to incorrect operation. • When using temporary diesel barrels to refuel machinery during camp construction, use refueling equipment (such as electric refueling pumps), and it is strictly forbidden to directly dump diesel. • Clean the oil storage area regularly to keep it clean. • Regularly maintain oil storage tanks and refueling equipment to keep their good performance. • In the case of spillage, the storage facilities will have a concrete containment oversize with 110% volume capacity to prevent post-contamination of soil and drainage and waterways	-Manager of the Material and Equipment Department -Site Engineer -HSE Officer	-Daily inspection during camp construction -Regular inspection -Water quality monitoring as mandated by an issued EPA Permit
Performance Indicator(s)	No oil leakage accidents. No spills to surface waters. No contamination of soil or surface/ground waters. No complaints from adjacent premises, workers, and/or community.		

Monitoring	- Daily inspection and Regular inspection (where will the inspections be conducted?) Check for leaks, rust, cracks, or damage; Ensure containers are clearly labeled (type of oil, hazard symbols); Confirm area is clean, dry, and well-ventilated; Check that spill response materials (absorbents, PPE) are stocked and accessible; Ensure drip trays or bunds are in place under storage containers; Log daily amount used and refilled. Inspect hoses, pumps, and machinery for oil leaks or residue; Review storage permits, MSDS sheets, and inspection logs; Verify stock levels and check expiration dates if applicable; Check for presence of fire extinguishers (Class B) near storage; Inspect waste oil containers and check for proper labeling and disposal method. • Service logs for oil storage tanks and refueling equipment.	-HSE Officer -Manager of the Material and Equipment Department	-Daily routine inspections
Reporting	Any complaints or incidents are to be reported to the project manager.	-HSE Officer	When available
Corrective Action(s)	• In case of oil leakage, stop using the oil immediately and seal the oil storage area. • Take measures to deal with the leaked oil to prevent it from seeping into groundwater and nearby freshwater rivers. • Before reactivating the oil storage area, all facilities and equipment should be inspected and put into use only if they meet the requirements.	-HSE Officer	When incidents occur

SEPTIC TANK CONSTRUCTION AND USE MANAGEMENT			
Objective(s)	Sewage and filth leaks are prohibited. Protecting surface water and groundwater resources.		
Management Strategy	Build a septic tank that meets the requirements. Regularly inspect the area around the septic tank.		
		Responsibility	**Timing**
Control(s)	Septic tank construction and management measures are as follows: • Build a strong and well-sealed septic tank. The septic tank should be made with concrete to specifications according to GNBS standards. • The construction standards for septic tanks are as follows: 1-Build a 3-chamber septic tank, the first chamber is used to treat sewage sediment, the second and third chambers are used for water seepage, but it can only seep downwards. 2-Sewage from septic tanks cannot be discharged; Therefore, Wastewater shall be treated in accordance with local disposal methods. 3-The capacity of the septic tank is 0.3 cubic meters per person per day. For example, if there are 100 people, a 30 cubic meter septic tank is needed. • Septic tanks are closed projects. After construction, they need to be tested for sealing and pipelines. Only when they meet the requirements can they be buried and put into use. • Regularly check the area around the septic tank for leaks. Septic tanks should be emptied by an authorized agent when necessary.	HSE Officer	Quarterly inspections or, as mandated by an issued EPA Permit
Performance Indicator(s)	-No odor leakage and dirt leakage.		

	-No spills to surface waters. -No contamination of soil or surface waters. -No complaints from adjacent premises, workers and/or community.		
Monitoring	• Regular inspection. • Groundwater testing can be initiated if there is suspicion that the septic tank has polluted the soil. • Surface water testing should be routinely done every six months for the facility	HSE Officer	Quarterly inspections or as mandated by an issued EPA Permit
Reporting	Any complaints or leakage incidents to be reported to the project manager.	HSE Officer	As needed
Corrective Action(s)	• If there is a septic tank leak or pipe blockage, stop using the septic tank immediately and repair or dredge it. • Take measures to deal with leakage to prevent pollution of surface water or nearby freshwater rivers.	HSE Officer	When incidents occur
WATER QUALITY MANAGEMENT			
Objective(s)	-No domestic or industrial sewage/solid waste is discharged into nearby freshwater bodies or pollutes surface water. -Ensure that the quality of potable water meets hygiene and health requirements		
Management Strategy	Strictly control the discharge of domestic and industrial sewage. Ensure that the source of edible water is reliable and meets drinking standards.		
		Responsibility	**Timing**
Control(s)	Water quality management measures are as follows: • Build a special sewage treatment pool and treat domestic sewage and sewage **water** operation separately; sewage can be discharged only after treatment. • Strengthen personnel education and management, prohibit chefs from directly spilling kitchen wastewater on the ground, and prohibit employees from directly spilling domestic sewage on the	HSE Officer	Quarterly Inspections or as mandated by an issued EPA Permit

	ground. • For edible water, you can contact the local water company to provide edible water, which can meet drinking and living needs after purification. If you take water from a well, it must go through a strict purification process and be tested for water quality. It can only be used for drinking by employees after it meets the drinking requirements. • Regularly check the area around the septic tank for leaks.		
Performance Indicator(s)	-No water pollution incidents occurred. No complaints from adjacent premises, workers and/or community. -Water quality test results are within range		
Monitoring	• Regular inspection and identification. • Surface water will be tested every 6 months for pH, Turbidity, Total Suspended Solids, Total Dissolved Solids, • Water purification equipment certificate/water quality test report.	HSE Officer	Quarterly Inspections or as mandated by an issued EPA Permit
Reporting	Any complaints or Pollution incidents to be reported to the project manager.	HSE Officer	As needed
Corrective Action(s)	• If water pollution occurs, stop production operations immediately, take measures to purify the polluted water resources, and • Conduct water quality testing.	HSE Officer	When incidents occur

HOUSEKEEPING AND WASTE MANAGEMENT (INCLUDING HAZARDOUS WASTE)			
Objective(s)	Reduce waste volume, maximize recycling, reuse, and recovery, and prevent any construction waste/litter from entering the environment.		
Management Strategy	Minimize environmental impacts through appropriate controls and site inductions of employees and subcontractors.		
		Responsibility	**Timing**
Control(s)	Housekeeping and Waste Management measures are as follows: • Provide appropriate waste bins, type, volume, and service frequency to accommodate anticipated waste streams. Bins must be clearly labelled. • Enforcement of a strict no-dumping policy, especially in drainage canals and areas nearest the waterways. • Enforcement of a strict no-burning policy (According to the Environmental Protection (Hazardous Wastes Management) Regulations 2000. • Separate hazardous waste from non-hazardous waste. • Place of trash disposal bins in the campsite. • Provide information regarding waste management in site-specific inductions, including waste separation and the importance of securing vehicle loads. • Contact specialized waste disposal and recycling companies to handle and recycle waste, especially hazardous waste. Waste Management or any other certified waste disposal company or by the local village council. • Installation of appropriate fencing and containment in waste managementareas • Implement management measures to prevent and manage spills, per Waste Management Plan. • Recycle oil and waste lubricants to be used for construction equipment (e.g., chainsaws). Storage containers must be clearly labelled and stored in a containment designated area. • Storage of excavation material in designated laydown areas away from drainage channels and water bodies. • Selection of laydown areas away from drainage channels and water bodies. • Appropriate training for staff on waste management practices and safe handling and storage of hazardous materials.	HSE Officer	-Daily routine inspections

	• Use of PPE for the handling of hazardous materials and waste. • Follow the Waste Management Plan in **Appendix Eight.**		
Performance Indicator(s)	• Hazardous materials are appropriately disposed. waste. •Recycling of all recyclable construction metal •Records kept of waste leaving site.		
Monitoring	• Daily inspection of the work site to occur. Review of waste bins (% full, time to next service). • Waste volumes leaving the site from the Waste Disposal Company.	HSE Officer	Daily inspections
Reporting	• Any complaints or Environmental pollution accidents need to be reported to the project manager. • Environmental incident reports. • PCI-Sinopharmintl Consortium will submit the Environmental Annual Report to the EPA on or before the date of compliance with the EPA permit as the requirement in the EPApermit.	HSE Officer	When available
Corrective Action(s)	• Investigate cause of inappropriate waste disposal. • Implement controls. • Review the cause of the issue and develop a response, such as a variation to bin size, service schedule or waste separation awareness.	HSE Officer	When incidents occur

8.5. *Additional General Environmental Control Measures*

Table 17; Environmental Controls during Camp and Hospital Construction

Environmental control measures	Responsible
Before Construction	
Induction Environmental awareness training for all personnel and workers	HSE Officer
Make the Site environmentally friendly (Waste Bins for different kinds of waste)	Site Engineer/ HSE Officer
Inspecting the condition of the heavy equipment	Equipment Administrator /HSE Officer
Visiting nearby receptors to exchange contact information in case of complaints.	HSE Officer
Require all construction workers to sign a code of conduct	HSE Officer
In construction	
Implement daily HSE toolbox meetings to increase environmental awareness.	HSE Officer
Implement measures in the Environmental Management Plan	Site Engineer
Monitor execution of the control measures.	Environmental / HSE Officer
Report and correct daily environmental issues.	Environmental Officer/ HSE Officer
Construction completed	
Clean up all project waste. (Stones, steel, iron, etc.)	Site Engineer
Restore vegetation	Site Engineer
Finalize the environmental performance report	Environmental/HSE Officer

8.6. Control Measures for Associated Facilities

Table 18: Control Measures for Associated Facilities

Associated Facility	Potential Impact	Mitigation Measures	Responsible Party
Access Road Construction	Land disturbance, dust, noise, potential damage to community paths and farmland	Use existing paths where possible; water spraying; construction schedule consultation with villagers	Contractor / Local Village
Power Supply Infrastructure	Visual intrusion, tree clearing, disruption to land use	Minimize vegetation clearing; replant trees; route alignment through already disturbed areas	Contractor
Water Supply System	Potential impact on local streams or groundwater sources	Conduct hydrogeological study; ensure sustainable abstraction rates; protect intake from contamination	Contractor
Sewage and Wastewater System	Groundwater pollution risk; community health hazard	Use sealed septic tanks or small-scale treatment plant; regular maintenance; staff training	Contractor
Associated facilities	-Noise and Lighting -Community Relations -Fire and Safety	Schedule rest hours and limit nighttime activities; use downward-shielded lighting to minimize light spillover. Engage with the local community regarding the purpose and use of the accommodations; establish a grievance mechanism. Equip buildings with fire extinguishers; clearly mark emergency exits; post safety instructions and conduct periodic safety checks.	Contractor

8.7. Training

All project personnel will be qualified for the specific tasks they are assigned and will undergo additional training as needed to meet the demands of the working environment.

All personnel, regardless of position, will receive job-specific Health, Safety, and Environment (HSE) training prior to commencing work and periodically thereafter, as required. Training will include general environmental awareness as well as specific procedures designed to prevent environmental

damage and ensure human health and safety.

Daily toolbox talks will be conducted each morning in small groups, tailored to the tasks planned for the day. These meetings will be used to communicate safety hazards, reinforce safe practices, and gather feedback or concerns from employees regarding health and safety on the project.

Emergency response training and drills will be conducted semi-annually throughout the project's duration.

All new staff, contractors, and visitors will undergo basic HSE induction training and will be required to comply with all project-specific HSE procedures.

8.8. Signage

Health and Safety signage is important for communicating important safety information to employees, management and visitors who may daily traverse the project site. The safety signs for the facility can be categorized into 5 different types:

- Prohibition Sign (Red) - No Smoking, No Entry, No Unauthorized entry, No parking
- Mandatory Signs (Blue) – Wear Protective Gears
- Warning Signs (Yellow) – Construction area, Go Slow
- Safe Conditions Signs (Green) – Emergency Exit, Muster Point,
- Fire equipment (red) – Fire extinguisher, Alarm

A sight safety sign will be erected at the entrance of the worksite to notify visitors of the campsite procedures.

8.9. Indigenous Peoples Plan and Socio-Cultural Analysis

A detailed Socio-Cultural Assessment (SCA) and an Indigenous Peoples Plan (IPP) have been prepared for this site and is appended to this document. See Appendix 16.

9. Public Consultation and Information Disclosure

From the project's inception, it has been important to engage all relevant stakeholders at every stage. As such, various forms of engagement and information disclosure have been utilized to convey the intention and updates of the project's phases. Based on the *Baseline Assessment Report (March 2023)*, several public consultation and information disclosure activities were conducted for the Moruca (Kumaka District Hospital) site, which is now being upgraded to the Moruca Regional Hospital Project.

Two stakeholder engagement sessions were held for each hospital, including Kumaka/Moruca:

- One session with hospital management, staff, and regional health personnel.
- A second session with community stakeholders such as residents, community leadership, local/regional authorities, and institutions.

Both sessions were conducted on January 26, 2023. These engagements were organized by the MOH, where they presented a project overview of the project with discussions facilitated by Environmental Management Consultants Inc. (EMC).

Recently, a consultation exercise was conducted on July 10, 2025 to present and discuss the temporary facilities, and its associated impacts and measures. Following the community engagement consultations in Moruca, key feedback, concerns, and recommendations were documented **(See the Consultation Report in Appendix Fifteen).** The ESA/ESMP has been updated to integrate these inputs into relevant sections to ensure the project remains responsive to stakeholder needs, mitigates potential risks, and enhances local benefits.

The incorporation process follows these steps:

1. **Review and Categorization:** each recommendation from the consultations was reviewed and categorized under the relevant ESA/ESMP thematic area (e.g., labour management, waste management, cultural heritage and community health and safety).
2. **Determination of Action:** for each recommendation, a corresponding mitigation measure was developed or existing measures were strengthened. Where relevant, responsibilities, timelines, and monitoring were assigned.
3. **Integration into ESA/ESMP:** the updated or new measures have been inserted into the following sections of the ESA/ESMP as outlined in **Table 20.**

Table 19: Integration of Consultations into ESA/ESMP

Consultation Topic / Recommendation	ESA/ESMP Section Updated	Incorporated Action
Preserve cultural respect and control disruptive behavior by workers	Labour Management Procedures (LMP) *Updated Section: (4)Training and Development – Cultural Awareness*	Inclusion of the requirement for cultural awareness training for all incoming workers, and mandate coordination with the Village Council. **See LMP in Appendix Six.**
Commitment to 60% local employment, ensuring fairness and compliance with Guyanese local content laws	Local Hire Plan (LHP) *Updated Section: (5) Hiring Process*	Included requirement of local hiring target of 60% provided that labourers meet the Contractor's requirements. **See LHP in Appendix Two.**
Contractor to submit job listings and requirements to Village Council; locals can uplift forms from there.	LHP - *Updated Section: (3) Recruitment Strategy*	Included a requirement for job advertisements to be provided to the Village Council before external recruitment. **See LHP in Appendix Two.**
Employment Documentation (ID, NIS, TIN)	LMP - *Updated Section: (3) Recruitment Strategy – Application Assistance*	Added facilitation support with Ministry and relevant agencies. **See LMP in Appendix Six.**
Underpayment of locals and preference for outsiders	LMP - *Updated Section: (5) Hiring Process – Fair Wage Compensation*	Included fair wage requirement with parity between local and non-local workers. **See LMP in Appendix Six.**
Maintain entry fees and royalties for materials as per Village Council 's systems.	Indigenous Peoples' Plan (IPP)	Require Contractor compliance with existing Village Council entry fees and royalties.
Language barriers	LMP - *Updated Section: (4) Training and Development – Bilingual Supervision*	Incorporated bi-lingual supervision requirements. **See LMP in Appendix Six.**
Safety culture to be taught to local workers	Worker Health and Safety Plan (WHSP) - Updated Section: This was already included in the *'Safety Training'* section of the WHSP document	Require mandatory safety induction and toolbox talks for all workers. **See WHSP in Appendix Twelve.**
Local attitudes and discipline improvement efforts supported by the Village Council.	SCA/IPP	Include collaborative behavioral management approach with Village Council. **See SCA/IPP in A 16**

The ESA/ESMP will be treated as a living document. Any new recommendations arising from further

consultations or during project implementation will be assessed and integrated using the same approach.

Following review and approval of this document by the relevant agencies, additional consultations on the socio-cultural analysis, indigenous peoples plan and updated ESA/ESMP will be conducted in conjunction with the presentation of the hospital design to ensure transparency, compliance, and inclusive stakeholder engagement.

10. APPENDIX

APPENDIX ONE - DECOMMISSIONING PLAN

This section provides an overview of the key measures to be undertaken during the decommissioning and closure phase of the campsite.

The plan outlines closure and disposal options, including the removal or potential reuse of the office and living areas, solar photovoltaic power station, and materials stored on-site. At this time the plan is to completely demolish the workers camp site, if this changes this plan will be updated (6 months before this process begins)

Infrastructure and utilities within the campsite include construction camps, material storage areas, electricity transmission lines, water supply systems, and internet connections.

1. Overview

Objectives:

The decommissioning plan provides a framework for the decommissioning and restoration of the campsite after the termination of its operations. This plan is designed to effectively guide the decommissioning of the PCI-Sinopharmintl Consortium camp to minimize environmental, financial and social impacts. The objectives of the decommissioning plan are to:

- Provide a framework for the decommissioning of the campsite.
- Explore different options for decommissioning of the facilities at the campsite.
- Ensure that measures are in place to dispose of all waste (including hazardous waste) that are on-site, clean up any contaminated area at the campsite.
- Include measures that will be implemented to address loss of employment due to the closure of the campsite.
- Detail the schedule of all decommissioning activities.
- The decommissioning plan shall confirm with national legislative and IDB requirements.

Scope:

The scope of this decommissioning plan includes:

- Buildings within the campsite, such as houses, septic tanks, basketball courts, etc.;
- Public utilities related to the camp, such as water, electricity, networks, etc.;
- Large facilities, such as solar photovoltaic power stations;
- Stockpile areas and machine workshop.

Timeline:

The campsite will be decommissioned after PCI-Sinopharmintl Consortium fully completes the Hospital Project, and the demolition is expected to take 1 to 2 months.

2. ***Assessment***

Survey: Conduct a thorough survey of the campsite to document existing conditions, including structures, utilities, and any hazardous materials.

Inventory: Create a comprehensive inventory of all items to be decommissioned, including buildings, facilities, utilities, equipment, and waste materials.

3. ***Policy Requirements***

Legal Requirements: Ensure compliance with local, country regulations, including environmental and safety standards.

Agency Requirements: Ensure compliance with the EPA environmental and safety standards.

IDB Requirements: The decommissioning plan for the camp must comply with the environmental and social framework policy requirements of the IDB and must be approved by the IDB before further construction can proceed.

4. ***Safety Plan***

Risk Assessment: Within two months before the camp is decommissioned, PCI-Sinopharmintl Consortium will conduct a comprehensive assessment of the safety risks involved in the camp decommissioning construction process and produce an assessment report.

Safety Measures: Implement safety protocols, including the use of personal protective equipment (PPE) and emergency response plans.

Training: Provide training for all personnel involved in decommissioning on safety procedures and equipment usage.

5. ***Decommissioning Procedures***

a) **Obtaining approval for decommissioning:**

IDB Approval: Prepare a detailed demolition plan, including equipment and housing disposal, and submit it to IDB for approval before proceeding to the next step of demolition.

EPA Approval: Before the camp decommissioning construction, prepare relevant documents according to EPA's requirements to obtain EPA's approval or no objection.

b) **Utility Disconnection:**

Water and Sewer: Properly disconnect and cap water and sewer lines.

Electricity: The solar power supply system will be retained for use by the hospital.

PCI-Sinopharmintl Consortium will reach a demolition or decommissioning agreement or contract

with these professional companies two months before the camp is decommissioned and hand it over to them for professional handling.

c) Building and facility demolition:

Building Demolition: Some basic building demolition will be performed by PCI-Sinopharmintl Consortium.

Facility dismantling: large facilities will be dismantled by the manufacturer or professional companies.

The solar photovoltaic power station equipment of the PCI-Sinopharmintl Consortium will be dismantled by the installation contractor upon project completion. For supporting infrastructure such as the water supply system, which was constructed by professional utility companies, consideration may be given to retaining the system for continued use by the hospital and surrounding residents..

If there are some buildings or structures that the Village Council is willing to keep, PCI-Sinopharmintl Consortium will reach a purchase and sale agreement with the landowner and sell them to the village.

d) Waste Management:

Sorting: Sort waste into categories such as hazardous, recyclable, and general waste.

Disposal: PCI-Sinopharmintl Consortium will hand over the waste disposal, including hazardous waste, Hazardous waste village-level collection points to be transported for safe disposal.

Documentation: Keep records of all waste disposal activities, including transfer notes and disposal certificates. Documentation will be done by PCI-Sinopharmintl Consortium.

e) Site Cleanup:

Soil and Water Testing: Water in the drains will be tested to detect any contamination present. Levels of contaminant will be compared to baseline conditions and measures will be but in place to clean up the water if baseline conditions are exceeded.

Restoration: The site will be restored to its baseline conditions and meet any requirement in the EPA permit. Restoration may include soil stabilization and replanting. We will implement measures including seed sowing to rehabilitate the vegetation in the campsite.

f) Resource Management

PCI-Sinopharmintl Consortium will make a complete inventory of all resources at the campsite. Resources mainly include equipment, materials and some items.

Ruse and Redistribution: If PCI-Sinopharmintl Consortium obtains another project in Guyana, PCI-Sinopharmintl Consortium will allocate these resources to the other project after completing legal and compliant procedures.

Inventory Management: PCI-Sinopharmintl Consortium will evaluate equipment and materials for potential reuse or resale. PCI-Sinopharmintl Consortium will ensure that all actions are legal and compliant.

Donations: PCI-Sinopharmintl Consortium will donate usable items to charitable organizations if appropriate.

g) Documentation and Reporting

Records: PCI-Sinopharmintl Consortium will maintain comprehensive records of all decommissioning activities, including dismantling, waste management, and site cleanup.

Final Report: PCI-Sinopharmintl Consortium will prepare a final report summarizing the decommissioning process, compliance with regulations, and the final condition of the site.

Stakeholder Communication: Provide updates to stakeholders and regulatory bodies (IDB/EPA/MOH) as required. PCI-Sinopharmintl Consortium will notify stakeholders who are likely to be affected by the decommissioning activities.

h) Final Inspection and Approval

Inspection: PCI-Sinopharmintl Consortium will conduct a final inspection of the site to verify that all decommissioning activities have been completed.

Certification: Obtain any necessary certifications or approvals from regulatory agencies (IDB/EPA/MOH) or project stakeholders.

i) Post-Decommissioning Monitoring

Monitoring Plan: PCI-Sinopharmintl Consortium will develop a plan for monitoring the site after decommissioning to ensure that no new issues arise.

Reporting: Provide periodic reports as required by regulations or stakeholders.

j) Lessons Learned

Review: Conduct a review of the decommissioning process to identify successes and areas for improvement.

Recommendations: Document lessons learned and make recommendations for future decommissioning projects.

k) Additional Considerations

Community Engagement: Engage with local communities to address any concerns and provide support if needed.

APPENDIX TWO – LOCAL HIRE PLAN

A Local Hire Plan is designed to ensure that the local community benefits from employment opportunities created by the PCI-Sinopharmintl Consortium, particularly during the construction and decommissioning of the campsite or other large-scale project activities. Given the small number of local personnel in Moruca, the available workforce is limited. Based on community engagement, surveys, and workforce assessments, it is estimated that approximately 10 local workers can be employed under this project.

1. Objectives

Employment Goals:

PCI-Sinopharmintl Consortium expects to recruit 5 to 10 drivers and operators of various types, and about 15 ordinary laborers from Moruca and nearby communities.

Community Benefits:

PCI-Sinopharmintl Consortium's camp will create jobs for the Moruca and nearby communities.

2. Stakeholder Engagement

Community Consultation: Engage with local community leaders, organizations, and potential workers to understand their needs and expectations. Please see **Appendix Three** (Stakeholder Consultation Plan) for details.

Partnerships: Build partnerships with local community, educational institutions, and employment agencies to facilitate local hiring.

3. Recruitment Strategy

Advertising: Use the village council, local media, community boards, and online platforms to advertise job openings. Ensure that job postings are accessible and clear. All vacancies and job postings will be shared with the Village Council to encourage local hiring from within the community.

Job Fairs and Information Sessions: Host job fairs and information sessions in the local community to provide information about job opportunities and application processes.

Application Assistance: Offer assistance with job applications. Ongoing requests will be made for assistance from the local village committee in recruiting laborers from nearby or neighboring villages. Assistance will also be provided from the MoH (and other applicable agencies) to workers who may need supporting documentation, such as NIS, ID, and TIN Certificates.

4. Training and Development

Skills Training: Provide training programs to local candidates to enhance their skills and make them eligible for available positions. This could include workshops, certifications, and on-the-job training.

Cultural Awareness: Onboarding and quarterly training will be provided to all staff when recruited to the project team. Collaborative training will be done with appropriate representatives from the village.

Bilingual Supervision: As needed, the Contractor will seek to have bilingual supervisors to allow for ease of communication with employees from various language backgrounds.

Safety Training and Communication: All staff must participate in the site safety induction, along with daily toolbox talks to always be informed about site safety.

Mentorship: Implement mentorship where experienced employees support and guide new local hires.

5. Hiring Process

Local Preference: Implement policies that give preference to local candidates when qualifications are equal. As mentioned in point 4, PCI-Sinopharmintl Consortium will publish recruitment advertisements through the village committee. Job seekers can send their resumes through committee reserved by PCI-Sinopharmintl Consortium. After screening, PCI-Sinopharmintl Consortium will issue a job offer to qualified job seekers and sign a labor contract before formal employment. The labor contract must comply with the laws and regulations of Guyana.

Additionally, the local hiring target will be 60% recruitment rate from within the community and surrounding villages, provided it allows the Contractor to reach its hiring needs.

Fair Wage Compensation: The Contractor will commit to the fair and equitable distribution of wages based on skills and qualifications for both local and non-local employees.

6. Monitoring and Evaluation

Tracking Progress: Monitor the number of local hires and assess how well they are integrated into the workforce. Keep track of metrics such as retention rates and job performance.

7. Reporting

Regular Updates: Provide regular updates on local hiring progress to stakeholders, including community leaders and project sponsors (IDB/MOH).

Impact Assessment: Assess and report on the economic and social impacts of local hiring, such as job creation and community development.

8. Continuous Improvement

Review and Adaptation: Regularly review the Local Hire Plan to identify areas for improvement. Adjust strategies based on feedback and evolving community needs.

Best Practices: Document best practices and lessons learned to enhance future local hiring initiatives.

By following these steps, PCI-Sinopharmintl Consortium can effectively implement a Local Hire Plan that not only supports local employment but also fosters positive relationships with the community and contributes to the overall success of this project. For the Labor Management Plan please see the **Appendix Six**, and Driver Safety Management Plan in **Appendix Seven.**

APPENDIX THREE – STAKEHOLDER ENGAGEMENT PLAN

The proposed project requires that stakeholders who may be affected by a project must be consulted. This SEP has been developed to describe the project's program for stakeholder engagement, public information disclosure and consultation. The SEP outlines the ways in which PCI-Sinopharmintl will communicate with stakeholders and provide a mechanism through which people can raise concerns, provide feedback, or make complaints about the project or any activities related to the project.

Stakeholders include people who may not be directly affected, and other groups who may possess information and resources that can benefit the project. This may include other the village council, neighboring communities ,government agencies, individuals and groups with particular expertise such as independent experts, and people who have an interest in a project and who may influence its outcomes. The present consultation plan considers:

1. Identification of stakeholders
2. Identification of impact or benefits, interests, positive or negative; and
3. Methodology to engage with each of the different groups
4. Details on Consultations

1. Identification of Stakeholders

Beneficiaries: The entire area occupied by PCI-Sinopharmintl Consortium's Camp is expected to positively benefit the surrounding communities, which includes:

- Private Sector
- Public sector,
- Waramuri, Assakata, Kwebanna, Manawarin
- PCI-Sinopharmintl Consortium local and foreign employees Local labor, and
- Services providers (Hospitals, Schools and Water Utility).

Persons adversely affected: Most negative impacts identified are minor and moderate and more likely to be experience due to the proximity of the campsite to residences.

- Drivers;
- Residents along the ROW;
- Private sector/business operating in the ROW.

Implementing agency staff and their consultants:

- PCI-Sinopharmintl Consortium staff;
- Project Execution Unit

- Contractors on site; and
- Supervision firm.

Government policymakers and local authorities: Coordination to ensure compliance to local laws or support for the implementation of mitigation measures will be required with the following Agencies and Ministries.

- Region 1: Regional Democratic Council - Moruca local Authority
- Ministry of Amerindian Affairs
- National Toshaos Council
- Village Council in the area of direct and indirect influence
- Ministry of Health
- Ministry of Natural Resources and Environment
- Environmental Protection Agency;
- Guyana Lands and Surveys Commission;
- Ministry of Local Government and Regional Development;
- Guyana Police Force;
- Ministry of Finance.
- Guyana Civil Aviation Authority
- Guyana Aircraft Owners Association

Academia and research organizations:

- University of Guyana.

Financing institutions:

- Inter-American Development Bank.

1. Identification of impact or benefits

The identification of adverse and positive impact is discussed in detail on Chapter 6 of the Environmental Impact Assessment Report. For the Consultation Plan the adverse and positive impacts are mentioned and a relation is stablished between impacts and stakeholders.

- Adverse Impacts:
    - Dust generation;

- Exhaust emissions;
- Noise Levels;
- Solid waste generation;
- Pollution of water bodies;
- Disruption of services;
- Traffic Congestion; and
- Health and Safety.
- Worker Influx

- Positive Impacts:
  - Local employment;
  - Reliability of energy supply; and
  - Improved access to services.

- Stakeholders impacted by Adverse Impacts:
  - Residents along the ROW;
  - Businesses along the ROW; and

- Stakeholders benefitting from Positive Impacts:
  - PCI-Sinopharmintl Consortium employees;
  - Private Sector;
  - Local labour; and
  - Services providers (water utility, hospitals).

2. Methodology to engage with each of the different groups.

The recommended methods of stakeholder engagement for the proposed project are the following:

- Public hearings or meetings for adversely affected and beneficiaries.
- Workshops to PCI-Sinopharmintl Consortium staff to inform the project campsite and needed maintenance and operation requirements.
- Consultations with key informants to engage local authorities and relevant agencies involved during the construction and operation of the project, including the financial donor.

- Discussions as part of conducting surveys or census studies with beneficiaries and adversely affected persons.
- Consultations with beneficiaries and adversely affected persons using electronic media.
- Awareness campaigns and outreach to beneficiaries and adversely affected persons

3. Consultations

PCI-Sinopharmintl Consortium will commence stakeholder consultations immediately upon approval of this ESA/ESMP and before any construction works. . Consultations will be held in Moruca, Region 1, since there are various challenges with telecommunications and connecting stakeholders online. All stakeholders will be informed at least two weeks in advance of the consultations, so that all logistical arrangements can be made in a timely manner.

Any interested stakeholders who would like to be part of the engagements, but is unable to do so at the proposed date and time, PCI-Sinopharmintl will make any necessary provisions to engage such persons.

After consultations, the socio-cultural analysis and indigenous peoples plan will be updated r and included as part of this updated ESA/ESMP.

Stakeholder Identification for Consultations

Key stakeholders critical for the consultations include the following:

a) Local communities and residents

- Santa Rosa
- Kabucalli
- Poloma
- Hobo
- Mathurin Point

b) Government authorities and regulatory agencies

- Ministry of Health
- Regional Health Department, Region 1
- Moruca Village Council
- Regional Democratic Council, Region 1

- Project Execution Unit – Ministry of Health
- Ministry of Amerindian Affairs

c) Other interested parties

- Inter-American Development Bank
- Guyana Police Force
- Guyana Aircraft Owners Association
- Civil Aviation Authority
- Environmental Protection Agency
- Ministry of Local Government and Regional Development
- Supervisory Firm – CB Associates & Partners
- Contractors and sub-contractors

Topics for discussion

The following topics will be discussed at the consultations:

1. Overview of the project
2. Overview of the proposed camp
3. Project Oversight (including village oversight and monitoring)
4. Labour Influx Plan
5. Labour Management Plan
6. Community Health and Safety Plan
7. Workers Code of Conduct
8. Grievance Redress Mechanisms and complaints protocol
9. Any other matters related to this project

Engagement Strategies

PCI-Sinopharmintl will use the following engagement strategies as part of its SEP:

- Regular Community Meetings – Conduct meetings to inform and consult communities about project progress and potential impacts.

- Public Consultation Forums – Organize forums to discuss project-related concerns and gather feedback.
- Information Disclosure – Provide timely updates via official reports, websites, and social media.
- Capacity Building and Training – Offer training programs for local stakeholders to enhance their participation.
- Feedback Mechanisms – Establish multiple channels for stakeholders to express their concerns or suggestions.

Monitoring and Evaluation

- Regular assessment of engagement effectiveness through surveys and feedback sessions.
- Stakeholder reports to track interactions and address gaps in communication.
- Performance indicators to measure transparency, responsiveness, and participation levels.

Grievance Redress Mechanism (GRM)

Objective

The Grievance Redress Mechanism (GRM) provides a structured and transparent process for addressing concerns, complaints, and disputes related to the consortium's operations. It aims to resolve issues efficiently, fairly, and in a timely manner.

Grievance Handling Process

Grievance Submission:

- Complaints can be submitted through:
- Dedicated grievance submission forms (online or offline)
- Community liaison officers or the Village Council
- Email services：motucaprojectpowerchina@gmail.com
- Telephone: +592 750 0692
- Suggestion boxes placed at key locations including the village council office

Grievance Registration

- All grievances are documented in a centralized database with tracking numbers.

- Acknowledgment is sent to the complainant within five working days.

Investigation and Resolution

- Relevant teams review the grievance and assess its validity.
- Necessary actions are taken to resolve the issue within 30 working days.
- If required, further engagement with the complainant and stakeholders is conducted.

Feedback and Closure

- Resolution outcomes are communicated to the complainant.
- Follow-up actions are monitored to ensure grievances are effectively addressed.

Appeal Process

- If the complainant is unsatisfied with the resolution, an appeal can be submitted for further review.
- An independent panel may be engaged to assess complex cases.
- Final resolution decisions are documented and communicated.

Reporting and Monitoring

- Periodic reports summarizing grievances and resolutions are shared with stakeholders.
- Continuous improvement through analysis of grievance trends and feedback mechanisms.
- Compliance with national and international best practices for grievance redress.

This SEP and GRM ensures proactive community engagement and a clear, fair process for addressing concerns, reinforcing PCI-Sinopharmintl Consortium's commitment to social responsibility and sustainability.

In addition to PCI-Sinopharmintl's GRM, affected parties are also welcome to utilize the MOH's GRM. Information about the MOH's GRM can be found here: https://health.gov.gy/projects/ under subheading "**GRM Plan – HCNS".**

APPENDIX FOUR – OCCUPATIONAL HEALTH AND SAFETY PLAN

Introduction

This section is the safety and occupational health management plan for the campsites prepared by the contractor (PCI-Sinopharmintl Consortium) in accordance with the IDB's policy framework and management requirements. This plan describes PCI-Sinopharmintl Consortium's management measures for safety and occupational health during the construction and use of the campsites. PCI-Sinopharmintl Consortium will update this plan according to changes in camp activities.

Objectives

The objectives of this plan are as follows:

- All workers and employees, are fully trained and experienced to do the tasks requested of them;
- Implement measures to eliminate hazards, and where elimination is not possible, puts in place controls to ensure that hazards and risks are minimized to acceptable levels;
- Ensure all employees and workers sign a Code of Conduct (**Please see LMP in Appendix Six).**
- Ensure the safety and health of employees during camps' construction and use.

Staff Training

PCI-Sinopharmintl Consortium will organize staff training to inform them of camp-related information, safety management policies of IDB, Ministry of Health and PCI-Sinopharmintl Consortium; code of conduct, wearing of personal protective equipment, the customs, norms and rules of people working in indigenous communities, etc.

Specialized training must be completed to perform activities as work at heights, electrical works, hazardous materials handling, lifting operations (involved in the construction of the campsites) that are considered medium or high risk evaluated. The specific training contents are shown in **Table 16.**

Table 16: Staff Training Records

Name	Age	Position/ Type of work	Training Date	Signature
General training content				
Yes	**N/A**			
		WSG and PCI-Sinopharmintl Consortium Policies regarding ESHS		

		IDB E&S Policy Framework and Construction ESMP
		Code of conduct (Training on all aspects, including sexual harassment)
		The employee's responsibility for performing his/her work in a safe manner, in accordance with policies and procedures, and Guyana Laws and

		Regulations.
		ESMP minimum requirements for wearing personal protective equipment, including hard hats, safety glasses, and steel-toed safety shoes or boots.
		The employee's responsibility to report all injuries and incidents, including near misses, to his/her supervisor. Inform employee where to get reporting forms and procedures for completing them.
		Prohibition of weapons (e.g., firearms, knifes, etc.)
		The employee's responsibility for participating in mandatory safety and E&S training.
		PCI-Sinopharmintl Consortium ESMP
		Hazardous Materials (Describe various types of hazardous materials present.)
		Flammables and Combustibles
		Respirable Dust
		Emergency Response Plan and Evacuation Plan
		First Aid Training
		Fire Protection Systems & Portable Fire Extinguishers
Specialized training content for work at heights		
		In addition to common PPEs, you must wear a safety belt and fasten a safety rope, and make sure the safety belt is hung high for use.

Specialized training content for electrical works		
		Electrical work can only be performed by professional electricians, who must hold valid certificates.
		Electricians must also wear insulating gloves and insulating protective clothing when working.
Specialized training content for hazardous materials handling		
		Hazardous waste is collected and processed by designated personnel wearing protective equipment, and be treated in accordance with local disposal methods and be transported to a local centralized treatment facility for further processing.
Specialized training content for lifting operations		
		Lifting and hoisting operations are directed by a dedicated person and supervised by safety officers throughout the process.
		Lifting equipment operators must hold valid certificates.
		It is forbidden for people to enter the crane's operating radius or stand the hoisted objects.
		The safety performance and safety devices of the lifting equipment must be checked before lifting operations.
Customs, Norms, and Rules in Amerindian Communities		
		Respect for Leadership and Protocol **-Village chief** is the primary authority. Always seek **permission** from the Toshao and the Village Council before entering the community or starting any activity. **-Decisions are made communally**. Major actions often require discussion with the village meeting or council. -It is customary to **greet and formally introduce yourself** to the leadership when visiting. ***Community First Ethic*** -Amerindian communities often operate on **collective responsibility**. Helping each other is valued over individual profit. -Activities like hunting, farming, and building are done **cooperatively**, especially for communal projects. ***Respect for Land and Nature*** -The land is considered sacred and **not individually owned**. Avoid disrespecting rivers,

		forests, and sacred spaces. -Always ask before **using natural resources** (e.g., wood, water, and fish). **-Hunting and fishing** are regulated by traditional and sometimes legal rules—always seek guidance. ***Dress and Behavior*** -Modest clothing is appreciated, especially in more traditional villages. -Public drunkenness, loud behavior, or **disrespectful language** is frowned upon. -Take off hats when addressing elders or attending meetings (if applicable to local custom). ***Photography and Recording*** -Always **ask for permission** before taking photos or videos—especially of people, rituals, or ceremonies. -Some traditions or knowledge are considered **sacred or private**. ***Workplace Etiquette*** -Be **patient and flexible**—time and task management may follow different rhythms from urban or Western norms. -Respect **non-monetary economies**; bartering and shared services are common. **-Gender roles** may influence who performs certain tasks. Always clarify expectations. ***Language and Communication*** -While English is widely spoken, **Patamona, Macushi, Wapishana, and other Indigenous languages** are commonly used. -Using **basic phrases or greetings** in the local language can be a strong sign of respect. ***Ceremonies and Cultural Practices*** -Participation in or observation of **festivals, storytelling, or spiritual rituals** should be done respectfully, and only when invited. -Some communities have **taboos** (e.g., dietary or behavioral) related to these practices.

Sexual and Gender-Based Violence

Gender-Based Violence (GBV), or violence against women in the workplace, is a major global public health problem, and even more worrying is its impact on workplace productivity. Gender-based violence refers to harmful behavior directed at individuals on the basis of gender. It has its roots in gender inequality, abuse of power, and harmful norms. GBV is a serious violation of human rights and a life-threatening health and protection issue. Sexual Exploitation and Abuse (SEA) include trafficking and prostitution. Sexual abuse refers to actual or threatened physical assault, whether by force or under conditions of unequal or coercive power. It includes sexual slavery, pornography, child abuse, and sexual assault. Violence against children includes all forms of violence against people under the age of 18, whether perpetrated by parents or other caregivers, peers, lovers, or strangers.

1. Training plan

New employees must be trained on the prevention of sexual and gender-based violence when they enter the site, in addition to a project-specific training on a quarterly basis. In addition, the social security employees of the project will organize such special training for the residents of the community within the construction area from time to time. Workers and sub-contractors will actively participate in training and lectures on the prevention of sexual and gender-based violence organized by the Contractor, in collaboration with relevant agencies.

PCI-Sinopharmintl Consortium is committed to combating gender-based violence, sexual exploitation and abuse, sexual harassment, and HIV/AIDS training (GBV/SEA/SH/HIV/AID) in the host communities where the project is located, educating staff about the dangers of GBV, SEA, SH, and HIV/AID so that they can identify, avoid, and report in various ways when it eventually occurs. This will also help the organization avoid all kinds of damage that may occur, thereby supporting every employee to make positive behavior changes. These trainings will be coordinated with a local NGO such as Health and Shelter and this commitment is in the social management plan.

1 Training objectives

At the end of the training, PCI-Sinopharmintl Consortium personnel and community members will be able to:

1) identify prevalent forms of gender-based violence in their communities;

2) take measures to prevent gender-based violence in the workplace;

3) Respond to GBV, SEA, SH incidents;

4) Learn how you get infected with HIV or AIDS and how to prevent it.

2 Expected Results

1) zero incidence of GBV/SEA, violence against children, or HIV;

2) the incidence of HIV infection is zero, and the transmission rate is zero;

3) increased workers' awareness of prevention and response;

4) Efficient and effective management of any case/incident in the community;

5) Establish a referral mechanism for response and reporting of GBV/SEA/HIV.

3 Training content

1) Mode of transmission of HIV During unprotected (skin-to-skin) sex (anal, vaginal, or oral).Exposure to HIV-infected blood or blood products. Intravenous drug needles are shared with HIV-positive individuals. Transmission from HIV-positive mother to child. During breastfeeding.

2) How to prevent HIV/AIDS Ask and talk about HIV ahead of time with your sexual partner. Use condoms during sex. Reduce the number of primary sexual partners. Get tested to find out how you are.

3) Who is at highest risk of HIV infection? Anyone who has not used a condom for sexual intercourse. People who have more than 1 partner and are not using a condom during sexual intercourse. A person whose sexual partner does not use a condom during sexual intercourse with another partner.

4) Chinese personnel are prohibited from having sex with local employees.

5) It is forbidden to engage in any acts of prostitution or captivity of mistresses.

Occupational Health and Safety Measures

1 Safety signs and reminders

During the camp construction phase, PCI-Sinopharmintl Consortium will post functional area signs (such as toilets, rest areas, emergency assembly points, etc.) and safety reminders (such as electrical hazards, beware of potholes, wear Personal Protective Equipment (PPE) when entering the construction site, etc.) in the camp. For the main camp, because it is close to the village, safety reminders need to be set up outside the camp (slow down signs and construction area signs are set up 50m on both sides of the camp).

After the camp is completed, the Consortium will install the necessary permanent safety signage in production areas within the camp. For example, pay attention to safety, no smoking, danger of electric shock, beware of falling objects, no entry into mechanical working areas, wear PPEs when entering the production area, etc.

2 Security Measures

During the camp construction phase, outsiders are prohibited from entering the camp at will except PCI-Sinopharmintl Consortium employees. PCI-Sinopharmintl Consortium will assign personnel to guard the gate. If outsiders really need to enter, they need to get approval and wear PPEs before entering. No under-aged persons, that is, under the age of 18, will be allowed to enter.

At night, PCI-Sinopharmintl Consortium will employ professional security guards to guard the camp and the materials and equipment within the camp.

After the camp is built, a closed gate will be installed and a guard will be posted at the gate. PCI-Sinopharmintl Consortium employees will enter with their work permits, and outsiders will enter with visitor permits after registration and security checks, but they must obtain approval from PCI-Sinopharmintl Consortium internal staff in advance.

After the camp is built, PCI-Sinopharmintl Consortium will hire professional security personnel to take turns to guard the camp. They will patrol the camp 24 hours a day. The security personnel will also be responsible for the safety check of external visitors (whether they are carrying weapons).

PCI-Sinopharmintl Consortium will build a tall and sturdy wall and install a continuous closed protective net on the wall to prevent dangerous people from climbing over the wall and entering the camp.

PCI-Sinopharmintl Consortium will establish a CCTV monitoring system, install surveillance cameras, and set up a dedicated monitoring room.

3 Rest area and potable water

During the camp construction phase, the PCI-Sinopharmintl Consortium will construct a temporary rest area for construction workers to take breaks and shelter from the rain, and will also obtain the necessary permit to drill a well.

Once the camp is completed, the Consortium will complete the well drilling and use water purification equipment to supply the camp with drinking water that meets sanitary standards.

4 Portable toilet

Before the fixed toilets are built, PCI-Sinopharmintl Consortium will purchase and install mobile toilets to meet the needs of construction workers. Male and female toilets will be set up at the same time. PCI-Sinopharmintl Consortium will arrange special personnel to clean the toilets and entrust professional companies to deal with the filth regularly.

5 Occupational Health

During the camp construction phase, PCI-Sinopharmintl Consortium will equip the site with first aid kits, which include first aid medicines such as medicines for relieving heat stroke, medicines for treating burns, hemostatic medicines, heart first aid medicines, bandages, wound dressings and other first aid medical items.

After the camp is built, PCI-Sinopharmintl Consortium will set up a medical clinic in the main camp or the sub camp to provide medical emergency and daily diagnosis and treatment to ensure the health of PCI-Sinopharmintl Consortium employees. The medical clinic will also be equipped with a first aid kit.

PCI-Sinopharmintl Consortium will recruit doctors from nearby hospitals to work in the medical clinic. At the same time, PCI-Sinopharmintl Consortium will establish close ties with the existing hospital in the surrounding area to obtain timely medical assistance, including on-site first aid, outpatient treatment, etc.

6 Other measures

In order to minimize the impact of the production area on the living area in the camp, a fence wall will be built between the production area and the living area to block dust and noise. In addition, PCI-Sinopharmintl Consortium will separate the office area and the residential area using fences, to prevent any unsafe factors from occurring

Personal Protective Equipment

This section establishes the requirements to be followed to provide adequate protection from workplace hazards through the proper selection and use of personal protective equipment (PPE). PPEs shall not be used as a substitute for adequate engineering or administrative controls, when feasible.

- The use of PPE will be mandatory. They will not prevent accidents, but will eliminate or reduce the severity of an injury.
- PCI-Sinopharmintl Consortium will provide their workers with the PPE required in the execution of any work that generates risks.
- The equipment will be new and of good quality.
- Immediate supervisor of each worker will determine the need for personal protective equipment and ensure that the worker makes use of them.
- The worker will be responsible for the care, conservation and proper use of any equipment entrusted to him.

More so, PCI-Sinopharmintl Consortium will:

- Evaluate workplace hazards with the goal of establishing PPE requirement for both routine and non-routine work situations.
- Ensure that required PPEs are being used properly and in good condition.
- Ensure employees have the required PPE training before initial assignment, and ensure they receive refresher training as needed
- Ensure that adequate supplies of appropriate PPEs are available for the employees.
- Conduct and document a semi-annual inspection of personally-assigned PPE.

All workers must:

- Participate in training to know when to use PPEs and shall use the appropriate PPEs.
- Properly wear all prescribed PPEs.
- Inspect personally assigned PPEs for serviceability and defects prior to use.
- Clean, maintain and store PPEs in a manner that will ensure its serviceability.
- Not intentionally damage PPEs.
- Report or correct situations where current PPEs use is not adequate to protect against the hazard(s) encountered.

APPENDIX FIVE – EMERGENCY RESPONSE PLAN

The Emergency Response Plan (ERP) outlines procedures and protocols to be followed in the event of an emergency situation. The purpose of this plan is to ensure the safety and well-being of employees, visitors, and assets, as well as to minimize disruption to the campsites. All employees are required to familiarize themselves with this plan and comply with its procedures.

Threat/Risk Assessment

To create an effective ERP, PCI-Sinopharmintl Consortium has conducted a comprehensive threat assessment to identify the types of events that may affect organization and analyze their likelihood and potential impact. Because specific threats vary by location, by work activity and the personnel involved, mitigation strategies and protective actions will vary depending on the scenario.

The potential threats/risks within the construction and use of the campsites are:

1. Fire or explosion;

2. Damage/destruction from inclement weather (Flood/Heavy Rain);

3. Release of hazardous materials such as spills;

4. Workplace violence, which could threaten human health or the environment;

5. Civil disturbances such as protests, demonstrations, riots, strikes, etc.;

6. Safety accidents such as falling from heights, cuts, electric shocks, etc.

Emergency Response Contact Information

The emergency response information is shown in **Table 15** below.

Table 15: Emergency Contact Numbers

Emergency Contact Numbers	
Service	**Contact number**
Chinese Ministry of Foreign Affairs Global Consular Protection Emergency Hotline	+861065612308
Chinese Embassy in Guyana Consular protection	+592 624-6702
Guyana Police Service	911
Guyana Fire Service	+592 226-2411 / +592 225-0650
Air Services Limited – Medevac Services	+592 222-1234 / +592 222-2536
Moruca Cottage Hospital	+592-225-4569
Toshao of Moruca Village	+592 677-7483
Deputy Toshao of Moruca Village	+592 695-8687
Moruca Police Station	+592 620-6723
Project Execution Unit – Ministry of Health	+592 225-007 / +592 225-0010

Emergency Management Team

In the event of an emergency, it is crucial to ensure that the entire team remains calm and does not panic. A well-functioning emergency management team can significantly enhance the efficient and effective response of the entire executing team. This management team will be responsible for activating the emergency response plan, answering questions, and ordering an evacuation if needed. The team will be present, reliable, and will react quickly in an emergency. **Table 16** shows the jobs and responsibilities of the Emergency Management Team. **All personnel on the management team is expected to be trained in providing basic first-aid care, if required.**

Table 16: Emergency Management Team

Roles and Responsibilities		
Job	**Assigned to**	**Job description**
Emergency Coordinator	HSE Manager	Overall coordination of the response efforts.
Safety Officer	HSE Manager	Monitoring and ensuring safety protocols are followed.
Communication Officer	Social Commissioner	Managing communication with internal and external stakeholders.
Incident Commander	Project Manager	Directing on-site response activities; responsible for all emergencies, including planning and preparation. The incident commander is in charge of emergency response plan activation and is the one all critical decisions should go through.
Evacuation Coordinator	Site Supervisor	Overseeing evacuation procedures.
Communication Commander	Site Engineer	This person will notify employees, call emergency services and gather reports. Be trained in first aid
Scene Supervisor	Site Engineer	This person controls access to the emergency scene and keeps people away from unsafe areas. Be trained in first aid

Emergency Notification

In the event of an emergency, employees should immediately report the incident according to the chain of command in the figure below. Please see report template in **Annex One. Figure 13** presents a simplified chain of command for initial emergency response. However, upon resolution of the incident, all designated emergency response personnel must be notified and involved in a post-incident review to assess the event and identify measures to prevent recurrence.

Figure 13: Chain of Command for Emergency Response

Emergency Procedures

Type of emergency to be reported by site personnel are:

1. Medical Emergency;

Step 1: Ensure Safety

Do not put yourself or others in danger.

Stop all nearby work and secure the area.

If the situation is life-threatening (e.g., unconsciousness, heavy bleeding), call emergency services immediately.

Step 2: Contact Site First Aid Personnel

- Notify the Site Safety Officer and the designated First Aider immediately.
- First Aider will assess the condition and begin basic first aid.

Step 3: Call Emergency Medical Services (EMS)

- Use the emergency number for local medevac services in Guyana:

Provide the following information:

Type of emergency

Location (site address and specific area)

Condition of the injured person

Contact person on-site

Step 4: Administer First Aid

While waiting for EMS:

Keep the injured person calm and comfortable.

Do not move them unless there is immediate danger (e.g., fire, collapse).

Apply CPR or bleeding control if trained.

Step 5: Escort to Medical Facility

- Ensure a team member is assigned to accompany the injured worker to the hospital (if applicable).
- Bring medical records or relevant site information.

Step 6: Incident Documentation

- The Site Safety Officer must complete a full Incident Report within 24 hours.

The report shall include, at minimum, the following information:

Time, date, and location

Description of the incident

Witness statements

Action taken

Recommendations to prevent recurrence

Step 7: Notification

- Notify project management and, if required, regulatory authorities.

Inform next of kin (handled by HR or designated officer).

Step 8: Post-Incident Review

- Conduct a safety meeting to review the incident.

Update procedures and training as needed.

Fire emergency:

Severe weather conditions (Flood);

Hazardous material leaks (such as chemical/fuel spills).

2. Natural Disasters

General Actions in the Presence of Hurricanes and Floods

In the case of occurrence of threats due to extreme weather conditions, the following actions should be considered:

Preparation

• Train operational personnel to act in the event of storm and flooding emergencies, so that personnel are prepared for these events.

• Conduct period maintenance cleaning of all drainage canals to remove trash, sediment, and other debris to promote adequate drainage of stormwater during these events.

• Inspect emergency equipment and make sure it is ready for use. Ensure emergency equipment includes drinking water and canned food.

• Secure with ropes or chains all equipment that cannot be secured inside a building.

• Place the vehicles in a manner so they are protected against hurricane winds.

• Call the relevant authorities for the Project or Operations, the Police and the security company, if any, and indicate that only the minimum emergency personnel will be left on site.

• Close the main gate if able to.

• The coordinator will determine, according to the prevailing or progressive conditions, if emergency stop procedures should be executed.

After the Emergency

• Equipment will not be energized/turned on until it has been checked by expert electricians/mechanics.

• In case of spills or fires, implement response procedures in accordance with the procedures related to these events in the contingency plan.

• Take a tour and assess the damages incurred.

• Proceed to repair minor damages and those necessary to provide immediate service.

• Proceed to clean debris and artefacts that obstruct the operations of the same.

• Prepare a written report at the end of the emergency. Said report shall contain the results of estimation of damages to the property of the company, affected persons, damages to private properties, and to the environment.

• Response plans should be updated based on the emergency to remain effective.

When flooding events are exacerbated due to drainage blockage (caused by construction activities), PCI-Sinopharmintl Consortium will divert traffic to avoid people and vehicles from crossing the flooded area, while the drains get unblocked/the issue is resolved. Follow the detail requirement of Drainage Management Plan in **Appendix Ten.**

3. <u>Fire and/or Explosions</u>

A fire can cause serious damage to equipment or personnel, and should be taken care of as quickly as possible. The following is the PCI-Sinopharmintl Consortium's Contingency Plan in case of a fire.

Before a Fire

• Provide training to all personnel through courses on fire practices and simulations of accidents, use of fire extinguishers, etc.

• Have infrastructure and equipment for fire protection, and extinguishers that work in different environments depending on the type of project (for example, Class A extinguishers for ordinary combustibles such as wood and paper, Class B extinguishers for use on flammable liquids like grease, gasoline and oil, etc.).

• Develop rigorous preventive maintenance programs for all types of equipment, inspect and recharge fire extinguishers, etc.

• Identification and signage of safe areas and establish evacuation routes in all facilities or work fronts.

• Keep extinguishers in good condition.

• Provide first aid kit, battery-operated flashlights, extra batteries, etc. on site.

During a Fire

• Evacuate and or stop work in the area and / or facilities.

• Communicate with the local Fire Brigade, National Police and other entities depending on the severity of the emergency.

• Protect mouth and nose with damp cloths.

• Keep calm and avoid running.

• Assist affected people immediately, if any.

• If appropriate, try to put out the fire with the use of extinguishers and other existing means. Ensure extinguishers are periodically inspected to ensure they are in working condition.

• If any equipment is involved in the fire or explosion, the operator must manually disconnect the electrical power that feeds the equipment, as long as it can be done safely or without risk to human life.

In the event that the fire cannot be fought directly with the extinguishers, or there is danger to the personnel, the actions to be taken are:

• Notify firefighters immediately for help.

• Evacuate the place to the meeting point previously agreed in the training plan and risk drills.

• Once the firefighters have determined that the emergency has ended, the emergency coordinator of the project owner should be informed.

• Proceed along with the maintenance crew to an inventory of damages and then make a detailed report on the matter.

After a Fire

• Clean the affected area.

• Remove all debris.

• Repair and / or demolish affected facilities in case of major damages.

• When the fire has been extinguished, proceed with the maintenance crew to prepare an inventory of damages and then make a detailed report on the matter.

Adequate Staff Training

Practices or simulations should be carried out every one year (can include coordination with the local Fire Department), and should include response procedures for personnel all personnel.

Use and Disposal of Fire Extinguishers

• Fire extinguishers must be located in appropriate places and easily accessible.

• Every extinguisher must have a plaque with the information about the kind of fire for which it is suitable and expiration date. Also, they must have operation and maintenance instructions.

• Each extinguisher must be inspected every two months, tested and maintained in accordance with the manufacturer's recommendations; similarly, they must carry a label with test dates and expiration date.

• If an extinguisher is used, it will be refilled immediately; or if necessary, it will be replaced immediately.

4. Spill Contingency Procedures

The purpose of spill contingency response measures is to provide a course of action, which will be implemented to allow a prompt and orderly response to spills that may occur during construction. A spill of any liquid, solid or gaseous substance, which could impair the usefulness of the land, water or air where it is released will be responded to by the procedures outlined in this contingency plan. The main objectives of the Spill Contingency Response are:

- To reduce the risk of harmful exposure to individuals and the surrounding environment;
- To clearly outline the action to take if a spill will occur; and,
- To ensure that project staff is aware of the correct response required.

Preparation:

Implementation of sumps and oil traps to prevent leaks and spills from contaminated surface water Storage of collected material in drums before being removed by an authorized waste oil removal company. Preparation and availability of spill kits.

Equipment and Materials Needed for Spill Response

PCI-Sinopharmintl Consortium will have a spill kit to deal with spill incidents. The spill kit will be stored at PCI-Sinopharmintl Consortium site office and/or strategic places to be used in the event of a Spill. The kit will comprise the following materials:

- Absorbent material, such as sand, sawdust, absorbent cloths (depending on spilled material), absorbent foam
- Skimmers
- Fire extinguishers
- Gloves, safety goggles and respirators and boots
- Gallon sealable containers
- Caution Tape
- Bags containing saw dust
- Bags containing white sand
- Plastic Spade
- Heavy Duty Garbage Bags
- Empty Five Gallon
- Containers with lids to store spilled materials.
- Photographic camera to document the incident

In the event of a spill, formal communication including completion of an incident investigation report will be sent to all relevant personnel which includes the IDB and may include local authorities. The time frame for reporting spill incidents is dependent on the nature and severity of the spill in line with general good practice guidelines for incident classification. The extent of contact with local authorities will also depend on the classification of the spill. Please see Oil Spill Report template in **Annex One.**

5. Emergency response for falls from heights and truck

Before

Training for personnel should include industrial safety to prevent unsafe acts and ensure the use of appropriate protective gear such as helmets, boots, safety glasses, and restraint harness. Additionally, personnel training should include first aid implementation to assist injured coworkers or themselves until medical or paramedical personnel arrive at the accident site or they are transferred to a hospital for professional care.

Provision of personal protection equipment to all workers, as necessary.

During

In case of an accident in the facilities, the staff will act as follows:

• If it is a minor accident, apply first aid to the injured person and transfer them immediately to the nearest clinic or hospital so that they can be seen by a doctor, in order to rule out possible aftereffects.

• If it is a serious fall from heights, shelter the injured person and request an ambulance for immediate transfer to a hospital.

• If a person is not breathing, provide rescue breathing (mouth-to-mouth breathing or mouth-to-nose) and request an ambulance for urgent medical attention.

• In case of burn, do not apply home remedies to the injured only water at the time and request an ambulance for its transfer to the clinic or hospital soon.

• For hemorrhage from a puncture wound, hold a gauze in place to avoid blood loss. If located in the extremities, make a tourniquet to cut blood loss, loosening the tourniquet every 10 minutes to avoid gangrene and to move the injured person to a nearby assistance center.

• If trapped with weight on the chest, lever the heavy element and remove it so that the victim does not suffocate, until the arrival of the ambulance.

• If the victim has suffered an electric shock, ensure they are breathing, provide rescue breathing (mouth-to-mouth breathing or mouth-to-nose), and simultaneously request medical assistance or transfer to a clinic or hospital.

Immediate attention to an injured person through knowledge of First Aid can save a life. Always seek the appropriate medical attention by a professional.

After

• Analyze the causes of the accident and the actions taken to assist.

• Prepare the preliminary and final report of the industrial accident.

6. Equipment or Infrastructure Failure Procedures

Anyone who detects a fault or failure will immediately notify the Supervisor or Chief of Operations identifying themselves and indicating the place and type of emergency. Try as much as possible to isolate the area or prevent vehicles or people from approaching. After overcoming the problem, analyze the root cause of the emergency/fault or failure.

APPENDIX SIX – LABOUR MANAGEMENT PROCEDURE

The Labor Management Plan will be in accordance with the following labor legislations:

The Labor Act, Chapter 98:01: (No. 2 of 1942)

Provides for the establishment of the Department of Labor, for the regulation of the relationship between employers and employees, the appointment of the Chief Labor Officer and staff, the statutory responsibility of the Chief Labor Officer and the Permanent Secretary. The Act also provides for conciliation in industrial disputes, defines the powers of the Minister to intervene in trade disputes, and establishes advisory committees, procedures for regulating wages and hours of work, rights and obligations of employees, and the status and enforceability of collective agreements.

Termination of Employment and Severance Pay Act, Chapter 99:08 (No. 19 of 1997)

Provides the conditions governing termination of employment, and the grant of redundancy or severance payment to employees for reasons connected with redundancy. The Act defines unfair dismissals and the termination process, including termination on the grounds of redundancy, and the formula for severance allowance.

Prevention of Discrimination Act, Chapter 99:09 (No. 26 of 1997)

Provides for the elimination of discrimination in employment, training, recruitment, and membership of professional bodies. The Act also provides for the promotion of equal remuneration for work of equal value. It further prohibits discrimination, defines unlawful discrimination, and protects against discrimination in employment, and protection against discrimination in other areas.

Occupational Safety and Health Act, Chapter 99:10 (No. 32 of 1977)

Provides for the registration and regulation of industrial establishments, and for occupational safety and health of persons at work. The Act also provides for the establishment and functions of the National Advisory Council, and Authority on Occupational Safety and Health (OSH), and defines the power and authority of an inspector of labor, medical inspector, OSH commissioner and their appointments. The Act further provides for the participation of non-governmental agencies through safety and health representatives and joint workplace and health committees with defined functions and powers. The duties of the employer, supervisors, workers, occupiers, owners, and directors are set out in the Act. Concerning hazardous chemicals, and physical and biological agents, the Act requires their identification and hazardous nature with appropriate inventories and regulates their use, storage, instruction and training. Notification of accidents and occupational diseases, inquest in case of death by accident or occupational disease are further requirements of this Act.

National Insurance and Social Security, Chapter 36:01 Act No. 15 of 1969

This Act provides for a system of national insurance and social security for old age, invalidity, survivors, sickness, maternity, and funeral benefits. The Act also complements compensation under the Workmen's Compensation law for injury or accidental death arising out of or in the course of employment or disease due to the nature of employment. The Act further establishes a National Insurance Fund.

Other Laws regarding the regulation of hours of work, wages and other conditions of work, duties and obligations relating to employers and employees are covered by the following legislation:

- ***Wages Council Act, Chapter 98:04 (No. 51 of 1956) for the establishment of wages councils***

- ***Employment Exchange Act, Chapter 98:05 (No. 21 of 1944) for the establishment of employment exchanges***

- ***The Recruitment of Workers Act, Chapter 98:06 (No. 9 of 1943) to regulate the recruiting of workers***

- ***Employment of young persons and children Act, Chapter 99:01 (No. 14 of 1933/No. 9 of 1999)***

- ***Holidays with Pay Act, Chapter 99:02, (No. 6 of 1995) to provide for the grant and regulation of annual holidays with pay for all categories of workers***

- ***Labor (Conditions of Employment of certain workers) Act, Chapter 99:03 (No. 18 of 1978) to regulate the conditions of employment of certain workers***

- ***Accidental Deaths and Workmen's Injuries (Compensation) Act, Chapter 99:05 (No. 21 of 1916) to make certain provision for accidental death and personal injury. This is in addition to any benefits obtained under the National Insurance and Social Security Act or any entitlements from any other service.***

- ***Household Service Workers (Hours of Work) Act (No. 17 of 1980) to regulate the working hours of household service workers.***

PCI-Sinopharmintl Consortium's Labor Recruitment Plan shall be made according to the construction organization plan. Qualified workers shall be recruited following the relevant regulations of Guyana.

Child labor/minor and forced labor are strictly prohibited. Equal employment shall be respected.

Project personnel shall comply with the code of conduct for the contractor, attend the induction meeting, HSE meeting, toolbox/pre-work meeting held for the Project, and participate in the HSE training plan organized for the Project.

Project personnel shall participate in HSE drills organized for the project. The labor training plan of the Project is summarized in **Table 17.**

Table 17: Labor Training Plan

Project Phase	Communication Mechanism	Audience	Frequency of Communication	Objectives	Responsible for Execution
Mobilization	Toolbox Talks	Employees of the Contractor	Inception Daily	• Outline any social/cultural sensitivity. • Outline Grievance and reporting procedures. • OSH Awareness	• Contractor • Community Liaison Officer
Mobilization	Sensitization Session/ Training	Employees of the Contractor	Inception	• Introduction to Occupational Safety & Health. • Occupational Safety & Health Legislation • Workplace Hazards • Safety and Health in The Construction Sector • Workplace Inspections • Accident and Accident Investigations • Awareness and Education on Social Issues Plan • Hazardous Material Communication • Communicable and Non-Communicable Disease • Grievance and reporting procedures.	• Contractor • Community Liaison Officer • External Facilitators • Gender Affairs Bureau

Project Phase	Communication Mechanism	Audience	Frequency of Communication	Objectives	Responsible for Execution
				• Outline of Sexual and Gender Based Violence (SGBV)	
Construction	Toolbox Talks	Employees of the Contractor	Inception Daily	• Outline any social/cultural sensitivity • Outline Grievance and reporting procedures.	• Contractor
Construction	Toolbox Talks Sensitization Session/ Training	Employees of the Contractor	1 Day Training As-needed Throughout the 36 months of the project	• Introduction to Occupational Safety & Health. • Occupational Safety & Health Legislation • Workplace Hazards • Safety and Health in The Construction Sector • Workplace Inspections • Accident and Accident Investigations • Awareness and Education on Social Issues Plan • Communicable and Non- Communicable Disease • Grievance and reporting procedures. • Outline of Sexual and Gender Based Violence (SGBV)	• Contractor • Community Liaison Officer • External Facilitators • Gender Affairs Bureau

Project Phase	Communication Mechanism	Audience	Frequency of Communication	Objectives	Responsible for Execution
Post Construction	Toolbox Talks	Employees of the Contractor	Inception Daily	• Outline any social/cultural sensitivity • Outline Grievance and reporting procedures. • OSH Awareness	• Contractor
Post Construction	Sensitization Session/ Training	Employees of the Contractor	Monthly meeting	• Outline any social/cultural sensitivity • Outline Grievance and reporting procedures. • Occupational Health and Safety • Communicable and Non- Communicable Diseases	• Contractor

Workers' Code of Conduct

PCI-Sinopharmintl Consortium has prepared a Workers' Code of Conduct, where the purpose is to regulate the behavior of all employees and prevent safety risks caused by improper personal behavior of employees. The code of conduct applies not only to the construction and use of the camp, but also to all stages of the entire project.

ESHS CODE OF CONDUCT REQUIREMENTS FOR PCI-Sinopharmintl Consortium INDIVIDUAL EMPLOYEE

The Code of Conduct shall define rules of behavior for all workers related to risks associated with but not limited to: prevention and management measures for environmental, labour, and social risks of the Project, including health and safety risks, third party contractor actions, labour influx, illicit behavior and crime, sexual and gender-based violence, discrimination, and sexual abuse and exploitation of children and other individuals or vulnerable groups.

Executive Summary

Courtesy and Respect: PCI-Sinopharmintl Consortium and their Employees should conduct themselves in a manner that is lawful, courteous, businesslike, and respectful of all staff, guests, or visitors.

Language and Behavior: PCI-Sinopharmintl Consortium and their Employees cannot engage in behavior that is rude, threatening, or offensive. Use of profane or insulting language is prohibited. Harassment of any type, including sexual harassment is strictly prohibited. Abusive, derogatory, obscene or improper language, gestures, remarks, whistling, cat calls or other disrespectful behavior cannot be tolerated. Rough housing, fighting, fisticuffs, physical threats, destruction of property, vandalism, littering, or physical abuse of anyone on campus are not permitted under any circumstance.

No Weapons, Alcohol, or Drugs: The use, possession, distribution, or sale of any weapon, alcohol, illegal drug, or controlled dangerous substance by any contractor or contractor's employee is prohibited. Offenders will be removed from site and/or reported to the local Police Department.

Smoking: PCI-Sinopharmintl Consortium and their employees are not permitted to smoke in or near any of the campus buildings.

Appearance: PCI-Sinopharmintl Consortium and their employees are required to wear appropriate work wear, hard hats and safety footwear, as the case may be, while on site. Articles of clothing must be neat and tidy in appearance, and cannot display offensive or inappropriate language, symbols or graphics.

Reporting: PCI-Sinopharmintl Consortuim and their employees is required to report any matter involving a violation of these rules of conduct to the Team Leader. Any matter involving health or safety, including any altercations, should be reported to the Team Leader as well.

Child/ Children: No "child" / "children" means any person(s) under the age of 18 years should not be employed by PCI-Sinopharmintl Consortium. Child Labour is strictly prohibited.

PCI-Sinopharmintl Consortium and their Employees shall ensure the protection of children (including prohibitions against sexual activity or abuse, or otherwise unacceptable behavior towards children, limiting interactions with children, and ensuring their safety in project areas)

Health and Safety Requirements: PCI-Sinopharmintl Consortium and their Employees shall ensure Compliance with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Employer's Personnel, and the Contractor's Personnel (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)

Non-Discrimination: PCI-Sinopharmintl Consortium and their Employees shall ensure the Non-Discrimination in dealing with the local community (including vulnerable and disadvantaged groups), the Contractor's Personnel (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status)

Sexual Harassment: PCI-Sinopharmintl Consortium and their Employees shall ensure that Sexual harassment is prohibited (for example to prohibit use of language or behavior, towards women and/or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)

Sexual and/or Gender-Based Violence: PCI-Sinopharmintl Consortium and their Employees shall ensure that Violence, including sexual and/or gender-based violence is prohibited (for example acts that inflict physical, mental, or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty)

Exploitation including Sexual Exploitation and Abuse: PCI-Sinopharmintl Consortium and their Employees shall ensure that Exploitation including sexual exploitation and abuse (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior, or abuse of power)

Welfare facilities: PCI-Sinopharmintl Consortium and their Employees shall ensure that adequate welfare facilities are provided (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)

Non-retaliation: PCI-Sinopharmintl Consortium and their Employees shall ensure that non-retaliation against workers who report violations of the Code, if that report is made in good faith.

Compliance with Laws and Regulations

Legal Compliance: As an employee of the Supervising Engineer -Sheladia Associates Inc (SAI), you are required to comply with all applicable laws, regulations, and standards of Guyana pertaining to construction, labour practices, environmental protection, and occupational health and safety. This includes but is not limited to:

Construction Laws: Understanding and adhering to the Building Codes and any other relevant legislation governing construction activities in Guyana.

Labour Practices: Ensuring compliance with Labour laws regarding wages, working hours, employment conditions, and worker rights as specified under the relevant Labour Legislations.

Environmental Regulations: Adhering to the Environmental Protection Agency (EPA) Act and regulations to minimize the project's impact on the environment and promote sustainable practices.

Health and Safety: Implementing and enforcing safety measures to protect workers, stakeholders, and the public from hazards associated with construction activities in keeping with the Occupational Safety and Health Act Chapter 99:06.

Integrity and Ethical Conduct

Honesty and Transparency: Conduct all professional activities with honesty, integrity, and transparency. Provide accurate and truthful information to the Employer, Contractor, Sub- Contractor and Stakeholders at all times. When reporting project progress or issues, present information objectively without omitting relevant details or providing misleading information.

Conflicts of Interest: Avoid conflicts of interest that may compromise your professional judgment or impartiality. Disclose any actual or potential conflicts of interest promptly to the appropriate stakeholders and seek guidance on how to manage or mitigate them.

Anti-corruption: Refrain from offering, soliciting, or accepting bribes, kickbacks, or any other form of improper advantage. Uphold a zero-tolerance policy towards corruption and report any suspected or observed instances of corruption to the relevant authorities. Decline any offers of gifts or favors from contractors or suppliers that could influence your decision-making process or create a conflict of interest.

Professionalism

Competence: Maintain a high level of competence and proficiency in your field of supervision. Stay informed about industry best practices, technological advancements, and relevant regulatory changes through continuous learning and professional development activities.

Attend seminars, workshops, and training sessions on construction management, quality assurance, and project supervision to enhance your skills and knowledge base.

Respect and Collaboration: Treat all individuals with respect, fairness, and dignity, regardless of their role or position within the project. Foster a collaborative and inclusive work environment that values diversity and promotes teamwork. Listen actively to the perspectives and concerns of all project stakeholders, including contractor, sub-contractor, workers, and community members, to facilitate constructive dialogue and problem-solving.

Professional Image: Uphold a professional image and demeanor in all interactions related to the project. Dress appropriately for the work environment and maintain a courteous and respectful attitude in communications and meetings. Communicate clearly and professionally in written correspondences, emails, and reports to convey information effectively and maintain professional standards.

The Contractor's personnel shall:

(1) General Conduct:

(a) Comply with this Code of Conduct.

(b) Carry out your duties competently and diligently in a professional manner at all times.

(c) Treat all individuals in the workplace and in the local community with respect, regardless of their position, race, gender, age, religion, language, sexual orientation, political affiliation, disability, or other protected characteristics.

(d) Be honest and truthful in all your dealings.

(e) Keep noise levels to a minimum, especially during early morning and late evening hours, to avoid disturbing the local community.

(f) Remove yourself from any situation that you believe presents an imminent danger to your life or health.

(g) Adhere to all applicable national laws and regulations and community rules. If in doubt, seek guidance from a Supervisor.

(2) Personal Security:

(a) Take precautions to ensure your personal safety, such as being aware of your surroundings and avoiding isolated areas.

(b) Follow emergency procedures in case of accidents or threats.

(c) Adhere to all security protocols, including wearing identification badges and following access restrictions.

(3) Occupational Health and Safety:

(a) Ensure that workplace machinery, equipment and tasks under your control are safe and without risk to health.

(b) Wear the required personal protective equipment (PPE).

(c) Use appropriate measures relating to chemical, physical and biological substances and agents.

(d) Adhere to a zero-alcohol policy during work activities and refrain from the use of narcotics or other substances that can impair your faculties.

(e) It is strictly forbidden to carry weapons, consume alcoholic beverages or drugs, as well as carry pornographic images or objects in all areas of the job site and the community.

(d) Follow applicable emergency operating procedures.

(4) Workplace and Community Behaviour:

Commit to non-violence and refrain from any behavior that could escalate tensions or provoke conflict.

(a) Treat all women, children, and men in the workplace and local community with respect.

(b) Avoid the use of language toward women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

(c) Do not engage in any form of harassment [This includes unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual or non-sexual nature].

(d) Ensure the safety and protection of children from sexual activity, abuse, or any other unacceptable behaviour.

(e) Not engage in exploitation [This includes any actual or attempted abuse of position, differential power, or trust for sexual or non-sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual or non-sexual exploitation of another].

(f) Not engage in any form of abuse, including sexual abuse and exploitation [This involves the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal coercive conditions, as well as sexual favours or other forms of humiliating].

(g) Unless there is the full consent' by all parties involved, do not engage in sexual interactions with members of the local community [These include relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex. Such sexual activity is considered "non-consensual" within the scope of this Code].

(e) Not engage in any form of sexual activity with individuals under the age of 18, including grooming, or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.

(5) Reporting of Violations and Incidents:

(a) Report violations of this Code in the workplace and in the local community through the following ways:

i. Contact the Supervisor regarding health, safety and security situations.

ii. Contact security personnel for reporting personal security incidents.

iii. Contact Community Liaison Officer regarding all type of concerns, especially reporting on gender and sexual-related incidents.

iv. Through the Grievance Mechanism for reporting of all types of complaints.
v. Contact the Toshao or village oversight committee regarding all types of concerns, especially reporting on gender and sexual-related incidents.
vi. Contacting the Ministry of Health or the Inter-American Development Bank

(b) Do not retaliate against any person who reports violations of this Code of Conduct.

The person's identity will be kept confidential unless reporting of allegations is mandated by the country's law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. Any violation of this Code of Conduct by Workers may result in serious consequences, up to and including termination and possible referral to legal authorities.

(6) Training:

(a) Complete relevant training courses that will be provided related to the environmental and social aspects of the project, including Health, Safety and Personal Security, Sexual Exploitation and Abuse, Sexual Harassment, and use of the Grievance Mechanism.

Confidentiality

Confidential Information: Safeguard confidential and proprietary information obtained during the course of your supervision duties. Use this information solely for authorized purposes related to the project and refrain from disclosing it to unauthorized individuals or third parties. Protect sensitive project data, such as financial records, design specifications, and strategic plans, from unauthorized access or disclosure by implementing secure document management practices.

Compliance and Accountability

Code Adherence: Adhere to this Code of Conduct and uphold its principles, standards, and guidelines in all aspects of your supervision consultancy services. Demonstrate personal accountability for your actions, decisions, and conduct throughout the project lifecycle. Review and acknowledge your understanding of the Code of Conduct annually or upon contract renewal to reaffirm your commitment to ethical behavior, professionalism, and compliance with legal and regulatory requirements.

Documentation and Audit: Maintain comprehensive documentation and records to demonstrate compliance with contractual obligations, regulatory requirements, and industry standards. Prepare documentation packages containing project plans, specifications, permits, inspection reports, and correspondence with stakeholders for audit purposes to validate compliance with quality, safety, and environmental standards.

Enforcement

Disciplinary Action: Violations of this Code of Conduct may result in disciplinary actions, up to and including termination of contract or employment, depending on the severity and impact of the misconduct. The decision to impose disciplinary measures will be made in accordance with contractual agreements, legal obligations, and organizational policies and the Termination of Employment and Severance Pay Act. Example: Consequences for breaches of ethical conduct or non-compliance with legal requirements may include verbal warnings, written reprimands, suspension from project duties, or termination of consultancy services, as deemed appropriate by the employer.

How would PCI-Sinopharmintl Consortium deal with the breaches?

Breaches on Construction sites are some of Guyana's most common Occupational Safety and Health violations. PCI-Sinopharmintl Consortium would deal with these breaches by ensuring enforcement by our dedicated team of Safety professionals providing all employees must wear hard hats if there is a potential risk of falling debris or other construction materials. Other safety measures include erecting barricades, signs, cones, delineating devices, other channeling devices, according to MUTCD Standards, flashing beacons, and flood lights.

PCI-Sinopharmintl Consortium will establish and implement a fall prevention program to protect workers following these and other Occupational Safety and Health Act Chapter 99:06 and OSHA Standards.

PCI-Sinopharmintl Consortium would train all employees to recognize the hazards associated with the

type of scaffold used. Training records would also be readily available for inspection.

PCI-Sinopharmintl Consortuim has the power to ensure the employees under their supervision adhere to the Occupational Safety and Health Act, Chapter 99:06 under the employer's duties and ensure compliance and Safety on the job site to protect your workers, which is our bottom line.

According to the Contract, PCI-Sinopharmintl Consortuim would take disciplinary action against staff in keeping with the Termination of Employment and Severance Pay Act. A stop work order would be issued where any infringement occurs on the site by the Engineer.

The Contractor shall be required to implement the agreed Code of Conduct (COC).

The Company will implement the code of conduct at PCI-Sinopharmintl Consortium under the proposed project EBRIP according to the Company's principles, standards, and the moral and ethical expectations of employees and third parties of PCI-Sinopharmintl Consortium organization.

Acknowledgment

All staff members are required to read, understand, sign and adhere to this Code of Conduct. By signing this document, you agree to adhere to the Worker Code of Conduct and understand that any violation of these guidelines may result in disciplinary action, including termination of employment or legal action, including arrest.

I agree that while working on the project I will:

1. Consent to Police background check.
2. Attend and actively partake in training courses related to ESHS, OHS, and GBV as requested by my employer.
3. Will wear my personal protective equipment (PPE) at all times when at the work site or engaged in project related activities.
4. Take all practical steps to implement the contractor’s environmental and social management plan (C-ESMP).
5. Implement the OHS Management Plan.
6. Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can impair faculties at all times.
7. Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
8. Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
9. Not sexually exploit or abuse project beneficiaries and members of the surrounding communities.
10. Not engage in sexual harassment of work personnel and staff —for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature is prohibited. E.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts.
11. Not engage in sexual favors — for instance, making promises of favorable treatment (e.g. promotion), threats of unfavorable treatment (e.g. loss of job) or payments in kind or in cash, dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.

12. Unless there is the full consent[2] by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered "non-consensual" within the scope of this Code.
13. Consider reporting through the GRM or to my manager any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

Employee/Workers Name _____

Signature _____

Date _____

[2] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

APPENDIX SEVEN – DRIVER SAFETY MANAGEMENT PLAN

1. Vehicle Maintenance and Inspection

Regular Maintenance Schedule: Vehicles managed by PCI-Sinopharmintl Consortium should have routine vehicle maintenance schedule for oil changes, tire rotations and brake inspections. Vehicles should have routine maintenance every 5000 miles or according to the vehicle specifications.

Daily Inspections: Drivers should inspect the vehicle before using it. This would include ensure there is oil, water, durable tires, working lights and breaks.

Documentation: Keep records of routine vehicle maintenance should be kept. The information that should be recorded are: Date of maintenance, Company maintained with, what was maintained on the vehicle. Vehicles will have signage identifying that they are for the project, with a "how am I driving?" sticker, with a number to call.

2. Driver Training and Education

- *Initial Training:* Provide comprehensive training for new drivers, covering vehicle operation, road safety rules, and company policies.
- *Ongoing Education:* Offer regular refresher courses and updates on new safety regulations and driving techniques.
- *Defensive Driving Courses:* Encourage or require participation in defensive driving courses to improve hazard awareness and reaction skills.

3. Safety Policies and Procedures

The safety procedures that driver should follow are:

- *Seatbelt Use:* Drivers must use their seatbelts and encourage all occupants to do the same.
- *Speed Limits:* Adhere to speed limits on the campsite and on the public roadways.
- *Distracted Driving:* Drivers should not use their mobile phone use while driving. Hands-free devices should be encouraged.
- *Substance Abuse Policy:* Strict no-tolerance policy for driving under the influence of alcohol, drugs, or other impairing substances.

4. Fatigue Management

- *Work Hours:* Drivers should not drive more than 10 consecutive hours within a day.
- *Rest Breaks:* 30-minute breaks should be taken after 8 hours of driving or whenever the driver desires a break during the journey.
- *Sleep:* Drivers should prioritize at least eight hours of sleep. Drivers are also encouraged to get regular medical checkups as it relates to eyesight, ergonomics and stress.

5. Emergency Procedures

Vehicle Accident Response:

In the event of a motor vehicle accident immediately take the following steps:

- Ensure all participants are accounted for and responsive.
- If any participant is ejected from the vehicle, unresponsive, or injured call 911 immediately.
- Assess your vehicle's condition to determine if it is safe to occupy and if it can safely be moved.
- If a vehicle cannot be moved, call 911 and wait for assistance.
- If it is safe to do so, participants should remain in the vehicle with seat belts fastened for everyone's safety until help arrives.
- If it is unsafe to remain in the vehicle, participants should cautiously exit and move to a safe location away from traffic but adjacent to the accident site.
- Turn on hazard lights, put on a safety vest if possible
- Do not smoke or place lit flares within 25 feet of damaged vehicles or fluids which have leaked from them.
- If a vehicle can be moved without creating further hazard, move it to a safe location adjacent to the accident site.
- Participants should remain in the vehicle with their seat belts fastened if possible.
- Exchange the following information at a safe location off the roadway:
- Name, address, phone number, insurance company, policy number, driver's license number, and license plate number for the driver and the owner of each vehicle.
- If the driver's name is different from the name of the insurance, establish what the relationship is and take down the name and address of each individual.
- Make a written description of each car, including year, model, and color the exact location of the collision and how it happened.
- Notify the nearest police station.

Breakdown Protocol:

- Put on vehicle hazard lights.
- Notify the main office of vehicular trouble.
- If the driver has prior knowledge of the reason for the mishap, then he may try to rectify

the problem. Otherwise;

- A mechanic should be contacted to assist with the vehicle
- Emergency Contacts: A list of emergency contact numbers should be made readily available in the company vehicles.

6. Monitoring and Reporting

- *Telematics and GPS:* Technology can be used to monitor driving behaviour, such as speed, harsh braking, and route adherence.
- *Incident Reporting:* Drivers should promptly all incidents, near misses, and safety concerns.
- *Feedback Loop:* The HSE department should regularly review incident reports and feedback to identify trends and areas for improvement.

7. Legal and Regulatory Compliance

- *Licensing and Certification:* Drivers should have a valid license for the specific type of vehicle that they will drive.
- *Regulation Adherence:* All vehicles should have updated vehicle registrations, insurance and fitness.

APPENDIX EIGHT – OIL SPILL PLAN

The purpose of this plan is to outline procedures for the prevention, immediate response, and cleanup of oil and fuel spills during construction activities in the Moruca region. The goal is to minimize environmental impacts, particularly to sensitive ecosystems such as wetlands, rivers, and mangrove areas.

Scope

This plan applies to all construction personnel, contractors, and equipment operating on or near the project site. It covers the handling, storage, and transportation of diesel, gasoline, hydraulic fluids, lubricants, and other petroleum-based products.

Spill Prevention Measures

- Secondary containment (e.g., drip trays, berms) must be used under all fuel tanks and storage containers.
- Designated refueling areas shall be located away from water bodies, with absorbent mats and spill kits on hand.
- Daily equipment checks for leaks or damage, especially hydraulic systems.
- Training for all staff in spill prevention and response protocols.
- Fuel storage shall be secured in properly labeled, sealed containers and regularly inspected.

Spill Response Procedures

Immediate Actions:

- Stop the source of the spill (shut down equipment or close valves).
- Alert the site supervisor and activate the Emergency Response Team.
- Contain the spill using booms, absorbent pads, or sandbags to prevent spread.

Notification:

- Notify relevant authorities such as the Environmental Protection Agency (EPA) of Guyana.
- Record time, location, substance spilled, estimated quantity, and immediate measures taken.

Cleanup:

- Use appropriate absorbent materials to recover spilled oil.
- Contaminated materials (soils, absorbents) must be collected and disposed of at an approved facility.
- Prevent residual contamination by thoroughly cleaning the area.

Reporting:

- Complete a formal Spill Incident Report (Annex One) within 24 hours.
- Include root cause analysis and recommendations to prevent recurrence.

Equipment and Supplies

- Each active work site must have access to:
- Spill kits with absorbent booms, pads, gloves, and disposal bags.
- Shovels and containers for soil removal.
- Fire extinguishers near fuel storage and usage areas.
- A list of emergency contact numbers.

Training and Drills

- Conduct monthly spill response drills simulating different scenarios (e.g., spill during refueling, leak from equipment).
- Maintain a training log with dates, attendees, and topics covered.
- New staff must be trained within one week of arrival on site.

Review and Update

This plan shall be reviewed and updated annually, or immediately following any significant spill incident or project scope change.

APPENDIX NINE – WASTE MANAGEMENT PLAN

Waste Management in Guyana

In Guyana, the two key agencies involved in waste management are the Environmental Protection Agency (EPA) and the Ministry of Local Government and Regional Development (MLGRD).

This Waste Management Plan is aligned with the following Guyana laws and regulations:

- Guyana's Environmental Protection Act of 1996;
- Guyana Regulations made under the Environmental Protection Act 1996 (No. 11 of 1996) of 2000;
- Guyana's Environmental Guidelines for the Transportation, Storage and Occupational Handling of Chemical/Industrial Hazardous Waste of 2011 (as applicable);
- Guyana's Environmental Guidelines for Removal, Treatment & Disposal of Oily Sludge of 2011 (as applicable); and
- Guyana's Environmental Guidelines for the Storage, Transportation & Occupational Handling of Biomedical Waste of 2011 (as applicable).

As such, transport owners and operators supporting the project will be required to obtain authorization for vehicles used to transport hazardous waste to the landfill area. In addition, vehicle owners and operators will be required to obtain authorization for any vehicles used to transport waste from Project facilities to the waste management facilities once or twice a week.

The Plan will be updated as needed upon issuance of any Project-specific Environmental Authorizations/Permits to reflect any specific waste management commitments, obligations, and conditions contained in those documents.

Non-hazardous waste management facilities

The project will establish dedicated Non-Hazardous Waste Management Facilities at the temporary site to handle general construction debris, packaging materials, and domestic waste. These facilities will be equipped with labeled containers for waste segregation and will follow standard procedures for collection, temporary storage, and final disposal at approved landfill sites. Regular monitoring will be conducted to ensure compliance with applicable regulations and to minimize environmental impact.

Hazardous Waste Management Facilities

The Temporary Facility will include Hazardous Waste Management Facilities designed to handle, store, and dispose of waste materials classified as hazardous under national and international standards. These may include used oil, lubricants, chemical containers, and contaminated PPE.

The facility will consist of a secure, clearly marked hazardous waste storage area with impermeable flooring and secondary containment to prevent leaks or spills. All hazardous waste will be properly labeled, logged, and stored separately from non-hazardous waste.

Disposal will be carried out through certified waste management service providers in compliance

with relevant environmental regulations. Staff will receive training on hazardous waste handling procedures, emergency response, and spill containment.

Waste storage and handling

A specific area shall be laid out and labeled to facilitate the separation of materials for potential recycling, salvage, reuse and return. Recycling and waste bins will be kept safe, in good condition, covered, clean and clearly marked in order to avoid any litter being blown around, damaged by the weather or scavenged by vandals, thieves, trespassers or animals, and to avoid the contamination of materials. If damaged they will be replaced. Skips clearly identified will encourage the workforce to deposit the correct materials into the correct skips.

Categorization of Waste

Construction phase:

Concrete waste should be broken, crushed and separated from any unwanted materials and reused in the new concrete mix or aggregate. This will reduce the volume of waste from the process. Wood should be repurposed as firewood thereby neighboring communities that require firewood would benefit from this gesture.

Plastics and Cardboard/Paper should be added to the domestic waste bins to be collected by a garbage collection company or transported to the village local landfill.

For material from the septic tank, need to check if there are licensed sludge disposal services available in Moruca, if not the project will establish a self-managed desludging system. A sludge pump system will be mobilized periodically to remove sludge. Sludge will be temporarily stored in a sealed, lined pit or holding tank within the camp boundary. Once full, the sludge will be transported to a government-approved disposal facility outside the region, in coordination with the Environmental Protection Agency (EPA).

All disposal activities will follow EPA guidance, and logs of dates, volumes, and disposal sites will be maintained.

Operation Phase:

Waste oil should be collected by an authorized company to properly dispose of waste oil from the facility. Waste oil can be collected periodically, therefore storage of waste oil should be done on an impervious surface.

Oily rags can be delicately stored and stockpiled to be collected by a hazardous waste facility with the ability to incinerate oily rags.

Scrap metal can be sold to scrap metal yards which would either repurpose the scrap metal or ship them out to be recycled.

All disposal activities will follow EPA guidance, and logs of dates, volumes, and disposal sites will be maintained.

Residential quarters:

Domestic waste should be placed into commercial bins to be removed by an authorized garbage collection company or removed from the site and carried directly to the village local landfill. This waste will include plastics, paper, cardboard, biodegradable items, glass, metal (aluminum) etc.

Organic waste should be utilized in the vegetable patch as compost to add nutrients to the soil. Organic waste would require an area to create a compost and turned regularly to ensure the adequate decomposition of the matter. Organic waste can also be disposed same as domestic waste.

Water effluent and sewage will be directed to a septic tank or sediment tank for bio digestion and treatment then released into constructed ditches of the compound.

Medical waste from the operations may come in the form of gloves, gauze, bandages, syringes, expired medications.

Sharps Disposal Bin will have syringes and other sharp medical objects for disposal. This should be a compliant sharps container that prevents sharp objects from penetrating.

Biohazards Bin will have gloves, bandages, gauze and any item with dried blood or fluids. The bin should be equipped with a red garbage bag.

Pharmaceuticals will have expired medication. This should be a blue bin.

Waste from Decommissioning

Decommissioning a construction campsite involves a comprehensive approach to mitigate any negative impacts on the environment. First, the site assessment to identify potential environmental hazards and document the current state of soil, water, and vegetation. Proper waste management is crucial, involving the segregation, recycling, and disposal of all waste types according to local regulations. When the site is handed over, the existing buildings at the of both parties (lesser and lessee) will be agree to left existing structures and building for their reuse and benefit to the owner, the rest of the structures and equipment are carefully dismantled and removed, ensuring no contamination occurs. Shipping back of equipment and machinery will be shipped back to the original contractor headquarter or to another nearby project doing by PCI-Sinopharmintl Consortium.

Also, selling equipment and machinery will be an option for PCI-Sinopharmintl Consortium. Soil and water are tested for contaminants, and remediation plans are implemented if necessary. Restoration efforts will focus on revegetation with native plants and soil stabilization to prevent erosion. Ongoing monitoring and maintenance will be done to ensure the site remains stable and free from contamination, while transparent communication with the community and stakeholders fosters trust and addresses any concerns. Compliance with all relevant environmental regulations is strictly maintained, and a detailed final report is prepared to document the decommissioning activities and environmental measures taken.

Waste logistics

Waste will be collected and disposed of by a local waste contractor, who shall transport both non-hazardous and hazardous waste offsite for the duration of the project. Copies of their Waste Management License and Waste carriers license will be held in the site filing system Waste logs and documentation for both hazardous and non-hazardous waste management for cradle-to-grave

tracking of all waste movements would be enforced.

Waste Hierarchy

Project wastes will be reduced, recycled, and reused where practicable, with the remainder being treated as needed and properly disposed. The following waste hierarchy shall apply as a priority order in waste prevention:

- Eliminate- Design out waste
- Prevention- lower the amount of waste Produced
- Re-use- Use materials repeatedly
- Recycling-use materials to make new Products
- Recovery-Recover energy from waste
- Disposal-safe disposal of waste to landfill

Education and Training

PCI-Sinopharmintl Consortium will provide on-site instruction of appropriate separation, handling, recycling, reuse and return methods to be used by all parties at all appropriate stages of the Project. Toolbox talks will be carried out every month on waste issues and all subcontractors will be expected to attend.

Monitoring and Reporting

A log will be maintained of all materials that come on to the site, and details will be obtained from the waste disposal company of the quantity of waste materials removed from the site. Details will also be provided outlining the recovery/disposal actions for the specific waste streams. Waste receptacles will be monitored to ensure that contamination has not occurred, results will be recorded. PCI-Sinopharmintl Consortium will continually review the type of surplus materials being produced and change the site set up to maximize reuse or recycling and the use of landfill will be the last option.

Evaluation of Waste Management Plan

At the end of the project, as part of the final report, the following information will be made available:

- Type of wastes generated on site
- Amount of waste generated on site
- Re-use on, and off site, recycling rates and diversion from landfill.

APPENDIX TEN – DRAINAGE MANAGEMENT PLAN

The drainage system construction of the main Camp and Sub-camp is essential to prevent waterlogging, soil erosion, and contamination of local water bodies. Effective drainage management ensures the safety, health, and environmental sustainability of the construction site.

Objectives

- To manage stormwater and prevent water accumulation.
- To minimize soil erosion and sediment transport.
- To ensure wastewater is not disposed in the drainage system
- To protect local water bodies from contamination.
- To ensure the safety and health of the construction workforce.

Site Assessment

Topography: Analyze the slope and natural drainage patterns of the site. Soil Type: Determine soil permeability and compaction characteristics.

Climate: Consider rainfall patterns and intensity.

Existing Drainage: Identify natural watercourses and existing drainage infrastructure.

Technical Aspect

- Camp drainage is divided into surface natural drainage and domestic sewage discharge.
- Drainage ditches are set up in front and behind the houses in the camp, and main drainage ditches are set up around the camp, and connected to the ditch located in the north of the planned camp, for the natural discharge of surface water in and around the camp. When the rainy season comes, the floodwaters around the camp will be directed into the ditch behind the camp, and the floodwaters farther away from the camp will be discharged by themselves.
- The sewage in the camp is collected into the sewage sedimentation tank in the camp through a special PVC pipe. After being filtered and meeting Guyana's environmental requirements, it is discharged into the ditch near the camp. The sediment treatment in the sedimentation tank is carried out regularly through companies with corresponding qualifications in Guyana.
- The campsite housing adopts simple container-type board houses, which have high structural rigidity and light weight. There will be no collapse in the event of heavy rainfall or floods.

- The campground is equipped with water pumps and water trucks to alleviate flooding and water accumulation in the campground.

Implementation

- Construction of Drains: Excavate and construct drains as per design specifications.
- Installation of Control Measures: Set up sediment control measures and retention ponds. Used water will not be disposed of in the drainage system
- Maintenance Schedule: Develop a regular maintenance schedule to clear debris and sediment from drains and control structures.

Supervision and Inspection

- Regular Inspections: Conduct periodic inspections to identify and rectify blockages, damages, or breaches in the drainage system.
- Training: Train construction personnel on the importance of drainage management and the proper use of drainage infrastructure.
- Waste Management: Ensure proper disposal of construction waste to prevent clogging of drains.

Emergency Response: Prepare an emergency response plan for heavy rainfall events and drainage failures. (Please see emergency response plan, related to flooding risk management

APPENDIX ELEVEN – COMMUNITY HEALTH AND SAFETY PLAN

This Community Health and Safety Plan aims to prevent accidents, injuries, and health issues among workers and nearby residents, promoting a safe and healthy living and working environment while minimize the risk of accidents and health hazards and to rise safety awareness and best practices among workers and community members.

Community Assessment

Community Assessment, should have the following main areas to assess and accommodate preventive measurements.

- Hazard Identification: Identify potential hazards such as heavy machinery, hazardous materials, and high-traffic areas.
- Risk Assessment: Evaluate the likelihood and impact of identified hazards.
- Community Proximity: Assess the distance and interaction between the construction camp and nearby communities.

Safety Policies and Procedures

- Safety Protocols: Establish clear safety protocols for all construction activities.
- Emergency Procedures: Develop emergency response plans for fire, medical emergencies, and natural disasters.
- Personal Protective Equipment (PPE): Mandate the use of PPE like helmets, gloves, and safety boots.

Training and Awareness

- Safety Training: Conduct regular safety training sessions for workers.
- Emergency Drills: Organize periodic drills to ensure preparedness for emergencies.
- Awareness Programs: Educate workers and community members about safety measures and potential hazards.

Health and Hygiene

- Sanitation Facilities: Provide adequate sanitation facilities, including clean water, toilets, and waste disposal systems.
- Medical Services: Ensure access to on-site medical services and first aid and offer medical service to the community for prompt response to emergency
- Hygiene Practices: Promote hygiene practices such as handwashing and safe food handling.

Traffic Management

- Traffic Control: Implement measures to control traffic flow within and around the construction camp. Including the traffic management plan

- Signage: Use clear signage to direct vehicles and pedestrians safely.

- Regularly patrolling within the communities will allow to assess the performance and traffic control car/truck enforcing speed limits to reduce the risk of accidents.

Security Measures

- Access Control: Restrict access to authorized personnel only.

- Surveillance: Use security cameras and patrols to monitor the site. Security forces are not anticipated to be harmed, but in the event of such, human rights training will be conducted.

- Lighting: Ensure adequate lighting in and around the camp to deter unauthorized access and reduce accidents.

- Hoarding**:** The site will be protected by hoarding.

Environmental Safety

- Waste Management: Implement proper waste disposal practices to prevent environmental contamination.

- **Water quality Management:**

- Noise Control: Use noise control measures to minimize disturbance to nearby communities to ensure surface and ground water is not contaminated.

- Dust Suppression: Apply dust suppression techniques to reduce air pollution.

Monitoring and Reporting

- Regular Inspections: Conduct regular safety inspections to identify and rectify hazards. Incident Reporting: Establish a system for reporting and investigating accidents and incidents.

- Continuous Improvement: Use feedback from inspections and reports to continuously improve safety measures.

- Communication mechanism within the Camp Managers, workforce, stakeholder and local community, will provide the possibility to express / officially record all concerns, complaints and grievances of individuals or society and to facilitate resolutions that should be mutually accepted by the parties. Throughout project execution the mechanisms to communicate grievances and complains by individuals and communities will remain active, and the procedures of recording and response will be adapted regularly, according to the local authorities' necessity.

APPENDIX TWELVE – WORKERS' HEALTH AND SAFETY PLAN

Introduction

This Workers' Health and Safety Plan outlines the procedures and practices to ensure the health, safety, and welfare of all personnel involved in the Guyana construction project. It complies with applicable occupational health and safety regulations.

Objectives

- Prevent accidents, injuries, and illnesses on site.
- Provide a safe working environment for all personnel.
- Ensure compliance with relevant national safety laws and site-specific regulations.
- Promote a safety culture through training, supervision, and communication.

Scope

This plan applies to all workers, subcontractors, and visitors at the construction site located in Guyana.

Responsibilities

Project Manager:

- Ensure implementation of the safety plan.
- Allocate resources for safety measures.
- Oversee compliance.

Site Safety Officer:

- Conduct daily site inspections.
- Report hazards and incidents.
- Lead toolbox talks and emergency drills.

Workers and Subcontractors

- Follow safety protocols.
- Attend safety training.
- Report unsafe conditions.

Risk Identification and Control

The following **Table 18** outlines key risks and control measures:

Table 18: Risk and Control Measures for Workers' Health and Safety

Activity	Potential Hazards	Control Measures
Excavation	Collapse, falling debris	Shoring, PPE, supervision
Working at heights	Falls	Scaffolding, harnesses, guardrails
Electrical work	Shock, burns	Lockout/tagout, insulated tools
Heavy machinery	Collision, roll-over	Trained operators, safety zones
Lifting items	Falling debris, crushing	PPE, Exclusion zones

Personal Protective Equipment (PPE)

- Hard hats
- Safety boots
- High-visibility vests
- Gloves and goggles (as required)
- Fall arrest systems when working at height

Safety Training

- Site-specific induction training for all workers
- Weekly toolbox meetings
- Emergency Response Drills
- Fire Drills
- Evacuation Drills
- Specialized training (e.g., scaffolding, welding, electrical safety, trenching and excavation)

Work Permits for high risk activities

Guyana does not have any specific high-risk permits for activities such as trenching and excavation. All high-risk activities will follow OHS and Labour Laws. Any guidance and support required will be requested from the Ministry of Labour. A checklist will be used to confirm sound environmental measures.

Emergency Procedures

Please refer to the Emergency Response Plan.

Incident Reporting and Investigation

All accidents, injuries, or near-misses must be reported immediately to the Site Safety Officer. Incidents will be documented and investigated to prevent recurrence.

Monitoring and Review

This safety plan will be reviewed monthly or after any major incident. Improvements and updates will be documented and communicated to all personnel.

APPENDIX THIRTEEN – WORKERS' INFLUX MANAGEMENT PLAN

This Worker Influx Management Plan is guided by key regulatory and normative frameworks that safeguard the rights and well-being of Indigenous Peoples. The following principles and requirements apply:

1.10.7. IDB Environmental and Social Policy Framework – ESPS 7 (Indigenous Peoples)

- Projects must obtain Free, Prior and Informed Consent (FPIC) where impacts on Indigenous Peoples are significant.
- Worker influx management must avoid adverse effects on land, resources, culture, and livelihoods.
- Engagement must be inclusive and culturally appropriate, ensuring Indigenous leadership participation.
- Mitigation measures should strengthen, not undermine, Indigenous governance systems.

1.10.8. ILO Convention 169 on Indigenous and Tribal Peoples (1989)

- Indigenous Peoples must be consulted in good faith through their representative institutions on matters affecting them.
- Protection against exploitative or discriminatory labor practices linked to worker influx is required.
- Customary laws, cultural practices, and community institutions must be respected in workforce management.

1.10.9. United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007)

- Indigenous Peoples have the right to maintain and strengthen their **d**istinct cultural institutions.
- FPIC is required for any development project affecting **l**ands, territories, or resources.
- Worker influx management must prevent cultural disruption, exploitation, or forced assimilation.
- Communities have the right to determine their development priorities and must be fully informed about risks and opportunities.

Authority and Governance

A titled community is the private property of a specific Indigenous people, held and administered by its Village Council, which is elected by community members every three years under the *Amerindian Act 2006*.

The Village General Meeting (VGM) is the highest decision-making authority within the community. All matters relating to entry, access, and use of community lands must be guided by decisions made at the VGM, not by the Toshao or Village Council acting alone.

2. Permission Requirements for Entry

- **Village Permission** – Any non-resident wishing to enter a titled community must first seek permission from the community.

- **Format of Request** – The community determines, via its established village rules, whether permission requests must be made in writing, by message, or via phone call.

Process for Contractors to Inform a Village Council of Worker Influx into an Indigenous Village

This process ensures that the introduction of workers into an Amerindian village respects the Amerindian Act 2006, maintains community control over land access, protects local customs, and safeguards against social disruption, including community conflict and gender-based violence (GBV).

The Amerindian Act 2006 outlines the requirements for entry into Amerindian communities as follows:

General Entry Requirement:

- Any person wishing to enter Village lands must first apply for and obtain permission from the Village Council.

- Failure to obtain permission is an offense, punishable under the First Schedule of the Act.

Step 1: Pre-Engagement Consultation with the Village Council

Timeframe: At least two months before mobilization

1. The contractor must formally notify the Village Council in writing of the anticipated influx of workers, including:

    - The number of workers.

    - Duration of stay.

    - The nature of work to be conducted.

    - Measures to mitigate environmental and social impacts.

2. The contractor must request a meeting with the Village Council to discuss worker entry and obtain permissions.

3. During this meeting, the contractor must:

    - Present a worker influx management plan (see Step 2).

    - Engage in a free, prior, and informed consultation respecting Indigenous decision-making customs.

    - Agree on conditions of entry and conduct for workers.

- The contractor must cause the worker to present themselves to the police outpost in the village to register their particulars in the recognizance book. The written notice shall include
- The name of each worker
- A photograph of the worker's ID or passport
- Usual place of residence of the worker
- The occupation of the worker on the project
- The intended departure date of the worker from the village

Step 2: Worker Influx Management Plan & Agreement

Timeframe: Developed jointly during the pre-engagement consultation with the village council

The contractor and Village Council shall agree on a Worker Influx Management Plan, which includes:

1. **Code of Conduct for Workers**
    - Prohibition of sexual exploitation, GBV, harassment, and discrimination.
    - Respect for local customs and restricted access to sacred and residential areas.
    - Participate in community sensitivity orientation by the village council
    - Ban on alcohol outside the camp.
    - Ban on firearms unless explicitly permitted
    - Clear disciplinary measures for violations. (warning, termination)
2. **Worker Identification & Registration**
    - Workers must carry identification and wear uniforms or badges to distinguish them from residents.
    - The contractor must submit a list of workers to the Village Council before mobilization.
3. **Housing & Living Arrangements**
    - Workers should not reside within the village unless approved by the Village Council.
    - If housed nearby, the contractor must ensure proper sanitation, security, and zero tolerance for exploitative relations with villagers.
4. **Community Liaison Officer & Grievance Mechanism**
    - A Community Liaison Officer (CLO) must be appointed to facilitate communication between the contractor and the Village Council.
    - A grievance mechanism must be in place for villagers to report worker misconduct confidentially.

Step 3: Formal Permission & Village Council Oversight

Timeframe: One month before worker mobilization

1. The Village Council reviews the agreement and grants or denies permission.
2. If granted, the Village Council issues written approval with any additional conditions.
3. The Village Council has the right to:
    - Revoke permission if the contractor violates the agreement.
    - Conduct spot-checks on worker behavior.

Step 4: Worker Orientation & Community Awareness

Timeframe: One week after workers arrive

1. The contractor conducts cultural sensitivity training for workers in collaboration with the Village Council.
2. The Village Council may introduce workers to the community to reduce fear and tension.

Step 5: Continuous Monitoring & Compliance

1. The contractor must submit monthly reports on worker behavior and community impact.
2. The Village Council, with the CLO, will monitor adherence to the agreement and address concerns.
3. Any violation must be reported immediately to the contractor, Village Council, and relevant authorities for action.

APPENDIX FOURTEEN – TEMPORARY FACILITY DESIGN AND HOSPITAL LAYOUT WITH LAND PERMISSION

Temporary Facility Design

The layout includes the following zones:

- Project Office & Living Quarters: Administrative offices and accommodations for project staff.
- Worker Living Area: Housing and amenities for construction personnel.
- Material Storage Areas:
    - Steel structures
    - MEP (mechanical, electrical, plumbing) installation materials
    - Finishing & decorative materials
    - Medical-specific materials and equipment
- Concrete Batching Plant
- Cement Storage Warehouse
- Gravel Stockpile Yard
- Steel Reinforcement Processing Workshop
- Carpentry Workshop
- MEP Fabrication Workshop
- Door/Window Assembly Workshop
- Equipment Parking Zone
- Construction Waste Temporary Storage
- On-site Generator Room

Facility Placement

Located within the primary construction site:

- Steel Reinforcement Processing Workshop
- Carpentry Workshop

- MEP Fabrication Workshop
- All other temporary facilities are planned outside the planned construction area.

Temporary Site Utilization Plan

Facility	Floor Area（sq.m）	Occupancy Period
Project Office & Living Quarters	2000	04/01/2025 – 10/30/2027
Worker Living Area	1500	
Material Storage Areas	4000	
Extra Material Storage Areas	4000	
Concrete Batching Plant	160	
Cement Storage Warehouse	160	
Gravel Stockpile Yard	160	
Door/Window Assembly Workshop	200	
Equipment Parking Zone	400	
Construction Waste Temporary	100	
On-site Generator Room	30	
Total	**12710**	

Additional Infrastructure & Energy Requirements

Supporting Facilities

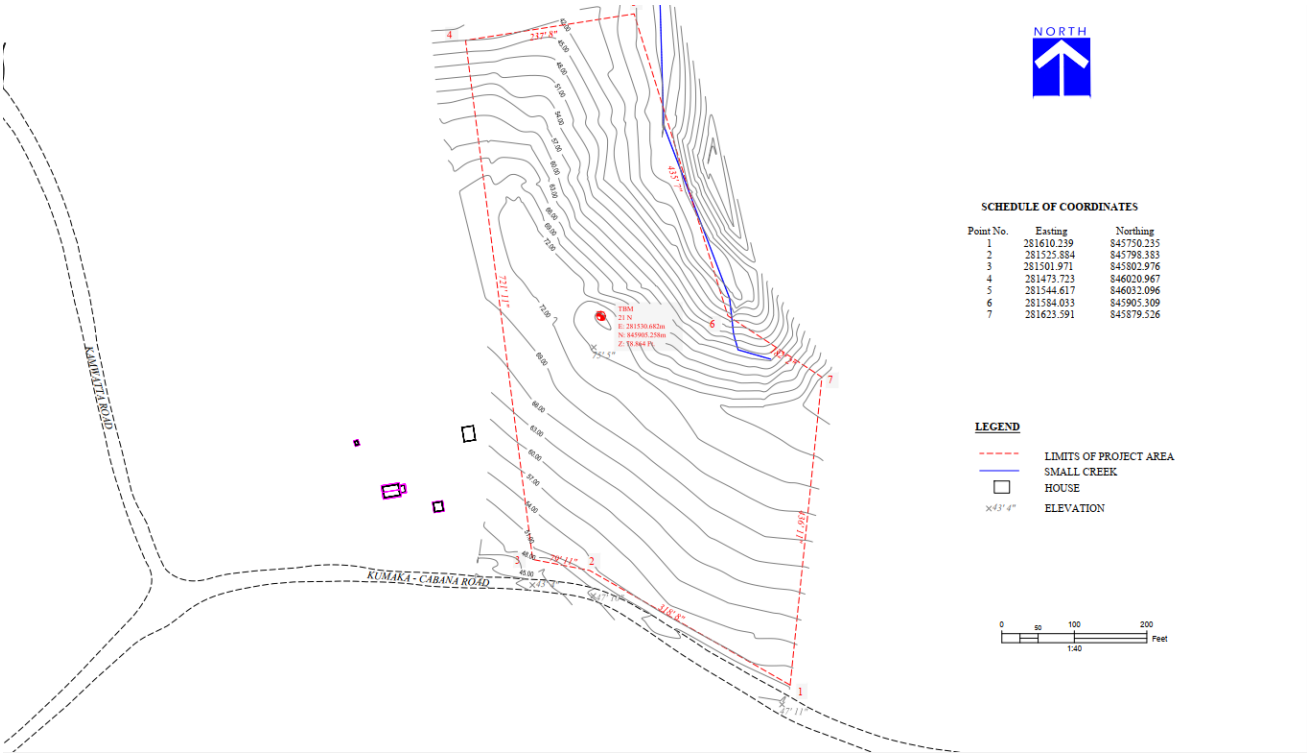
- Roads, drainage ditches, and other essential infrastructure are included in the temporary site plan.
- Total temporary site footprint: Approximately 16,200 sq.m, see the attached drawings for details.

Solar Power Installation

- An additional 2,500-3,000 sq.m is required for solar panel arrays.

Purpose: To meet the power demands for on-site construction and living facilities.

Figure 14: Map of Camp with Water Line



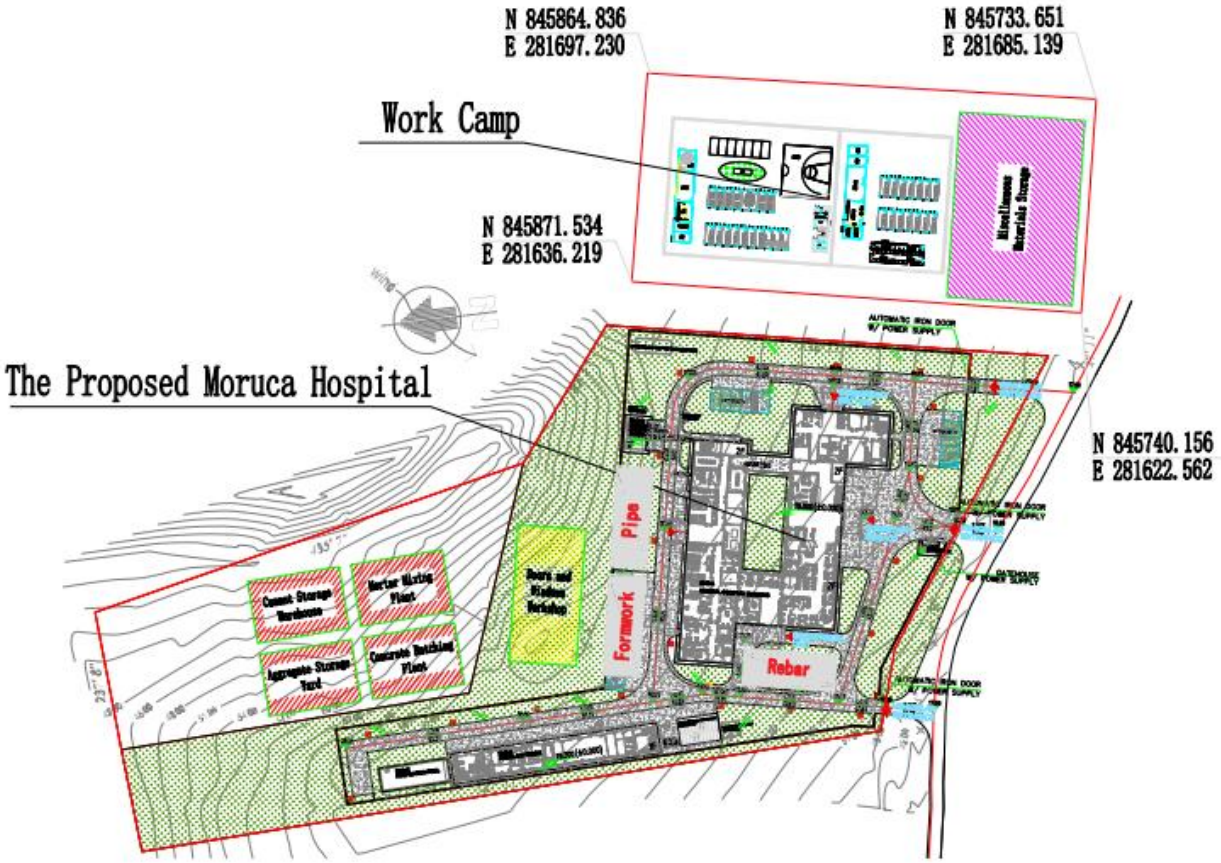
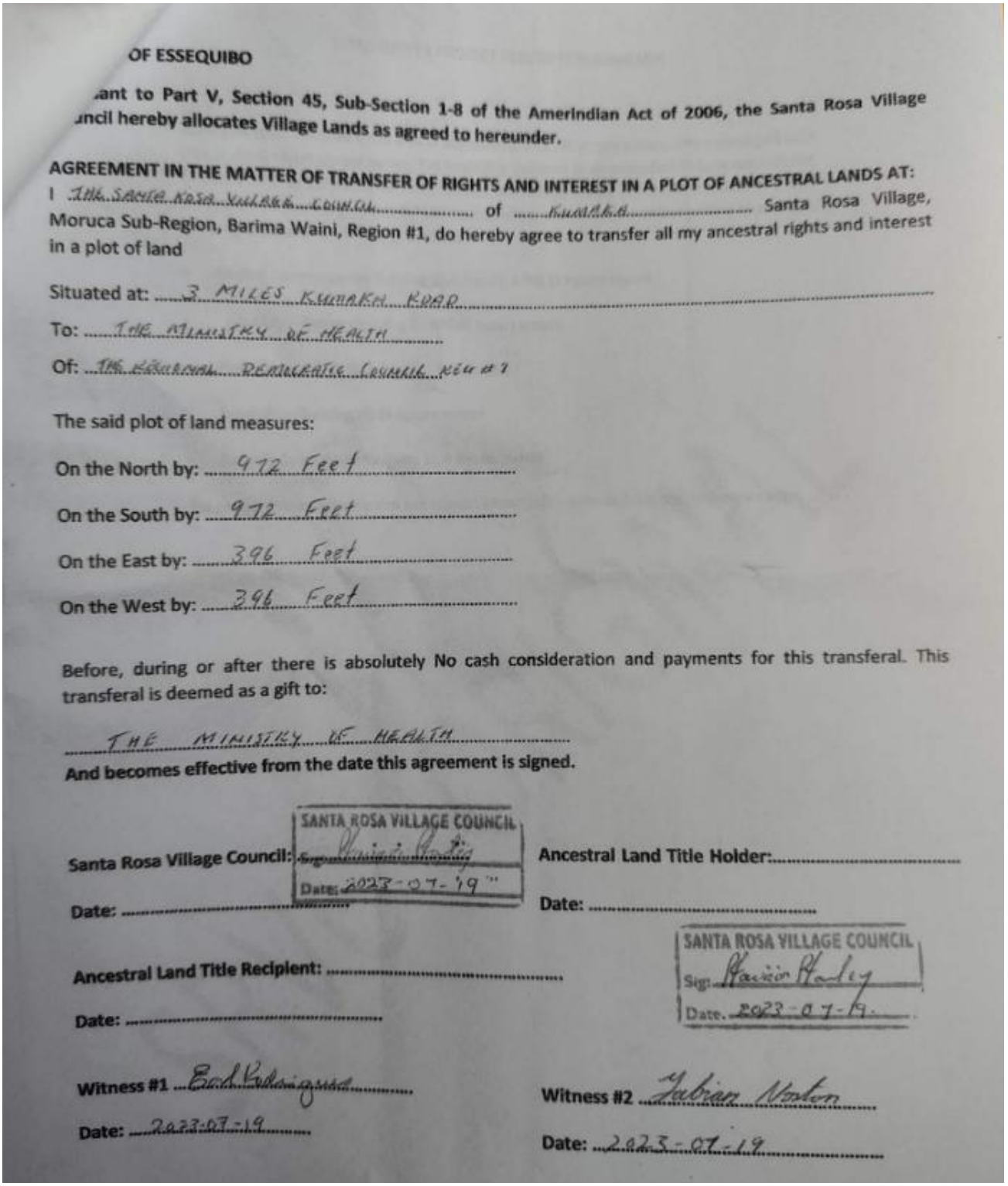


Figure 15: Building and Camp Layout

Land Permission-Hospital Site



OF ESSEQUIBO

...ant to Part V, Section 45, Sub-Section 1-8 of the Amerindian Act of 2006, the Santa Rosa Village ...ncil hereby allocates Village Lands as agreed to hereunder.

AGREEMENT IN THE MATTER OF TRANSFER OF RIGHTS AND INTEREST IN A PLOT OF ANCESTRAL LANDS AT:

I THE SANTA ROSA VILLAGE COUNCIL of KUMAKA Santa Rosa Village, Moruca Sub-Region, Barima Waini, Region #1, do hereby agree to transfer all my ancestral rights and interest in a plot of land

Situated at: 3 MILES KUMAKA ROAD

To: THE MINISTRY OF HEALTH

Of: THE GUYANA REPUBLIC COUNCIL REG # 7

The said plot of land measures:

On the North by: 972 Feet

On the South by: 972 Feet

On the East by: 396 Feet

On the West by: 396 Feet

Before, during or after there is absolutely No cash consideration and payments for this transferal. This transferal is deemed as a gift to:

THE MINISTRY OF HEALTH

And becomes effective from the date this agreement is signed.

Santa Rosa Village Council: SANTA ROSA VILLAGE COUNCIL Sig: Date: 2023-07-19

Date:

Ancestral Land Title Holder:

Date:

Ancestral Land Title Recipient:

Date:

SANTA ROSA VILLAGE COUNCIL Sig: Date: 2023-07-19

Witness #1 Enid Wilson

Date: 2023-07-19

Witness #2 Fabian Norton

Date: 2023-07-19

<u>This site includes 15 ha and includes the spring, that is might be used if needed</u>

Land Permission-Camp Site

SANTA ROSA VILLAGE COUNCIL

Kumaka, Santa Rosa Village, Moruca Sub-Region, Barima/Waini, Region #1, Guyana
Tel#: Office +592, Toshao +592677-7483, Secretary +592695-8687, Treasurer+592683-8824
Email:srvc.moruca@gmail.com, Facebook: Santa Rosa Village Council or P.O c/o Acquero Post Office

COUNTY OF ESSEQUIBO

REPUBLIC OF GUYANA

AGREEMENT OF TENANCY

This **Agreement** is made this **07 day of April 2025** between the **Mr Raymond Atkinson of Santa Rosa Village, Moruca Sub-Region, Region 1,** (hereinafter referred to as the **Landlord**) of Acquero. **Powerchina International Group Limitted, 3rd Floor ,R&S Mall Apartment District Track JW Mandela Avenue, Durband backlands** of the other part.

WHEREAS the Landlord is desirous of renting the Premises.

AND WHEREAS the Tenant agrees to rent the Premises for the entire Duration of the of project, starting date **is 20th of April 2025.**

Payment will be every three month, and it will be made to the village office.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

THE PARTIES: The Landlord and Tenant, which term shall include their heirs, representatives, administration, assigns and successors in title.

PREMISES:

☐ One Land Space within the Santa Rosa Village (the entire land space close to the road), Kumaka 3 miles kwabanna-Road of Santa Rosa Village, Moruca Sub-Region, Region 1.

☐

TERMS OF AGREEMENT:

1. The Tenant agrees to pay a monthly rental of <u>thirty</u> thousand Guyana dollars ($ 30,000.00), on or before the **first or second week in the forth months.**

"Santa Rosa & Islands, Kumaka, Rincon, Cabrora, Mora, Hurudiah, Koko, Kyrie & Islands, Karabari, Wallaba, Kamwatta, Parakese, Haimaruni"

SANTA ROSA VILLAGE COUNCIL

Kumaka, Santa Rosa Village, Moruca Sub-Region, Barima/Waini, Region #1, Guyana
Tel#: Office +592, Toshao +592677-7483, Secretary +592695-8687, Treasurer+592683-8824
Email:srvc.moruca@gmail.com, Facebook: Santa Rosa Village Council or P.O c/o Acquero Post Office

Raymond Atkinson.......................................

Lianghui zhu (Person in charge Moruca Hospital Project)..

Raul Hendricks, SRVC TOSHAO.......................................

SANTA ROSA VILLAGE COUNCIL
Toshao:
07/04/2025
Date

GUYANA

COUNTY OF ESSEQUIBO

Pursuant to Part V, Section 45, Sub-Section 1-8 of the Amerindian Act of 2006, the Santa Rosa Village Council hereby allocates Village Lands as agreed to hereunder.

AGREEMENT IN THE MATTER OF TRANSFER OF RIGHTS AND INTEREST IN A PLOT OF ANCESTRAL LANDS AT:
SANTA ROSA VILLAGE COUNCIL of Santa Rosa Village, Moruca Sub-Region, Barima Waini, Region #1, do hereby agree to transfer all my ancestral rights and interest in a plot of land

Situated at: 3 MILES KUMAKA ROAD. MORUCA SUB REGION

To: Raymond Atkinson Of: Acquero, SANTA ROSA VILLAGE REGION #1

The said plot of land measures:

On the North by: 1032 FEET Coordinates 0281890 - 0846080

On the South by: 1135 FEET. Coordinates 0281766 - 0846112.

On the East by: 452 FEET. Coordinates 0281730 -0846425.

On the West by: 452 FEET. Coordinates 0281459 - 0846422

Before, during or after there is absolutely No cash consideration and payments for this transferal. This transferal is deemed as a gift to:

RAYMOND ATKINSON.

And becomes effective from the date this agreement is signed.

Santa Rosa Village Council: SANTA ROSA VILLAGE COUNCIL **Ancestral Land Title Holder:**

Date: 02/06/2025 Joshao: 02/06/2025 Date: 30-05/2025

Date

Ancestral Land Title Recipient: X

Date: 30-05-2025

Witness #1 Barry Atkinson.

Date: 30/05/2025.

Witness #2 Idella Cayer

Date: 30/05/2025.

APPENDIX FIFTEEN – CONSULTATION REPORT FOR DISCLOSURE OF THE ESA & ESMP FOR THE WORKERS' CAMP

1.0 *Introduction*

This report summarizes the consultation process conducted for the Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) related to the workers' camp for the construction of the new Moruca Hospital in Region No. 1, Guyana. The consultation was conducted by the PCI-Sinopharm International Consortium, the project's contractor, in collaboration with the Ministry of Health (MOH) and other key stakeholders. The primary goal was to ensure that relevant environmental, social, health, and safety management measures were disclosed and effectively communicated to stakeholders, in accordance with the Inter-American Development Bank's (IDB) Environmental and Social Performance Standard (ESPS) 10: Stakeholder Engagement and Disclosure.

2.0 *Project Overview*

The Moruca Hospital forms part of the Health Care Network Strengthening (HCNS) Project (GY-L1080), a multi- year health infrastructure initiative funded by the IDB at a total cost of USD 97 million. Of this amount, USD 21 million has been allocated to the Moruca component. The project aims to expand healthcare access, integrate digital health record systems, and enhance medical service delivery across hinterland and underserved regions. A temporary workers' camp will support the proposed hospital infrastructure. The ESA and ESMP provide a framework for managing environmental and social risks associated with the construction phase, including site preparation, labour accommodation, waste management, and community interaction.

3.0 *Consultation Objectives*

The objectives of the consultation were to:

- Disclose information to stakeholders regarding the proposed construction of the workers' camp that will support the development of the Moruca Hospital under the Health Care Network Strengthening

Project (GY-L1080).

- Present the Environmental and Social Assessment (ESA)and Environmental and Social Management Plan (ESMP)* prepared for the temporary workers' camp, in compliance with IDB Environmental and Social Performance Standard (ESPS) 10 – Stakeholder Engagement and Information Disclosure

- Provide details on the design and layout of the proposed camp and the associated environmental, health, safety, and social management measures to be implemented

- Discuss the *Grievance Redress Mechanism (GRM) and its application across the project, including complaint submission channels, response timelines, and safeguards for confidentiality and equity.

- Offer stakeholders — including the Santa Rosa Village Council, health sector personnel, and community residents- the opportunity to raise questions, express concerns, and provide recommendations that may inform the finalization of the ESMP and future phases of project implementation.

4.0 *Consultation Activities*

The consultation process included the following activities:

- **Notification Mechanism:** A formal letter of notification was sent to the Santa Rosa Village Council and relevant stakeholders, informing them of the planned disclosure session for the Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) of the workers' camp for the Moruca Hospital construction.

- **Public Disclosure Meeting:** A face-to-face public disclosure meeting was convened on July 10, 2025, at the Santa Rosa Secondary School in Region No. 1. The meeting was facilitated by representatives of the Ministry of Health (MOH) and the project contractor, Power China International.

- **Welcome and Introductions:** The meeting was opened by Environmental and Social Officer at the Ministry of Health. She welcomed attendees and introduced the key stakeholders facilitating the session. She provided a contextual overview of the consultation's purpose, noting that the meeting was convened in alignment with IDB Environmental and Social Performance Standard (ESPS) 10, which mandates the disclosure of key project documents and early engagement with affected communities. She explained that the workers' camp is a critical temporary facility that will enable the construction of the Moruca Hospital under the Health Care Network Strengthening (HCNS) Project (GY-L1080). Attendees were informed that the consultation would include presentations on the project background, anticipated impacts, proposed mitigation measures, and channels for ongoing community engagement.

- **Environmental and Social Overview:** MOH's E&S Officer provided a summary of the Moruca Hospital subproject, noting that it is part of the IDB-funded Health Care Network Strengthening Project, with USD 21 million allocated for Moruca. She introduced the Project Implementation Unit (PIU) and explained that the Environmental and Social Management Plan (ESMP) must be finalized before construction begins. The consultation also covered the Grievance Redress Mechanism (GRM), which ensures stakeholders can submit complaints through various channels and receive timely, confidential responses. Additionally, the Project Engineer of the Ministry of Health outlined the projected construction timeline, stating that the hospital is expected to be completed by October 2027, with the design to be presented in August.

- **Contractor Presentation:** The Contractor's Representative of Power China International, presented the technical layout and operational details of the proposed workers' camp. He thanked the Village Council for facilitating access to the land required for the camp. He indicated that the site would include six offices, twenty-six living quarters, a kitchen, showers and toilet facilities, storage areas,

and a septic tank system. Water for the site would be provided by Guyana Water Incorporated (GWI). He acknowledged that noise, dust, and solid waste would be generated during the construction process. He outlined measures to manage and monitor these impacts, including the use of spraying equipment for dust suppression and designated waste management protocols. He informed the community that all foreign workers would undergo health screenings and orientation on village rules. He would be required to remain within the camp after working hours to prevent conflicts or cultural misunderstandings. Supervision officers would be assigned to support off-site errands. Contracts with local workers would be signed in the presence of the Village Council. All workers would receive induction training and participate in toolbox meetings covering personal protective equipment (PPE), emergency response procedures, and general occupational health and safety standards.

- **GeoEnvironmental & Surveying Solutions (GESS):** The E&S Consultant and his team of Environmental and Social Specialists provided a comprehensive overview of their role in monitoring environmental and social compliance throughout the project. He explained that the Environmental and Social Management Plan (ESMP) serves as the guiding document for ensuring environmental and social performance, which the contractor must strictly follow during all phases of construction. GESS will conduct baseline assessments of air and noise quality, as well as community-level social indicators, repeating these assessments during construction to track changes and inform adaptive mitigation measures. He emphasized that all community concerns raised during consultations will be documented and incorporated into the updated ESMP, underscoring that compliance is mandatory for the contractor. In addition, he and his team delivered a presentation summarizing the findings of the Environmental & Social Assessment, including proposed management measures and mitigation strategies designed to address identified issues throughout the project. This integrated approach aims to ensure all stakeholders are well-informed of the key environmental and social considerations and the necessary steps to mitigate potential impacts during project implementation effectively.

- **Feedback Channels:** Stakeholders were encouraged to report concerns or questions using the available feedback channels, including direct communication with the Village Council, the MOH Environmental and Social Officer, or other designated project focal points. Feedback may also be submitted via telephone, email, or through physical drop boxes to be installed at locations identified in consultation with the Village Council. All grievances will be logged in a formal register and handled in accordance with the GRM process outlined in the ESMP. Direct contact with the contractor can be made via email and telephone at morucaprojectpowerchina@gmail.com or by phone at +592 750 0692

5.0 Stakeholder Feedback and Responses

During the Public Disclosure Meeting, community members raised several questions and concerns:

- **Worker conduct and cultural sensitivity**: Community members expressed concerns about potential conflicts between foreign workers and residents. It was confirmed that Chinese workers will be restricted to the camp after working hours and must first meet with the Village Council.
- **Local employment and wage equity:** Requests were made for prioritizing local hires and ensuring fair pay. The contractor and MOH committed to engaging 60–70% local workers, with the Village Council witnessing employment contracts. MOH will mediate any wage-related grievances.
- **Worker attendance and discipline**: The Village Council acknowledged challenges with local attendance and pledged to promote accountability.
- **Language barriers**: Concerns were raised about communication. The site manager is bilingual (English and Mandarin), and cultural exchange was encouraged.
- **Health and safety training**: Stakeholders requested safety awareness for locals. The contractor will conduct induction sessions and daily toolbox talks. MOH's HSE staff will monitor compliance.
- **Employment documentation**: Many residents lack NIS and TIN registration. MOH will assist with processing these documents.
- **Job application process**: Residents asked for physical application forms. Forms will be made available via the Village Council and by email.
- **Entry fees and royalties**: Questions were raised about standard village entry fees and resource royalties. The Village Council confirmed that all existing systems remain in place.
- **Community contributions**: A suggestion was made for the contractor to give back through infrastructure (e.g., pavilion or playground). The contractor acknowledged the request for consideration.

6.0 Next Steps

Feeback from the consultation will be incorporated into the final versions of the Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) for the proposed workers' camp. These documents will be submitted to the Ministry of Health and the Inter-American Development Bank (IDB) for approval. Once finalized, the ESMP will guide all environmental, social, and safety measures during project implementation. Ongoing stakeholder engagement and monitoring will be conducted to ensure transparency and compliance throughout the construction phase.

6.0 Stakeholders

Key stakeholders involved in the consultation process included:

- Residents of Santa Rosa and surrounding Moruca communities
- Santa Rosa Village Council
- Ministry of Health (MOH)
- PCI-Sinopharmintl Consortium
- Santa Rosa Health Facility
- Guyana Police Force
- Regional Democratic Council – Region 1

7.0 Closing Remarks

The consultation concluded with expressions of appreciation and support from residents and representatives of the Santa Rosa Village Council. A local doctor expressed enthusiasm for the project and gratitude to all involved. Participants acknowledged the hospital's importance to the region and emphasized their willingness to collaborate with the Ministry of Health and the contractor throughout the implementation process. The meeting was formally brought to a close at 11:17 a.m.

PCI-SINOPHARMINTL CONSORTIUM

June 30th, 2025 **Reference No: PCI-S/GUYMAH/25/013**

Toshao [redacted]

Santa Rosa Village Council

Santa Rosa, Moruca Sub-Region, Region NO.1, Guyana.

RE: NOTIFICATION OF DRAFT ESA/ESMP AND INVITATION TO CONSULTATIVE MEETING

Dear Toshao [redacted],

As you may be aware, the Ministry of Health is undertaking the Health Care Network Strengthening (HCNS) project (GY-L1080) to improve healthcare access across Guyana. This project includes the construction of a new regional hospital at Three Miles Kumaka, Moruca sub-region. To ensure the project proceeds in an environmentally and socially responsible manner, an Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) are required, as per the Inter-American Development Bank's (IDB) policies. As the contractor, PCI-Sinopharmintl Consortium has developed a draft ESA and ESMP that focuses specifically on the construction and operation of the temporary workers' camp that is needed to support the hospital's construction. This plan addresses potential impacts related to the camp, including areas such as waste management, community relations, and workers safety, etc., and forms part of the project-level ESA and ESMP, which is currently being developed by the contractor, and which will also be consulted on with Santa Rosa's Village Council and other stakeholders once drafted.

Your village's participation and insights are highly valued in this process to ensure the project do not negatively impact on the community and the environment. In this regard, we kindly invite you to an engagement session to review and discuss the draft ESA and ESMP for the Workers' Camp. The meeting is proposed to be held at the Santa Rosa Secondary school on July 10th, 2025, at 10:00 am.

We also seek your support in mobilizing the members of the Village Council to participate in this important discussion. Additionally, representatives from the Ministry of Amerindian Affair, Ministry of Health, Kumaka District Hospital and RDC sub-office will also be invited to participate in the session. PCI-Sinopharmintl Consortium's Technical staff and Environmental and Social Specialists will also be in attendance.

Enclosed with this letter are both hard and soft copies of the draft ESA and ESMP for review by participants from the village. All participants are welcome to send any comments or

ADD:3rd Floor, R&S Mall Apartment District Track JW, Mandela Avenue,
Durban Backlands, Georgetown, Guyana
Tel:+592 636 6948

questions in advance via email at morucaprojectpowerchina@gmail.com or by phone at +592 759 8933.
Participation of your village is crucial to ensure that the project aligns with the needs and concerns of the village. We look forward to your confirmation of the proposed venue, date and time, and to engaging with the community during this important process.
Thank you for your cooperation and support.

Yours sincerely,

Contractor's Representative / Project Manager

[redacted]
Authorized Signature

Cc. [redacted] Permanent Secretary
Ministry of Health

[redacted] Project Coordinator
Project Implementation Unit
Ministry of Health

PCI-SINOPHARMINTL CONSORTIUM

Project: Health Care Network Strengthening (HCNS) in Guyana Project (GY-L1080)

Meeting Agenda: Disclosure of Environmental & Social Assessment (ESA) and Environmental & Social Management Plan (ESMP) for Workers' Camp for the Construction of Moruca Hospital.

Location: Santa Rosa Secondary School, Moruca, Region No. 1, Guyana

Date & Time: July 10th, 2025, 10:00 am | Duration: 1 hour 30 minutes

1. Welcome and Announcements *(5 minutes)*
   - Opening remarks and introductions
   - Purpose and importance of the meeting

2. Project Overview by the Ministry of Health *(10 minutes)*
   - Background of the HCNS project
   - Community and environmental benefits of the Project.
   - Grievance Redress Mechanism

3. Design, Construction, and Operation of the Camp by Contractor *(15 minutes)*
   - Objectives and scope of the Workers' Camp component
   - Key design features and construction activities
   - Operational processes and environmental considerations

4. Presentation of ESA/ESMP by the Contractor's E & S Specialists *(20 minutes)*
   - Summary of Environmental & Social Assessment findings
   - Proposed management measures and mitigation strategies
   - Compliance and safety protocols

5. Q&A Session (15 minutes)
   - Community questions, clarifications, and discussions

6. Closing Remarks (5 minutes)
   - Summary of main points
   - Next steps and contact info
   - Thank you and end of session

Project: Design and Build of Moruca Hospital
Date: Thursday, July 10, 2025
Time: 10:20 AM – 11:17 AM
Location: Santa Rosa Secondary School, Region 1
Facilitated by: Ministry of Health (MOH) & Power China International
Funding Agency: Inter-American Development Bank (IDB)
Allocated Budget: USD 97 Million (USD 21M for Moruca Hospital)

1. Opening and Introductions

The meeting commenced at 10:20 AM with opening remarks by [redacted] **Environmental and Social Officer at the Ministry of Health**.

- [redacted] gave an overview of the hospital project, one of four hospitals to be built. under the Government of Guyana's Healthcare Strengthening Programme, funded by the Inter-American Development Bank (IDB).
- The total value of the programme is USD 97 million, with USD 21 million allocated for the construction of the Moruca Hospital.
- She identified key team members in the Project Implementation Unit, including:

  - [redacted] – Lead Engineer, MOH

  -[redacted] – Environmental Specialist, C.B & Associates

  -Additional staff who were not present at the meeting.

2. Project Scope and Objectives

- Moruca Hospital is one of four hospitals being constructed (others in Kato, Kamarang, Lethem).
- Aims to enhance digital national health records, improve workforce efficiency, and strengthen healthcare delivery.
- The Digital Health Records Management System has already been contracted and signed.

3. Grievance Redress Mechanism (GRM)

- Purpose: To raise, document, and resolve complaints fairly and efficiently.
- Scope: Applies to all four hospitals, including Moruca.
- Eligible Complaints: Disruptions from construction activities, environmental and social impacts, community health and safety concerns, labour-related issues.

- Submission Methods: In person, by phone, email, grievance boxes, and through designated GRM representatives.
- Processing Timeframe: Acknowledgement within 2–14 working days; urgent cases can be addressed in 2–5 minutes; appeals allowed.
- A Grievance Book will be kept on site.
- Primary focal point: MOH E&S Officer, with the Village Council as the first point of contact.

Contractor's Remarks – [redacted] (Power China International)

- Thanked Village Council for the land lease. Campsite: 50 ft with six offices, 26 rooms, kitchen, toilets, showers, storage, and septic tank system.
- Water via GWI. Noise, dust, and waste impacts acknowledged. Dust suppression and monitoring systems planned.
- Waste disposal site to be selected with Village Council.
- Chinese workers to undergo health inspections and follow village rules. Restricted movement after hours; supervision provided.
- Local worker contracts will involve the Village Council as witness.
- All workers to undergo induction training and toolbox talks.

Environmental & Social Compliance – [redacted]

- Representing Power China International
- Stressed IDB compliance and ongoing ESIA/ESMP preparations by GESS.
- Baseline data to be collected (environmental, social
- Stakeholder engagement to continue.
- Community input will be reflected in ESMP (noise, dust, foreign workers).
- Contractor is required to comply with all ESMP guidelines.
- Contact information shared with residents.

4. Community Engagement and Dialogue

Category	Question/Feedback	Response/Action
Other	What is your name?	I am [redacted] Environmental and Social Specialist, MOH.
	What is the project's completion date?	October 13, 2027 for completion; and up to April 13, 2029 for defects period.
	Is this project IDB funded? For how much?	Yes. USD95 million in total; USD 21 million for Moruca Hospital
	When will construction begin?	Works will begin soon, but first we have to complete our Environmental and Social Assessments and plans. A preliminary design is completed and aligns with MOH and community standards.

Category	Question/Feedback	Response/Action
	Will there be entry fees?	The Toshao confirmed that entry fees would remain in place.
	Will there be royalties/fees for materials?	The Village Council confirmed that systems in place and to will be publicized.
	Can the community request social contributions from the Contractor, for e.g., funding for improving local facilities?	This is entirely between the Contractor and the VC. The Contractor is not contractually obligated, but this is completely up to them.
Employment Transparency	Toshao emphasized 60-70% commitment made by President Irfaan Ali at the sod turning ceremony. He also emphasized importance of preserving cultural respect, and controlling disruptive behavior by outside workers.	Contractors committed to working with the Village Council closely relating to labour influx within the community, emphasizing that they are required to do so as outlined in their management plan for workers. Contractor also stated that where possible and if local workers meet requirements, they would be employed to provide services.
Local Employment	Usually, there are underpayment of locals to favor hiring of outsiders.	Contracts with workers will ensure fairness. The MOH will mediate. All employment are done under Guyanese Labour Laws. Village Council will be involved in raising awareness.
	How will salaries be paid?	The Contractor confirmed on a monthly basis.
	How do we apply for jobs?	The Toshao suggested that the Contractor should submit application forms of the types of positions and the requirements to the Council, and workers interested in applying can uplift a form from there. The Contractor committed to submitting the list of workers required and the requirements to the Village Council. The Contractor also informed the community that they could send an email for information.
	Can MOH assist with NIS and TIN?	Yes, the MOH will facilitate whatever we can.
Local Attitudes	Village Council acknowledged local attitude issues and pledged to improve discipline.	The MOH thanked the Village Council for their support.
Cultural Issues	How will language barriers be handled?	The Contractor has bi-lingual on site managers. Contractor introduced Mr. Rick as the site manager to the community. Language exchanged was encouraged.

Category	Question/Feedback	Response/Action
Worker Safety	Can safety culture be taught to local workers?	As mentioned by the Contractor in his presentation, all workers must undergo induction training and toolbox talks. This is a requirement of the Health and Safety Plan, so this will be monitored.

5. Closing Remarks

- A resident expressed appreciation and excitement.
- Meeting concluded at 11:17 AM.

Meeting Attendance Register

Subject: ESA/ESMP for Temporary Facilities-Moruca Hospital

Date: 10th July, 2025.

Location: Santa Rosa Secondary School

No.	Name in Full	Organization/Company	Contact Information
1	[redacted]	Ministry of Health	[redacted]
2	[redacted]		
3	[redacted]	C.B Associates.	
4	[redacted]		
5	[redacted]	GeoEnvironmental & Surveying Solutions	
6	[redacted]		
7	[redacted]	Resident	
8	[redacted]		
9	[redacted]	[redacted] – Kumaka District Hospital	
10	[redacted]	[redacted] – Kumaka District Hospital	
11	[redacted]	[redacted] – Kumaka District Hospital	
12	[redacted]	[redacted] Village Council	[redacted]
13	[redacted]	Resident	[redacted]
14	[redacted]	Mora	
15	[redacted]	4 Miles	
16	[redacted]	Kumaka	
17	[redacted]	Kumaka	
18	[redacted]	Karib	
19	[redacted]	M/S	
20	[redacted]	MOH	
21	[redacted]	MOH	
22	[redacted]	Police	
23	[redacted]	Police	
24	[redacted]	Senior Council	
25	[redacted]	Area Councillor	
26	[redacted]	MOH	
27	[redacted]	Resident	
28	[redacted]	Resident	
29	[redacted]	Resident	
30	[redacted]		[redacted]
31	[redacted]		
32	[redacted]		
33	[redacted]	Santa Rosa and Island	

Objectives of the GRM

- Provide accessible mechanisms for stakeholders to raise concerns
- Resolve grievances fairly, efficiently, and transparently.
- Prevent and address adverse impacts on communities
- Strengthen accountability in project implementation

Scope and Principles

Applies to all project activities and stakeholders at all sites: Lethem, Kato, Moruca, and Kamarang.

Anchored in principles of confidentiality, equity, and responsiveness.

Promotes rights to be heard without retaliation or prejudice.

Components of the Project

Component 1: Supporting Hospital Health Services Networks (USD 85 million)	• Construction of four hospitals: **Lethem**, **Kato**, **Moruca**, and **Kamarang**.
Component 2: Strengthening Digital Health (USD 7 million)	• Implementation of a **national Electronic Health Record (EHR)** system. • Strengthening digital health governance and long-term sustainability.
Component 3: Promoting Health Sector Management and Efficiency (USD 3 million)	• Focused on improving the **quality and efficiency** of the delivery of health services.

The GRM outlines a structured process to receive, evaluate and resolve complaints related to the HCNS Project, ensuring transparency, inclusiveness and responsiveness throughout implementation

What types of Grievances can be reported?

- Disruptions from construction and operations
- Environmental and social impacts
- Community health and safety issues
- Labour-related complaints
- Workers' behaviour and misconduct
- Accessibility of project benefits and services

GRM Structure and Responsibilities

- PIU's E&S Specialist:
  - ✓ Serves as the focal point to receive and record complaints
  - ✓ Supports resolution and oversight
  - ✓ Monitor, escalate and ensure compliance
- Ministry of Health:
  - ✓ Address any systemic issues

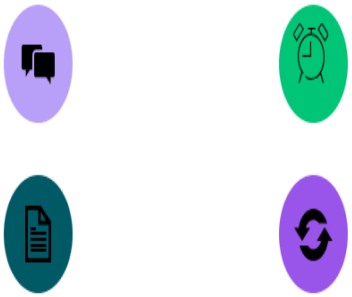
GRM Submission Channels

https://health.gov.gy/wp-content/uploads/2025/06/HCNS-PROJECT-GRIEVANCE-REPORT-FORM-test.pdf

Processing Timeline

01	02	03	04
Acknowledge complaint within 2 working days.	Resolve within 14 working days (simple cases).	Escalate unresolved issues to higher levels.	Notify the complainant of the outcome and rights to appeal.

Monitoring and Evaluation



Confidentiality and Non-Retaliation

GRM FOCAL POINT CONTACT

PARTY	REPRESENTATIVE	CONTACT		
		OFFICE	TELEPHONE	EMAIL
Project Execution Unit – Ministry of Health	Project Coordinator	Ministry of Health Lot 1 Brickdam, Stabroek, Georgetown	225-0007	projectcoordinator@gmail.com
	Environmental and Social Specialist		225-0010	ess.hsdu@gmail.com
Ministry of Health – National Hotline	Coordinator		227-4357	Not available
Supervisory Firm	Team Lead / FIDIC Engineer	Section "L" Lot A279 Sheriff and John Smith Sts., Georgetown, Guyana	706-1075	ofd@jfampc.com
Contractor	Contractor's Representative	4167 Block III Apt. 2 Gr.Floor Providence, East Bank Demerara, Georgetown	636-6948	katoprojectpowerchina@gmail.com
	Site Supervisor	Kato Hospital, Kato Village	624-5172	jenkim933@gmail.com
IDB	Operations	Lot 47 High Street, Georgetown, Guyana	225-7951 / 225-7950 / +1 (202) 826-3705	IDBGuyana@iadb.org / quejas@iadb.org
Village Council	Toshao	Kato Village, Kato	661-5859	katovillagecouncil@gmail.com

THANK YOU!

QUESTIONS? CONCERNS? COMMENTS?

NOTE: [PHOTOS OF THE CONSULTATIONS ARE REDACTED. FOR INTERNAL PURPOSES ONLY.]

OIL SPILL REPORT TEMPLATE

PROJECT: Moruca Regional Hospital

EMPLOYER: Ministry of Health

CONSULTANT: JV JFAMPC-CBA.

Oil Spill Report

Report ID:

Date:

Time:

Location:

Duration of the oil/fuel spill	
Identity and quantity of the oil/fuel	
Circumstances of the spill (How did the spill occur)	
Containment and clean-up methods	
Disposal method of oil spill	
Adverse effect observed.	
How did the emergency occur? (Include the use of equipment and personnel)	
What tasks were being performed?	
Were there adequate safe working procedures and was it followed?	
Was the risk known? If so, why wasn't it controlled? If not, why not?	
Were the people involved competent and suitable?	
Did the workplace layout influence the adverse event?	
What injuries or ill effects were caused?	

If there was an injury, how did it occur and what caused it?	
Was the safety equipment sufficient?	
Did other conditions influence the adverse event?	
What were the immediate, underlying and root causes?	

~~Signature of supervision firm~~

EMERGENCY REPORT TEMPLATE

PROJECT: Moruca Regional Hospital

EMPLOYER: Ministry of Health

CONSULTANT: JV JFAMPC-CBA.

Emergency Report

Report ID:

The purpose of this report is to record all emergencies. The term accident for this report be categorized as the need for first aid, medical aid, lost time, fatality, or oil spill. The term incident for this report will be categorized as near-miss, property damage with no injuries but required preventative actions.

Report completed by: Date of Report:

_____

Persons involved:

_____

Date of emergency: Time: Location:

Type of Emergency:

Medical Emergency Fire Emergency _ Severe weather conditions

Hazardous material leaks

Brief Description of emergency:

_____

_____

_____

_____

_____

Any unusual working conditions:

_____

_____

_____

_____

Overview of Emergency

How did the emergency occur? (Include the use of equipment and personnel)	
What tasks were being performed?	
Were there adequate safe working procedures and was it followed?	
Was the risk known? If so, why wasn't it controlled? If not, why not?	
Were the people involved competent and suitable?	
Did the workplace layout influence the adverse event?	
Did the workplace layout influence the adverse event?	
What injuries or ill effects were caused?	
If there was an injury, how did it occur and what caused it? How many hours/days of work lost	
Was the safety equipment sufficient?	
Did other conditions influence the adverse event?	
What were the immediate, underlying and root causes?	

Risk, Control Measures, Analysis of Emergency

What risk control measures are needed/recommended?	1. 2. 3. 4. 5.
Have similar emergency happened before?	

Which Risk control measures should be implemented in the long and short term?		
Control Measure	Completion Date	Person Responsible
1		
2		
3		
What are the findings from the analysis? (Demonstrate the 5 why's analysis)		

Members of the investigation team

Name	Position	Signature

ANNEX SIXTEEN – EPA PERMIT

Environmental Protection Agency

Ganges Street, Sophia,
Georgetown, GUYANA
Tel.: (592) 225-0506
Fax: (592) 225-5481
Email: epa@epaguyana.org
Website: http://www.epaguyana.org

Environmental Permit

Issued under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000

Reference No.:	**20250411-MHCMH**
Fee:	**Small (C2) - US$175 per year**
Fees Paid:	**US$875 for five (5) years – September 2025 to August 2030**

Addressee: **Ministry of Health**
Lot 1 Brickdam Street, Stabroek
Georgetown,
Guyana.

Activity: Construction and Operation of the Moruca Hospital

The Ministry of Health, herein referred to as the "Permit Holder", is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, Laws of Guyana, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to construct and operate the Moruca Hospital at Moruca, Region 1, hereinafter referred to as "the Project", in the manner indicated in the Application submitted on April, 11, 2025, subject to the terms and conditions set forth herein under the Environmental Protection Act, existing or forthcoming regulations made under the said Act and/or any other applicable Laws of Guyana, best practices, approvals, directives, guidelines and standards relevant to this project.

Terms and Conditions for construction and operation to be adhered to by the Permit Holder, his servants, agents, and sub-contractors:

1.0 GENERAL

1.1 The Permit Holder shall make an application to the Agency to vary this Environmental Permit in instances where it becomes necessary to:

a) change the construction, operation, structure, or layout of the facility and all associated buildings;
b) change equipment, machine, apparatus, mechanism, system, or technology serving the facility;

c) change the position and design of any outlet at the point or points of discharge of effluents;
d) or effect any other change outlined in 20(3) of the Environmental Protection (Authorisations) Regulations.

1.2 The Permit Holder shall adhere to the requirements of the **Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana**.

1.3 The Permit Holder shall employ or designate an employee to the role of an **Occupational Health and Safety (OHS)/Environmental Officer** to be responsible for the implementation and coordination of all safety requirements and terms and conditions stipulated in this Permit, as well as compliance monitoring with the preparation of all required reports.

1.4 The Permit Holder shall make all employees, and third parties under your direction, aware of the conditions of the Environmental Authorisation and provide training on good environmental practices.

1.5 Construction works shall not be executed between 18:00 hrs. to 06:00 hrs. on any day, close to communal areas, unless approval is sought from and granted by the EPA. This requirement does not apply to large concrete pours or asphalt laying and earth removal, where work in the early morning and late evening is required.

1.6 The Permit Holder shall ensure that servicing and maintenance of the batching plant, machines, generator(s), and other equipment shall be conducted in accordance with the manufacturer's specifications. Summarised maintenance records shall be maintained onsite and be made available for inspection by the Agency upon request.

1.7 The Permit Holder shall ensure that upon completion of works, all barriers, equipment/material staging areas, and all support infrastructure, facilities, and equipment are removed in accordance with documents and plans submitted to the Agency.

1.8 The Permit Holder shall install adequate traffic control devices, signage, guardrails, and warning tape at work sites. Additionally, ensure that a speed limit is enforced to control traffic speed at the project site.

1.9 The Permit Holder shall adhere to the requirements of **the Health Facilities Licensing Act, 2007, Laws of Guyana.**

1.10 The Permit Holder shall ensure that hazardous materials (pharmaceutical and laboratory chemicals) are stored in accordance with the manufacturer's directions or Safety Data Sheet (SDS) instructions.

1.11 The Permit Holder shall ensure that all employees involved in the management of hazardous materials (pharmaceutical and laboratory chemicals) are trained on

Hazardous Material Communication and Emergency Preparedness Response. An annual training schedule shall be submitted to the Agency as a component of the **Annual Report.**

1.12 The Permit Holder shall ensure that emergency spill cleanup kits are established and maintained at the Project for response to potential spills. Kits should contain absorbent materials, drain seals, and other appropriate tools for clean-up. Spills should be cleaned up by the Best Available Technology (BAT).

1.13 Guyana Fire Service Approval shall be obtained and maintained annually and shall be submitted as a component of the **Annual Report**.

1.14 The Permit Holder shall ensure that they maintain fire prevention and control equipment in accordance with the Guyana Fire Service Approval. This may include a smoke detection and alarm system, fire extinguishers, fire hydrants, or sprinkler systems as appropriate.

2.0 BIO-HAZARDOUS WASTE MANAGEMENT

2.1 The Permit Holder shall adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations, 2000.**

2.2 The Permit Holder shall ensure that all waste generated by the project is identified and segregated at the point of generation. Bio-hazardous wastes should be segregated according to their category.

2.2.1 All waste mixed with any medical waste shall be treated as bio-hazardous waste.

2.3 The Permit Holder shall ensure that the **bio-hazardous waste storage area** is maintained in accordance with the following conditions:

2.3.1 Be bunded to provide 100% containment of the waste stored;

2.3.2 Be secure and access restricted to authorised personnel only;

2.3.3 Have visible warning signs and biohazard symbols on the walls;

2.3.4 Be constructed with a hard, impermeable floor with drainage; the floor shall be designed to withstand cleaning/disinfection, without cracking, breaking, or damage that would prevent effective disinfection;

2.3.5 Allow easy access to waste collection vehicles; and

2.3.6 Be protected from contamination and contact with stormwater, rain, wind, and animals - measures should be taken to ensure the area does not become a breeding ground for vermin.

2.4 The Permit Holder shall ensure that bio-hazardous waste is properly labelled and colour-coded. Labelling shall include words such as "Infectious Substances", "Bio Hazardous Waste", and "Bio Hazard".

2.5 The Permit Holder shall ensure that bio-hazardous waste containers are labelled with the following information:

i. Name (location);
ii. Date;
iii. Type of Waste;
iv. List of Content; and
v. Quantity.

2.6 The Permit Holder shall ensure that bio-hazardous waste referred to in **regulation 19 (4)** of the **Health Facilities Act, 2007,** is kept separately from other wastes and shall be:

2.6.1 Stored in double impervious plastic bags at least **2 mm** in thickness, securely fastened and conspicuously marked **"infectious waste";** when full, the bags should **not exceed 25 pounds** in weight;

2.6.2 Transported in receptacles that are conspicuously marked "**infectious waste**";

2.6.3 Held for pick-up in specially marked non-metal containers separated from regular waste;

2.7 The Permit Holder shall ensure that bio-hazardous wastes consisting of human cultures and biomedical waste containing infectious agents and cultures are treated and disposed of via incineration at a minimum furnace temperature of 850°C.

2.8 The disposal of sharps shall **NOT** incorporate cutting, breaking, bending, or any other manipulation.

2.9 The Permit Holder shall ensure that used sharps are placed in containers that meet the following requirements:

i. Rigid;
ii. Puncture resistant;
iii. Impervious to moisture, leak, and shatterproof;
iv. Display the universal bio-hazard symbols and a clear label of its contents; and
v. Can be sealed, preferably with a self-closing lid and/or a lid that prevents persons from removing sharps from the container.

2.10 The Permit Holder shall ensure that storage of bio-hazardous waste does **not exceed seventy-two (72) hours (3 days)**. The 3-day period commences when the first item is placed into the designated storage container.

2.11 The Permit Holder shall ensure that bio-hazardous waste is collected, transported, treated, and disposed of by an EPA-authorized waste disposal facility.

2.11.1 All bio-hazardous waste treatment and disposal shall be documented on a **Waste Manifest Form,** which must be submitted to the EPA as a component of the **Annual Report.**

2.12 The Permit Holder shall ensure that **broken or leaking bags** of infectious waste are **not to be transported** from the hospital unless it is re- re-bagged in accordance **with conditions 2.6 and 2.9.**

2.13 The Permit Holder shall ensure that where waste may constitute a hazard to any person or thing is compacted and the integrity of the container is compromised, the container shall be handled as infectious waste as outlined in the **Health Facilities Act, 2007.**

2.14 The Permit Holder shall ensure that the use of mercury-based medical devices (e.g., thermometers and blood pressure devices) is avoided and replaced with digital alternatives. Where mercury waste is generated, the waste shall be segregated for disposal at a facility authorised by the EPA.

3.0 RADIOACTIVE MATERIAL MANAGEMENT

3.1 The Permit Holder shall ensure that the following information for all radiation-emitting devices is submitted to the Agency before operation of the facility:

i. A list of the radiation-emitting devices and the serial numbers for the devices;
ii. Description of the location of all radiation-emitting devices;
iii. A Radiation Safety Manual Plan;
iv. The shielding calculations for the room(s) used to store radiation-emitting devices; and
v. Qualifications/ competency for staff operating radiation-emitting devices.

3.2 The Permit Holder shall ensure that the premises of the hospital that houses the x-ray department or unit conform to the following structural requirements for protection from radiation as outlined in the **Health Facilities Act, 2007**:

3.2.1 Radiation protection for the walls of the facility shall be a lead equivalent of 2 millimetres.

3.2.2 Where there is a room above the facility, radiation protection in the ceiling of the facility shall be a lead equivalent of 2 millimetres.

3.2.3 Where there is a room below the facility, radiation protection on the floor of the facility shall be a lead equivalent of 2 millimetres.

3.2.4 For the purposes of condition 3.2.3, a lead equivalent of 42 millimetres means:

i. A single brick wall at least nine inches thick;
ii. A six-inch thickness of solid concrete; or
iii. Two millimetres of lead sheeting.

3.3 The Permit Holder shall ensure that the waiting areas and changing rooms are situated that they prevent radiation exposure. **Zero-radiation** protection for patients shall consist of gonad shields or lead rubber aprons, where necessary to support a patient during an examination.

4.0 FUEL HANDLING AND STORAGE

4.1 The Permit Holder shall adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations, 2000**.

4.2 The Permit Holder shall adopt and comply with the National SOP "Guidance for the Design, Construction, Modification, and Maintenance of Petrol Filling Stations" and any forthcoming code of practice/guidelines pertaining to the **operation of fuel storage.**

4.3 The Permit Holder shall ensure that a register of the quantities of fuel and associated hazardous materials stored onsite is established and maintained. Registered information shall be maintained on-site and made available to the EPA upon request.

4.4 The Permit Holder shall ensure that fuel at all times be stored above ground and away from ignition sources. **'No Smoking'** signs shall be posted where fuel is handled or stored.

4.5 The Permit Holder shall ensure that all secondary containment remains sealed and all piping entering or exiting the containment is over the wall. Secondary containment shall provide total containment, and no part of the tank infrastructure (e.g., dispenser, filling hoses, and valves) shall protrude outside the containment.

4.6 The Permit Holder shall ensure that secondary containment around the fuel tanks is inspected for cracks and deterioration to ensure they are liquid-tight to withstand the hydrostatic pressure of any contained liquid when full. An inspection report shall be maintained on-site and made available to the EPA upon request.

4.7 The Permit Holder shall ensure that direct discharge from the secondary containment of the fuel tank into the environment is **STRICTLY PROHIBITED**.

4.8 The Permit Holder shall ensure that in the event of a spill, contaminated wastewater from the secondary containment is pumped to a collection vessel and collected and treated by an EPA Authorised Hazardous Waste Disposal Facility.

4.9 The Permit Holder shall ensure that all collection, treatment, and disposal of wastewater from the secondary containment be documented on a Waste Manifest Form and made available to the EPA upon request.

4.10 The Permit Holder shall ensure that fuel storage tanks are visually inspected to verify their integrity. Inspection reports shall be maintained on-site and made available to the EPA upon request.

4.11 The Permit Holder shall ensure that protection measures for fuel storage tanks, such as painting and coating, are maintained to minimise corrosion of fuel tanks.

4.12 The Permit Holder shall ensure that maintenance and/or repair of fittings, pipes, and hoses are in accordance with the manufacturer's specifications. A summarised inspection report shall be kept and submitted to the EPA upon request.

4.13 The Permit Holder shall ensure that the overfill protection is installed and maintained on all fuel tanks. This may include an automatic shut-off device or an audible or visible overfill alarm.

5.0 AIR QUALITY MANAGEMENT AND NOISE ABATEMENT

5.1 The Permit Holder shall adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000**, and the **Environmental Protection (Noise Management) Regulations 2000**.

5.2 The Permit Holder shall ensure that noise emissions are monitored at the Project's boundary to determine compliance with **Guyana National Bureau of Standards (GNBS) Guidelines for Noise Emissions** into the Environment, not exceeding the limits listed below:

During Construction
Construction Limits: 80 dB during the daytime (06:00 h - 18:00 h)
65 dB during the night-time (18:00 h - 06:00 h)
During Operation
Commercial Limits: 80 dB during the daytime (06:00 h - 18:00 h)
65 B during the night-time (18:00 h - 06:00 h)

5.3 Noise Quality Monitoring of the parameters above shall be conducted at the approved sampling point/s and the results analysed at a GNBS-certified laboratory or by trained

personnel using calibrated equipment. Analyses shall be submitted to the Agency as part of the Annual Report.

5.4 The Permit Holder shall carry out all construction and operation activities in a manner to avoid, minimise, and control potential noise disturbance to the surrounding environment.

5.5 The Permit Holder shall ensure that all machines/equipment are serviced in accordance with the manufacturer's specifications to ensure efficiency and reduce the level of noise produced. A summarised maintenance report shall be maintained on-site and made available to the EPA upon request.

5.6 The Permit Holder shall ensure that all equipment and machinery are placed upon foundations properly designed to ensure effective damping of vibrations.

5.7 The Permit Holder shall ensure that all significant noise-producing equipment, such as generators, is equipped with appropriate silencers or mufflers and/or is enclosed in suitable acoustic enclosures where necessary, to reduce noise levels impacting the surrounding environment to achieve compliance with Guyana National Bureau of Standards (GNBS) requirements.

5.8 The Permit Holder shall locate generators away from communal areas to minimise noise, fumes/soot impacts on the contiguous areas/residents. Ensure that the exhaust stacks of generators are at a sufficient distance from communal areas to minimise adverse fumes/soot impacts on the contiguous areas.

5.9 The Permit Holder shall ensure that exhaust stacks of generators are at least 2 metres above the tallest nearby building.

5.10 The Permit Holder shall monitor ambient air quality at the boundary of the property to assess compliance with the requisite standards below:

No.	Air Pollutant	Averaging Time	Maximum Permissible Level	Type of Monitoring
1.	Carbon Monoxide	1 h	35ppm	Ambient
2.	Nitrogen Dioxide	1 h	200µg/m^3	Ambient
3.	Sulphur Dioxide	24 h	20 µg/m^3	Ambient

5.11 The Permit Holder shall monitor air quality during construction in accordance with the Environmental Permit to determine compliance with the **World Health Organisation (WHO)** Air Quality Guidelines for Particulate Matter in the

Environment, not exceeding the limits below:

$PM_{2.5}$: 25 µg/m3 24-hour mean
PM_{10}: 50 µg/m3 24-hour mean

5.12 The Permit Holder shall employ dust suppression methods, such as watering or erecting dust screens/fences, to control dust emissions from material stockpiles and other dust-generating components of the project.

5.13 The Permit Holder shall place stockpiles downwind to avoid materials being transported by wind to sensitive receptors (e.g., residences, schools, etc.). Confine loading and offloading activities, as far as possible, to this location.

5.14 The Permit Holder shall minimize the potential for particles to become airborne by keeping drop heights at a minimum when loading and/or offloading materials such as sand, aggregates, etc.

5.15 The Permit Holder shall keep engine idling during on-loading and off-loading activities to a minimum during construction.

5.16 The Permit Holder shall record, investigate, and address complaints of excessive noise, dust, and vibrations from the public promptly upon receipt. Maintain a record of all complaints received and the action taken.

6.0 WATER QUALITY

6.1 The Permit Holder shall adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000.**

6.2 The Permit Holder shall maintain the integrity of the existing waterways adjacent to and within the project site at all times. Any discharges into the environment must be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following are the allowable limits for this type of project and should not be exceeded:

- pH 5.0-9.0;
- Temperature < 40 °C;
- Biological Oxygen Demand (BOD) < 50 mg/L;
- Chemical Oxygen Demand (COD) < 250 mg/L;
- Total Suspended Solid (TSS) < 50 mg/L;
- Oil and Grease < 10 mg/L

6.3 The Permit Holder shall monitor the parameters specified above, in **Condition 6.2**, **annually;** sample points should include the final discharge point(s) from the project site, as well as an upstream and downstream sample from the receiving body of water.

The results should be compiled and incorporated into the project's Annual Report submission. ***The Agency reserves the right to request an independent analysis from an EPA-approved certified laboratory.***

6.4 The Permit Holder shall take all practicable precautions to prevent erosion, siltation, and sedimentation of existing water bodies/drains within the vicinity of the project site during the construction and operation phases.

6.5 The Permit Holder shall avoid soil and water contamination from fuel, grease, waste oils, and other petroleum products that might be used at the project site during construction. Ensure that all oils, fuel, paints, and chemicals are stored in a designated area, at least 10 meters away from waterways.

6.6 The Permit Holder shall conduct refueling, oil changes, and maintenance of vehicles, machinery, and other equipment on an impervious base. Spills should be cleaned up immediately, utilising the best practicable means.

6.7 The Permit Holder shall adequately store and/or cover temporary stockpiles of construction materials and excavated waste in a secured designated area to prevent release into the surrounding environment, especially in rainy conditions. As stated above, the designated area should not be placed within 10 meters of any water body.

6.8 The Permit Holder shall construct and maintain drainage systems capable of handling the probable maximum precipitation storm event.

6.9 The Permit Holder shall ensure that the disposal of excavated materials into surrounding drains is strictly prohibited.

6.10 The Permit Holder shall ensure that there will be no discharging or dumping of solid waste and/or trade effluent directly into receiving waters without prior treatment. Install and maintain a grease trap/ an oil-water separator(s) at the final discharge point of the onsite sewage facility through which all effluent must pass before final discharge.

6.11 The Permit Holder shall direct discharge of untreated effluent, including biohazardous waste such as bodily fluids, into the environment is **STRICTLY PROHIBITED**.

6.12 The Permit Holder shall treat all wastewater with a 10% bleach solution prior to discharge into the sewerage system. Discharge of wastewater into surface drainage is prohibited.

6.13 The Permit Holder shall ensure that disposal of medical wastes that consist of human cultures that may contain infectious agents into the surrounding drainage system is **STRICTLY PROHIBITED.**

6.14 The Permit Holder shall ensure that only non-radioactive decontaminated/non-infectious liquids that have been treated shall be disposed of into the Sewerage System.

7.0 WASTE MANAGEMENT

7.1 The Permit Holder shall adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013**, and promote good sanitation and solid waste disposal practices on site. Covered garbage receptacles shall be placed on an impervious base at strategic locations, both within and outside the facility.

7.2 The Permit Holder shall ensure that dumping of waste into the surrounding environment is **STRICTLY PROHIBITED.** Waste, inclusive of waste oil and/or fuel, shall not be stored within 10 meters of any waterways.

7.3 The Permit Holder shall ensure that Non-hazardous solid waste is not burnt at the Project. All solid waste shall be disposed of at a sanitary landfill by an EPA Authorised Waste Disposal Company.

7.4 The Permit Holder shall maintain good housekeeping, sanitary, and hygienic practices shall be maintained at all times. The facility's drains and surroundings shall be kept free of vegetation and litter.

7.4.1 Solid waste receptacles shall be secured when not in use.

7.4.2 Waste collection areas shall be kept clean. Dry methods shall be used when cleaning around waste handling and disposal areas (e.g., sweeping, use of absorbents).

7.5 The Permit Holder shall construct and maintain a septic system on site; the septic tank shall not be located within 1.5 m of a building or property boundary and should be accessible for cleaning and de-sludging. Any modification to the septic tank shall be in accordance with the **Guyana National Bureau of Standards (GNBS)** Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems.

7.6 The Permit Holder shall adhere to the requirements of the **Food and Drug Act Cap. 34.03. Laws of Guyana.**

7.6.1 Pharmaceuticals stored by the project should be in accordance with the **Food and Drug Act Cap. 34.03** and associated regulations.

7.6.2 Expired Pharmaceuticals shall be disposed of in accordance with the regulations of the Government Analyst Food and Drug Department (GA-FDD) requirements.

7.6.3 Each disposal of expired and recalled drugs shall be recorded on a Waste Manifest Form and shall be submitted as a component of the **Annual Report.**

8.0 SPILLS AND EMERGENCY MANAGEMENT

8.1 The Permit Holder shall notify the Agency **immediately** in instances where section 19(1) of the Environmental Protection Act Cap 20:05 is contravened, and **within one (1) hour** of the discovery of any emergency, which emergency shall include but not be limited to:

a. the accidental or unintended discharge of contaminants;
b. sudden onset disaster;
c. an accident; or
d. any other occurrence, whether induced by natural, technological, or human factors, which causes or threatens to cause severe environmental damage and harm to human health and livelihood.

8.2 The Permit Holder shall ensure that all near misses, spills, and unwanted/accidental discharges, amounting to less than five (5) imperial gallons, must be recorded and reported to the Agency.

8.3 The Permit Holder shall ensure that discharges of contaminants amounting to **five (5) imperial gallons or more** must be reported to the Agency by submitting an "Incident Notification Form for Spills in Onshore Operations" using the most recent template provided by the Agency, within forty-eight (48) hours of the incident. A follow-up incident notification form shall be submitted **within seventy-two (72) hours** of the submission of the initial notification form (a total of five days after the discharge of the contaminants).

8.4 The Permit Holder shall establish procedures for analysing accidents and failures to determine the causes of the failure and minimize the possibility of a recurrence. This information shall be made available to the Agency upon request.

8.5 The Permit Holder shall ensure an electronic shutdown system is maintained as a primary emergency response mechanism, along with one or more suitable leak detection mechanisms.

8.6 The Permit Holder shall provide a fully equipped first aid kit at all primary work sites and ensure that functional communication and transportation systems are in place to respond to emergencies.

8.7 The Permit Holder shall maintain an Emergency Response Plan (ERP) for the entire facility, inclusive of the pipeline system. The ERP shall contain, but may not be restricted to, the following:

b. Spill detection and mitigation procedures;
c. Escape, evacuation, and rescue plan and assessment;
d. A list of responsible parties and duties;
e. A list of regulatory agencies to be notified;
f. Names and addresses of response organizations;
g. Training procedures;
h. A list of equipment to be utilized;
i. Testing procedures to ensure that the equipment to be used remains in working condition; and
j. Clean up and hazardous waste disposal procedures.

8.8 The Permit Holder shall annually simulate the entire ERP with relevant stakeholders as directed and/or approved by the Agency. The Agency reserves the right to attend any exercise organised in accordance with this Condition.

8.9 The Permit Holder shall produce appropriate documentation to the EPA, evidencing the conduct of the exercises required by **Condition 8.8**. The documentation must be submitted no later than thirty (30) calendar days following the emergency response exercise and shall include information detailing the:

I. Type of exercises;
II. Date and time of the exercises;
III. Description of the exercises;
IV. Objectives met; and
V. Lessons learned.

9.0 COMPLIANCE MONITORING AND REPORTING

9.1 The Permit Holder shall monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees and all third parties under your direction.

9.2 The Permit Holder shall notify the Agency in writing of any change of name or ownership of the Permit Holder's facility within **thirty (30) days** after the change occurs.

9.3 The Permit Holder shall notify the Agency **within twenty-one (21) days** in the event of death, bankruptcy, liquidation, or receivership of the Permit Holder or if the Company becomes a party to an amalgamation.

9.4 The Permit Holder shall maintain and submit to the Agency, as a component of the Annual Report, records of the type, composition, and quantity of contaminants released (i.e., any solid, liquid, gas, odour, sound, vibration, radiation, heat, or combination of any of them).

9.5 The Permit Holder shall submit an **Annual Report** to the EPA on their compliance

with this Permit on or before **March 31, each year.**

9.6 The Permit Holder shall report to the Agency any non-compliance(s) with the Environmental Permit:

i. Within **twenty-four (24) hours** of the time the Holder of the Environmental Permit becomes aware of the non-compliance, outlining the anticipated manner in which human health or the environment may be impacted.

ii. Within **seventy-two (72) hours** of the time the Holder of the Environmental Permit becomes aware of the non-compliance, submit to the Agency a written report containing a description of the non-compliance, its cause, the period of non-compliance, including exact dates and time and the anticipated time it is expected to continue if the non-compliance(s) has not been corrected.

9.7 Any Approval granted in accordance with this Permit shall be subject to such terms and conditions as may be required by the Agency, and shall be considered as forming part of the present Permit so that any breach or contravention thereof shall be considered a breach or contravention of the Permit.

9.8 The Permit Holder shall comply with any lawful directions given by the EPA from time to time in furtherance of the implementation of any international or other obligation for the environmental protection of Guyana.

9.9 It is the responsibility of the Permit Holder to ensure the permitted activity and premises are secured and that all practicable steps necessary to prevent fires, explosions, leaks, or suspected leaks and spills at the permitted premises are taken.

10.0 INSTITUTIONAL AUTHORITY/ LIABILITIES

10.1 The terms and conditions of this Permit are binding upon the Permit Holder, and the Permit Holder is responsible for any violations hereunder. The Permit Holder agrees that it can pay compensation for any loss or damage which may arise from the Project or breach of any term or condition of this Permit.

10.2 The Permit Holder shall be liable for any material environmental harm caused by polluting the environment, pursuant to s. 39 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.3 The Permit Holder shall be liable for any serious environmental harm caused by polluting the environment, pursuant to s. 39 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.4 The Permit Holder shall be strictly liable for any loss or damage to the environment caused by any act or omission done intentionally or recklessly.

10.5 The Permit Holder shall be liable for any activity that causes or is likely to cause pollution of the environment unless all reasonable and practicable measures are taken to prevent or minimize any resulting adverse effect, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.6 The Permit Holder shall be liable for discharging, causing or permitting the entry into the environment, of any contaminant in any amount, concentration or level in excess of that prescribed by the regulations or stipulated by this Environmental Permit, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.7 The Permit Holder shall be liable to compensate any person who suffers any loss or damage as a result of contravening conditions 9.3 and 9.4 of this Environmental Permit, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.8 The Permit Holder shall not be indemnified by the Agency for any activity that causes or is likely to cause pollution to the environment, resulting from adverse effects through the discharge, any contaminant in any amount, concentration, ultra-hazardous substances, chemicals, or otherwise, and shall be rendered liable to prosecution and to penalties prescribed under the Environmental Protection Act and Regulations.

10.9 The Permit Holder, his Servants and/or Agents shall be jointly and severally liable for any negligence, gross negligence or wilful misconduct which causes harm to the environment, biodiversity, protected species and natural habitat.

10.10 Should the Permit Holder contravene or be likely to contravene any condition of this Permit, the Agency (EPA) may serve on him an Enforcement Notice in accordance with Section 26 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.11 Where it appears to the Agency that the Permit Holder is engaged in any activity that may pose a serious threat to natural resources or the environment, or a risk of serious pollution of the environment or any damage to public health, the EPA may issue to the Permit Holder a Prohibition Notice, which may order him to immediately cease the offending activity, in accordance with Section 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

10.12 The EPA reserves the right to conduct regular inspections of the Permit Holder's construction activities as part of its monitoring and enforcement requirements under the Environmental Protection Act, Cap 20:05, and the Environmental Protection (Amendment) Act, 2005, and Environmental Protection (Authorisations) Regulations, 2000.

10.13 The Permit Holder, His Servants and/or Agents shall at all times allow entry to the permitted facility to any Officer designated by the EPA for the purposes of conducting inspections or any other legitimate business of the Agency. Pursuant to Section 38 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, it is an offence to assault, obstruct, or hinder an authorised person in the execution of his/her duty under the said Act or its Regulations, and the Permit Holder shall be liable to penalties prescribed under paragraph (c) of the Fifth Schedule for doing so.

10.14 The EPA has the right to modify, cancel, or suspend this Permit for breach of any of the terms and conditions contained herein.

10.15 **This Environmental Permit is not the final consent; all relevant Permissions should be obtained from other regulatory bodies for continued operation.**

10.16 This Environmental Permit is effective for the period stipulated herein: **September 2025 to August 2030.**

10.17 This Environmental Permit shall remain valid until **August 31, 2030**, unless otherwise suspended, cancelled, modified, or varied, in accordance with the provisions of this Permit or the Environmental Protection Act, Cap. 20:05, Laws of Guyana, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

10.18 This Permit must be renewed by submitting a completed *Application Form for Renewal of Environmental Authorization* to the Agency at least six months before this Permit expires, that is, no later than **February 28, 2030.**

10.19 Any late submission of renewal application after the specified date as stated above, may require the Permit Holder to pay, in addition to the renewal fee, a late penalty fee (accruing at the time such obligation was first owed for renewal) at a rate of **two thousand dollars (GY$2000.00) per day for every business day late, until such renewal application is submitted to the Agency**, without prejudice to any other rights of the Permit Holder in connection therewith.

10.20 Failure to comply with the requirements of this Permit or with applicable laws and regulations, whether existing or forthcoming, shall render the Permit Holder liable to prosecution and to penalties, inclusive of civil penalties, injunctive relief, and imprisonment, as prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection Regulations, and other applicable Laws of Guyana.

Signed by _____ on behalf of the Environmental Protection Agency.

Environmental Protection Agency
Kemraj Parsram
Executive Director
Executive Director

Date 2025.9.11

I hereby accept the above terms and conditions upon which this Environmental Permit is granted and agree to abide by the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, and any existing or forthcoming regulations, guidelines, approvals, directives, best practices, and standards made under this Act.

NAME:	SU MING
DATE:	2025-9-12
SIGNATURE:	
DESIGNATION:	PROJECT COORDINATOR

APPENDIX SEVENTEEN – SOCIO-CULTURAL ASSESSMENT & IDIGENOUS PEOPLES PLAN FOR THE CONSTRUCTION

PCI-SINOPHARMINTL CONSORTIUM

SOCIO-CULTURAL ANALYSIS
&
INDIGENOUS PEOPLES PLAN

FOR THE CONSTRUCTION OF MORUCA REGIONAL HOSPITAL

HEALTH CARE NETWORK STRENGTHENING (HCNS) PROJECT

SEPTEMBER 2025

Prepared by Ms. Vanessa Williams for PCI-SINOPHARMINTL

1.0. Introduction

The Government of Guyana (GoG) has embarked on a major upgrade of the national health sector aimed at advancing health outcomes, improving equity, and strengthening resilience. The overarching goals of this upgrade are to:

- Increase life expectancy at birth to greater than 75 years by 2030.
- Reduce Disability Adjusted Life Years (DALYs).
- Lower maternal and infant mortality rates.
- Reduce disabilities and premature deaths caused by Non-Communicable Diseases (NCDs).
- Strengthen pandemic preparedness and response capacity.

The COVID-19 pandemic underscored the need for resilient health systems with strong pandemic preparedness. In recognition, the GoG is ensuring that investments in health also include measures to address emerging and future health emergencies.

A priority objective of this national health investment is to reduce inequities in health service delivery, particularly between coastal and hinterland regions. Existing disparities disproportionately affect vulnerable groups such as Indigenous peoples, women, and children, limiting equitable access to quality care.

In partnership with the Inter-American Development Bank (IDB), the GoG has identified three priority areas for expansion and upgrading of the health sector:

Physical and Technological Improvement of Hospitals – Infrastructure development will receive the largest share of project funding, with priority hospitals identified both on the coast and in hinterland regions. This will focus on the construction of four Hinterland hospitals: Moruca, in Region 1; Kamarang, in Region 7; Kato, in Region 8, and Lethem, in Region 9. This SCA is site-specific to Moruca in Region 1.

Digital Health for All – The introduction and rollout of a national Electronic Health Record (EHR), scaling of telemedicine services will link hinterland hospitals with the Georgetown Public Hospital Corporation (GPHC), regional facilities, and international partners. This will expand the range and quality of services available nationwide.

Improved Service Delivery and Supply Chain Strengthening – Enhancements will focus on logistics, distribution of medical supplies, and the rollout of the national package of health services, recently revitalized with the support of PAHO/WHO.

Through these investments, Guyana's health sector will become more equitable, efficient, and future-ready, ensuring that all citizens—regardless of geography or background—can access timely, high-quality health care.

1.1. Purpose of the SCA

The purpose of this Socio-Cultural Assessment (SCA) is to systematically identify, analyze, manage, and monitor potential cultural and social impacts that may arise from the implementation of the project. The assessment focuses on project-affected persons, defined as individuals or groups most likely to directly experience the impacts of the project, whether positive or negative. In doing so, the SCA establishes a structured framework for stakeholder engagement throughout the project lifecycle, ensuring that consultations are inclusive, culturally appropriate, and responsive to the needs of affected individuals, groups, and communities. The framework also provides mechanisms for grievance redress, enabling concerns to be addressed in a timely and transparent manner. Furthermore, the SCA outlines measures for managing and monitoring relations with project workers and key stakeholders, with particular attention to special interest groups such as women, children, youth, the elderly, Indigenous peoples, and other minority populations.

This SCA also includes an Indigenous Peoples Plan (IPP) that supports the overall ESA/ESMP prepared for the construction of the Moruca Hospital.

1.2. Objectives of the SCA

- Understand cultural practices and beliefs of Indigenous people and communities surrounding the hospital development
- Evaluate gender and social inclusion parameters within the project area
- Identify potential social risks and design mitigation measures
- Establish the social and economic baseline within the project area
- To identify and profile project-affected persons (PAPS), including vulnerable groups within the project area.
- To establish a structured framework for meaningful engagement and consultation with project-affected persons throughout the project lifecycle.
- To provide a policy framework for grievance redress, as well as for the monitoring and reporting of the project's social and cultural impacts.

1.3. Project Description

The Project Comprises three components, these components aim to fulfil the Government of Guyana' s goal to enhance the quality of healthcare across the various local geographic areas, these components include:

Component 1 of the project focuses on supporting hospital health services networks and includes:

a) Infrastructure rehabilitation and expansion at four district hospitals located in the hinterland (Moruca, Kamarang, Kato, and Lethem), considering energy and water efficiency and climate change risk reduction features, accessibility provisions for disabled persons, as well as cultural and linguistic needs of patients;
b) demand and supply assessments as well as health care network analysis, particularly in the hinterland;

c) services for architectural and engineering design and construction supervision; and equipment inventory, corrective and preventive maintenance of infrastructure works and medical equipment and improvement of installed maintenance capacity (including training and manuals revision/development).

Component 2: focuses on the design and rollout of a national Electronic Health Record (EHR).

Component 3. Promoting health sector management and efficiency. The National Strategic Plan for Health targets several key parts of the health system that promote improved quality and efficiency in the delivery of health services, and this component will support the following areas and specific activities:

i. human resource quality and availability (allied health professional assessment, including current supply, gaps, and projected demand; stock-taking of existing training capacity;
ii. curricula review and improvement, including socio-cultural dimensions in health; proposal for addressing sector's Human Resources needs, considering training center that could be financed in second operation);
iii. supply chain management (expansion of warehouse capacity; software and hardware for electronic supply chain management system; training of staff in supply chain management);
iv. pandemic and emergency preparedness (analysis of COVID-19 response, Emergency Operations Center plan, simulation exercises, laboratory equipment and diagnostic tests procurement, and biosafety/biosecurity assessments); and
v. essential services package for maternal and child health (laboratory and medical equipment, maternal waiting homes, community health committees set-up and training).

In addition to the three project components described above, the project will also support project administration and program monitoring and evaluation. These resources will support the MoH in program management and assessment of its effects. It will finance specialized consulting services for project implementation, costs associated with the Project Executing Unit (PEU), and evaluation of project implementation and impact.

1.4. Project Location

The proposed hospital construction project is located at "Three Miles" along the Kumaka–Cabana Road, Kumaka, in the Sub-District of Moruca, the administrative sub-center of Region #1 [Barima-Waini], which is located at UTM: Zone 21N, Latitude: 7.6499972° N, Longitude: -58.9499972° W.

Situated in the northwest of Guyana, the region borders the Atlantic Ocean to the north, the region of Pomeroon–Supenaam to the east, the region of Cuyuni–Mazaruni to the south, and Venezuela to the west.

The site is centrally located among several outlying villages including Santa Rosa, Kumaka, Kwebanna, Waramuri,and Kamwatta, whose inhabitants are predominantly indigenous Amerindians. The site is located approximately 2–3 km from the main administrative center of Santa Rosa.

The land profile (Moruca) is on an elevated mound with an undulating landscape; the site sits at a

general elevation of approximately 40–80 meters. [3]

Figure 1: Project Location

2.0. Legislative and Legal Framework

The legislative framework that informs the socio-cultural and economic baseline of this SCA comprises a combination of national laws, regulations, and international policies. Together, these instruments provide the foundation for conducting socio-cultural assessments within the broader context of local development. They address a wide range of thematic areas, including Indigenous peoples' rights, gender equality, cultural heritage, environmental protection, labour standards, occupational health and safety, and community engagement. Each of these legislations and policies are briefly presented in the tables below, to ensure that the project aligns with both domestic requirements and international best practices.

Table 1 highlights the local legal frameworks that governs this SCA and IPP.

[3] Baseline Assessment Report, Healthcare Network Strengthening Project, 2023

Table 1: Local Legal Frameworks

Legislation	Description
Constitution of the Cooperative Republic of Guyana (1980)	The Constitution is the supreme law of Guyana. It outlines the branches and powers of Government, establishes qualifications and times for elections, lists basic human rights and sets up independent institutions to protect these rights. All laws made by Parliament must be in keeping with the provisions of the Constitution. This means that any law that is in conflict with the Constitution is unconstitutional, in other words, it is not valid.
Amerindian Act (2006)	An Act to provide for the recognition and protection of the collective rights of Amerindian Villages and Communities; the granting of land to Amerindian Villages and Communities and the promotion of Good Governance within Amerindian Villages and Communities.
Local Government Act (1998)	An act to make provision for local government in village districts, country districts and rural districts and for matters related there to.
Prevention Of Discrimination Act (1997)	The Prevention of discrimination Act of 1997, is an Act to provide for the elimination or discrimination in employment, training, recruitment and membership or professional bodies and the promotion of equal remuneration to men and women in employment who perform work of equal value, and for matters connected therewith.[4] In particular, the Act protects against discrimination on the basis of "race, sex, religion, colour, ethnic origin, indigenous population, national extraction, social origin, economic status, political opinion, disability, family responsibilities, pregnancy, marital status or age". Significantly, section 8 of the Act expressively protects against sexual harassment by providing that sexual harassment constitutes a prohibited form of discrimination on the basis of sex.[5]
Protection Of Children Act (2009)	The Protection of Children Act In addition, the Protection of Children Act, enacted in 2009, was passed to provide comprehensive legislation on the

[4] https://webapps.ilo.org/dyn/travail/docs/588/Prevention%20of%20Discrimination%20Act%201997.pdf

[5] https://pancap.org/pancap-documents/guyana-gender-based-violence-policy-brief/

Legislation	Description
	protection of children in Guyana. The Act seeks to ensure children are protected from threatening situations. Particularly, the Act prohibits the commercial sexual exploitation of children through the production, distribution, importation, exportation or possession of child pornography as well as the use of children for child pornography. The Act also imposes mandatory reporting obligations in cases of child abuse.[6]
Labour Act (1942)	An act to provide for the establishment of a Department of Labor, for the regulation of the relationship between employers and employees and the settlement of differences between them. The Act sets out the duties, rights, and obligations of employees. The Act serves to guide how employers should treat with treat employees including the payment and deduction of wages, and hours of work of employees.
Persons With Disabilities Act (2010)	Sub-part three, Sections (20), (21), and (22) set out the responsibilities of the Minister with responsibility for health to collaborate with the National Commission on Disability to ensure that health services are provided for people with disabilities. [7]
National Trust Act (1972)	An Act to make provision for the preservation of monuments, sites, places and objects of historic interest or national importance
Domestic Violence Act (1996)	This Act affords protection to both men and women in cases involving domestic violence by the granting of a protection order and provides the police with powers of arrest where a domestic violence offense occurs and for matters connected therewith or incidental there to.[8] Under the Act, victims, police officers and social workers, among others, are empowered to seek protection, occupation, tenancy and/or maintenance orders against abusers on behalf of persons affected by domestic violence. The category of protected people includes intimate partners, including non-married couples, and family members.
Sexual Offences Act (2010)	Instituted in 2010, the Sexual Offences Act is gender neutral,

[6] https://pancap.org/pancap-documents/guyana-gender-based-violence-policy-brief/

[7] https://www.parliament.gov.gy/publications/acts-of-parliament/persons-with-disability-act-2010

[8] https://mola.gov.gy//laws/Volume%204%20Cap.%2010.08%20-%2012.211696970601.pdf

Legislation	Description
	meaning that both females and males can be charged with offences and both females and males can make complaints about being victims of the offences provided under the Act.[9] In 2013, the Act expanded the offences of rape to include oral, vaginal and anal penetration. In so doing, the Act adopted a gender-neutral definition of rape which would now recognize male rape. In addition, marital rape was criminalised without conditions, and the offences of stalking, grooming and voyeurism were created. Lastly, the age of sexual consent was increased from 13 to 16 years old for both boys and girls.
Occupational Health and Safety (2005)	An act to provide for the registration and regulation of industrial establishments, for occupational safety and health of persons at work, and for purposes connected therewith or material thereto. The Act sets out the roles and responsibilities of employers towards employees including ensuring that workers have the requisite training, skills, and equipment needed to perform the job, the provision of a healthy and safe working environment. Equally, the Act places responsibility on employees to ensure their own safety while on the job by adhering to safety guidelines and the proper use of Personal Protective Equipment (PPE) by employees[10].
Access To Information Act (2011)	An Act to provide for setting out a practical regime of rights to information for persons secure access to information under the control of public authorities in order to provide transparency and accountability in the working of the government and public authorities and for the appointment of the Commission of Information.
Employment of Young Persons and Children Act (1933)	Under this Act, a "child means a person under the age of fifteen years" while a young person means a "person who has ceased to be a child and who is under the age of sixteen years". Section three subsections 3 (1); (2); and (3) forbid the hiring of children or young persons under the age of fifteen years. Where a young person is employed, a register must be maintained. Section 5 subsections (1); and (2) address the penalties to be

[9] https://mola.gov.gy//laws/Volume%203%20Cap.%206.03%20-%2010.071696982578.pdf

[10] https://gcci.gy/wp-content/uploads/2013/07/Occupational-Health-and-Safety-cap9910.pdf

Legislation	Description
	imposed for breach of the act, these penalties are: 5 (1) if any person employs a child in any occupation or work or a young person in any industrial undertaking in contravention of this Act, he shall be liable on summary conviction to fine of $10,000 or in the case of a second or subsequent offense of $15,000 (2) where the offence of taking a child into employment in contravention of this Act is in fact committed by an agent or workman of the employer, such agent or workman shall be liable to a penalty as if he were the employer.
Trafficking in Persons Acts (2005)	In 2024, Guyana passed a Combating of Trafficking in Persons Act, amending the Act of 2005 and the 2013 Amendment. The amendment fills gaps in victim protection, increases penalties for traffickers, and enhances prosecution provisions. It extends protection, non-criminalization, and access to services to survivors, regardless of their immigration status. Guyana developed national Standard Operating Procedures on Trafficking in Persons (TIP) in 2021.
Prevention of Discrimination Act (1997)	The *Prevention of Discrimination Act* expressly recognizes sexual harassment as an act of discrimination. It defines sexual harassment as: "unwanted conduct of a sexual nature in the workplace or in connection with the performance of work which is threatened or imposed as a condition of employment on the employee, or which creates a hostile working environment for the employee." One of the grounds on which the legislation makes it unlawful to discriminate, is on the grounds of sex. Section 8 of the *Prevention of Discrimination Act* provides that any act of sexual harassment against an employee committed by an employer, managerial employee or co-worker shall constitute unlawful discrimination based on sex.
Equal Rights Act (1990)	This Act makes provision for the enforcement of the principles enshrined in article 29 of the Guyanese Constitution to secure equality for women and for matters connected therewith. Particularly Section 2 (4) promulgates: No person shall be ineligible for, or discriminated against in

Legislation	Description
	respect of, any employment, appointment, or promotion in, or to, any office or position on the ground only of sex. 2 (7) Nothing in this section shall be deemed to prevent any employer from making special labour and health protection measures for women, or from making provision for conditions enabling mothers to work or for material and moral support for mothers and children, including paid leave and other benefits for mothers and expectant mothers.[11]

Table 2 highlights international policies and conventions that Guyana has signed on to.

Table 2: International Policies and Conventions

International Policy / Convention	Description
National Gender Equality and Social Inclusion policy	In 2018 a National Gender Equality and Social Inclusion policy was drafted by the Government of Guyana. The policy aimed to provide a framework for the elimination of all forms of discrimination and violence against women and girls, and to promote economic development, inclusion, health, wellness and healthcare, and support education, training and skills development for women and children. The Gender and Social Inclusion Policy aim to mainstream gender issues in all sectors to eliminate negative economic, social, and cultural practices that impede equality and equity. The policy also seeks to strengthen links between Government and Non-Governmental Organizations to develop, maintain and provide gender-sensitive information and gender disaggregated data for use in project planning and implementation at all levels and in all sectors.[12] Guyana has also adopted a National Gender and Social Inclusion Policy, aimed at mainstreaming gender into all sectors of government.[13]
Sustainable Development	The overarching framework for global development is the United Nations Sustainable Development Goals (SDGs). The SGDs are 30

[11] https://www.ilo.org/dyn/travail/docs/587/Equal%20Rights%20Act%201990.pdf

[12] https://wrd.unwomen.org/sites/default/files/2021-12/GUYANA_NationalGenderEqualitySocialInclusionPolicy.pdf

[13] https://pancap.org/pancap-documents/guyana-gender-based-violence-policy-brief/

Goals	global futuristic development goals that nation states are aspiring to achieve by the year 2030. Guyana being a member of the United Nations has aligned its national goals in conjunction with the 2030 SDGs. Specifically Goal 5, addressed the needs of women. Recognizing that holistic global development hinges on the principle that no one should be left behind. Goal number 5 supports the end of all forms of discrimination, violence, and harmful actions against women; also, the fostering of an environment for positive growth and development for women by advocating for the provision of economic and livelihood opportunities for women and girls, provision of opportunities to education and to occupy governance positions, appropriate and health care[14].
Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) 1979	The convention defines what constitutes discrimination against women, and outlines an agenda for national action to end discrimination
The Beijing Platform for Action 1995[15]	An agenda for women's empowerment. It is considered the key global policy document on gender equality. It is a global commitment to achieving equality, development, and peace for women worldwide
Inter-American Convention on the Prevention, Punishment, and Eradication of Violence (Belem do para) 1994	The convention defines violence against women, establishes that women have the right to live a life free of violence, and that violence against women constitutes a violation of their human rights and fundamental freedoms.
The UN Declaration on the Elimination of Violence Against Women 1993	The declaration contains six articles and recognizes the need for the universal application of rights and principles of equality, security, liberty, integrity, and dignity of all human beings to women as well.
International Convention on Civil and Political Rights (ICCPR)	Enables people to enjoy a wide range of human rights including those relating to freedom from torture and other cruel inhumane and degrading treatment or punishment.
International Convention on Economic Cultural and Social Rights 1996	Ensures the enjoyment of economic, social, and cultural rights including the rights to education and fair and just conditions of work. It also ensures an adequate standard of living, the highest attainable standard of health and social security

[14] https://guyana.un.org/en/sdgs/5

[15] https://www.cepal.org/sites/default/files/comunicacion_26_guyana.pdf

https://www.cepal.org/sites/default/files/comunicacion_26_guyana.pdf

International Convention on the Protection of The Rights of all Migrant Workers and Members their Families - ICMW (1990)	A global diplomatic deal to guarantee dignity and equality in the era of globalization. The convention sets minimum standards for migrant workers and members of their families, with a focus on eliminating the exploitation of workers in the migration process.
Convention on the Rights of the Child-CRC (1989)	Consists of 54 articles that set out children's rights, and how governments should work together to make them available to all children.
Equal Renumeration Convention 1951 (NO. 100)	Focuses on gender parity in employment, and outlines principles for the equal renumeration for work of equal value. Independent of whether it is performed by men or women.
Discrimination (Employment and Occupation) Convention 1958 (No. 111)	Sets out the definition for discrimination and forbids distinction, exclusion, or preference based on race, color, sex, religion, political opinion, national extraction, or social origin.
Domestic Workers Convention 2011 (No. 189)	Establishes the first global standard for domestic workers making them entitled to the same basic rights as those available to other workers in their country.
The Universal Declaration of Human Rights	The declaration contains 30 articles and covers the most fundamental rights and freedoms of people collectively and individually everywhere in the world.
World Heritage Convention	The convention concerning the protection of the world's cultural and natural heritage, the World Heritage Convention was adopted by the General Conference of UNESCO in 1972. The Convention aims to encourage the identification, protection, and preservation of earth's cultural and natural heritage. It recognizes that nature and culture are complementary, and that cultural identity is strongly related to the natural environment in which it develops. The Convention provides for the protection of those cultural and natural 'properties' deemed to be of greatest value to humanity. It is not intended to protect all properties of great interest, importance, or value, but rather a select list of the most outstanding of these from an international viewpoint. The Convention recognizes that nations have a duty to ensure identification, protection, conservation, presentation, and transmission to future generations of their cultural and natural heritage. By adhering to the Convention, nations pledge to conserve not only the World Heritage Site(s) situated within their territories, but also to improve the protection of their national heritage.
Free, Prior, and Informed Consent (FPIC),	FPIC ensures that Indigenous peoples are fully informed, consulted in advance, and able to consent to or reject projects that may affect their lands, resources, or cultural heritage. Within this project, FPIC serves

	as a safeguard and participatory mechanism to promote meaningful engagement and protect the rights and well-being of Indigenous communities.

Table 3 highlights the Institutions that governs this SCA and IPP.

Table 3: Institutional Frameworks

Institution	Description
Ministry of Health	The Ministry of Health is the implementing agency of this project and will oversee the project in its entirety through a Project Execution Unit (PEU). The Ministry of Health was established under the Ministry of Health Act 2005 and is responsible for the efficient and effective administration and delivery of healthcare in Guyana. The Act empowers the Minister and other officials to manage the business of the Ministry including health facilities and improvement projects.
Ministry of Amerindian Affairs	The Ministry of Amerindian Affairs is the principal administrator of government initiatives and projects relating to indigenous populations within the national framework and accordance with the goals outlined in the national budget. The Ministry is guided by a minister who represents the collective interests of indigenous communities in the National Assembly and Cabinet.
Ministry of Labour	The Ministry of Labour was established in under Chapter 98:01 the Labour Act of Guyana. The Minstry of Labour's mandate includes the protection of fundamental rights of employed persons in Guyana. The Ministry of Labour therefore can play a supporting role, promoting sound industrial relations policies and practices through collective bargaining; resolving labour disputes; conciliation/mediation services; setting up and servicing arbitration tribunals; and conducting labour and occupational safety and health inspections and enforcement.
Ministry of Human Services and Social Security	The Ministry of Human Services and Social Security provides psychological, social, financial and other material assistance as well as regulatory services for senior citizens, the infirm, the indigent and children.
National Toshaos Council	The Amerindian Act made provisions for the establishment of the National Toshao's Council (NTC). The NTC is the representative decision-making body responsible for the collective development of indigenous communities. The NTC is made up of Toshaos from each Amerindian village across, Guyana; and is managed by an

	executive comprising of one Toshao from each administrative region, along with ten additional Toshao. The primary objectives of the NTC are the promotion of good governance within indigenous villages, and to further the general well-being of indigenous villages through the formulation of strategies and plans for the reduction of poverty, conservation, and other matters concerning natural resources as outlined in the Amerindian Act. The Council may offer advice to the Minister as provided for in the Act
Village Council	Village Councils for indigenous communities are provided for under the Amerindian Act. The Council is a body comprising of a Toshao (indigenous village Chief) and Councilors who are elected by members of the villages to manage village administration. The Village Council is responsible for the good governance and well-being of the community and promotion of sustainable use, protection and conservation of village lands and resources, and resources on those lands under the provisions made in the Amerindian Act. The Village Council is responsible for the nomination of members to the national Toshao Council. Village Councils are elected every three years.
Regional Democratic Council	The Regional Democratic Council (RDC) is the body responsible for local government and administration in the administrative Region and has a mandate to: a) Support the administration of all services required within its boundaries (services such as health, education and public works among others). In this regard, relevant duties of RDCs include maintaining and protecting public property, protecting and improving the physical environment, and improving living and working conditions. b) Coordinate the activities of the Local Democratic Councils and provide such cooperation and support as required. It should be noted that the RDC has some 48 powers delegated to it by the Minister responsible for Local Government. c) Develop regional facilities, as it deems necessary. d) Identify economic (revenue-earning) projects and assist the Administration in executing works necessary for the development of the region.

Woman and Gender Equality Commission	The Women and Gender Equality Commission was established under section 212G of the Constitution of Guyana and is tasked with supporting the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the fulfilment of the Sustainable Development Goals. It also promotes gender mainstreaming in all policies and programs, provides opportunities for education of women and men on the benefits of gender equality and ending gender-based violence. The commission has recommended the use of evidence-based data, timely policy, and legislative initiatives to uphold women's rights and gender equality.
Ethnic Relations Commission (ERC)	The Ethnic Relations Commission (ERC) is a Constitutional body established by Constitution (Amendment) (No.2) Act No.11 of 2000. Amongst the functions of the Commission are to provide for equality of opportunity between persons of different ethnic groups and to promote harmony and good relations between such persons; Foster a sense of security among all ethnic groups be encouraging and promoting the understanding, acceptance and tolerance of diversity in all aspects of national life and promoting full participation by all ethnic groups in the social, economic, cultural and political life of the people; Investigate complaints of racial discrimination and make recommendations on the measures to be taken if such complaints are valid, and where there is justification therefore refer matters to the Human Rights Commission or other relevant authorities for further action to be taken

3.0. Environmental and Social Baseline

3.1. Geographical Location

Moruca (often spelled *Moruka* in older sources) is one of the three sub-regions of Region 1, officially known as Barima Waini, in the far northwest of Guyana. The sub-region centers on the Moruca River and is clustered by the settlements of Santa Rosa / Kumaka / San Jose along a 10-mile stretch of the river. Santa Rosa sits near 7.6°5N, 58.95°W. Kumaka is the sub-district's administrative hub.

Moruca's coastal margin lies just southeast of the Shell Beach Protected Area (SBPA) on the Atlantic, with the sub-region's functionality framed by the Moruca, Barabara, Biara, Baramani, and Waini rivers, and the ocean coast.

Moruca sits on Guyana's low coastal plain at the northern edge of the Guiana Shield, a very low relief landscape near sea level, transitioning inland to slightly higher, well-drained forests. The Moruca River is flanked by open, seasonally flooded savannahs punctuated by small sandy islands that are remnants of ancient sand dunes as described in classic North-West District geomorphology. Many homesteads and farms occupy these higher, sandy ridges; and farther inland, these ridges coalesce into well-drained secondary and primary forests.

Along the nearby coast, the (SBPA), the terrain is flat with a classic beach, mudflat, mangrove swamp forest sequence landward.

The region is known for its equatorial rainforest climate with high humidity year-round, moderated by onshore breezes. Region One experiences very frequent rainfall with pronounced wet periods. Day-to-day forecasts commonly show high humidity and recurring showers/thundershowers across the sub-region.

One of Guyana's most intact mangrove systems with seasonally flooded ite-palm savannahs, mixed swamp forests, and 120 km of shell-rich beaches, that is globally important for sea turtle nesting (Leatherback, Green, Olive Ridley, Hawksbill) and rich in coastal/migratory birds.

Figure 2: Map of Guyana highlighting Region 1 (in Red)

Black water habitats, flooded savannahs and sand-ridge forests support diverse fish, replies, mammals, and birds typical of the north-west district.

Linear-clustered villages occupy the sandy islands/ridges along the Moruca River (elevated, better-drained ground), with fields and tree crops on the ridges and wetland resource use (fishing palmetto/manicole, thatch, hunting) in the surrounding swamps.

3.2. Transportation and Local Logistics

Riverine access dominates as people and cargo move chiefly by boats and canoes along the Moruca river and adjoining creeks. Overland movement within the hub is aided by the Moruca bridge which connects San Jose-Kumaka-Santa Rosa. Long distance travel typically links Charity (Essequibo Coast) to Moruca by speedboat, via coastal/estuarine routes.

Road links connect Moruca villages (Santa Rosa, Kumaka, Kwebanna, Waramuri, Kamwatta), facilitating minibuses and taxis, however, travelling via roads becomes extremely difficult during the rainy seasons. Boat transport serves critical routes, but facilities like the Charity stelling, lack basic amenities such as sanitation facilities.

3.3. Demography and Population Characteristics

The total population of Barima Waini (Region 1) was 26,941 in 2012. The Moruca sub-district forms a significant part of this total, with an estimate of 12,000 inhabitants, a figure that may have grown or shifted slightly since then, making it the largest Amerindian settlement in Guyana. Indigenous people, especially from the Arawak (Lokono) and Warrau (Warao) groups, predominantly inhabit the sub-region. With Santa Rosa being described as a "predominantly Arawak village".

Based on the 2012 census, other communities like Kwebanna recorded 658 inhabitants;

Assakata estimated around 300 people in 2013, spread across four village settlements, and Waramuri survey data shows 41 surveyed adults, with extrapolated population likely in the low hundreds.

Other notable settlements in the Moruca sub-region include Chinese Landing, Warapoka, Santa Cruz, Kokerite, and Haimacabra, though detailed population figures for these are not available in publicly accessible sources. Combining these, approximately 6,000-7,000 individuals reside in the core settlements of Santa Rosa, Kwebanna, Assakata, Waramuri, and surrounding villages in Moruca.

The Population Density for Region 1 is 1.30.[16] The median age of the population is 17.48 years of age. Across Guyana, Amerindians (Indigenous peoples) comprise of about 10.5 % of the total population. [17] Coastal Amerindian communities, such as those in Moruca, belong to three key language groups: Lokono (Arawak), Kalina (Carib), and Warao.

Arawaks, Carib and Warao peoples, sharing distinct languages and cultural adaptations to the environment, inhabit Moruca River communities. For example, artisanal groups such as the Moruca Embroidery Group, comprising women from Santa Rosa and Waramuri, reflect strong Amerindian cultural engagement, crafting items inspired by local biodiversity like sea turtles.

Amerindians account for the majority of the residents in Region One, the number 17, 846 or 65% of the total regional population. The next significant proportion of residents are "Mixed" (a local terminology for persons who are born from parents of a different race (bi-racial /inter-racial) parents.

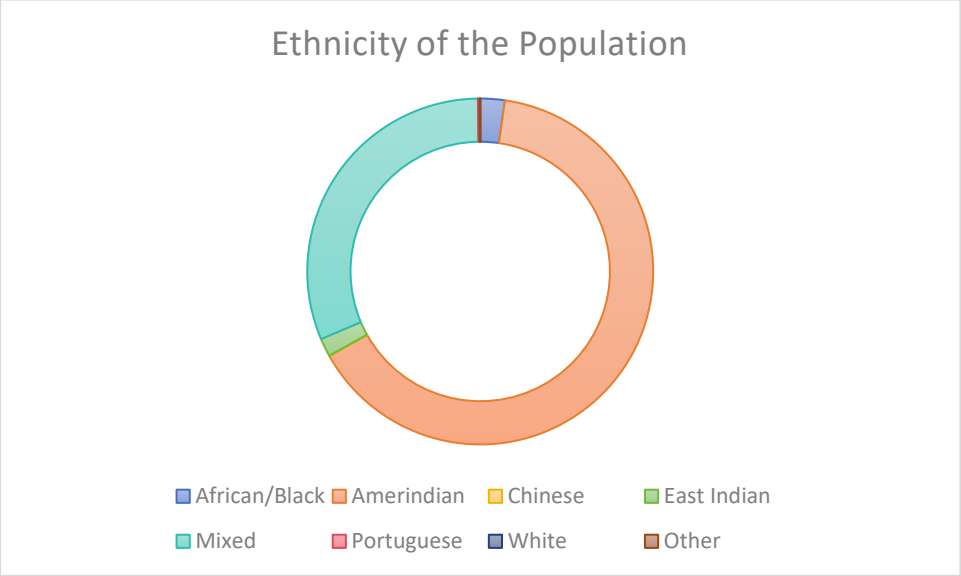


Figure 3: Ethnicity of Population in Region 1

[16] chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://statisticsguyana.gov.gy/wp-content/uploads/2019/10/2012_Preliminary_Report.pdf

[17] Bureau of Statistics – Census 2012

The population of Region One, quite like the national population, represents a plurality of religious disciplines. However, the dominant religion in Region One is Christianity. The most prevalent Christian denominations are Pentecostal, Jehovah Witness, Other Christians, and Anglicans.

3.4. Indigenous Population

It is believed that the indigenous peoples arrived in the South American region around 9000 BC, making Guyana their home long before the arrival of Europeans. They settled in the lush rainforests, along the fertile riverbanks, and in the savannahs of the interior where they have remained to this day. Guyana's Indigenous population is called Amerindians.

There are four main Amerindian tribes and nine ethnically distinct Amerindian groups in Guyana, each with unique customs, languages, and traditions. These include Arawak, Warrau, Macushi, Wai Wai, Wapishanas, Caribs, Patamona, Arekunas, and Akawaios. Together each group contributes to the rich tapestry of Guyana's indigenous culture.

The Amerindian population in Region One comprise indigenous people from the following nations:

Waraus: Believed by many scholars to be the oldest known inhabitants of Guyana, this tribe is known archaeologically from the shell mounds of the Northwest and Pomeroon, some dating back to 7,000 years ago. Living in the low-lying coastlands between the Barima and the Pomeroon Rivers and their tributaries, these people were called the 'water people' because they built their houses on stilts over or close to the water. Being inhabitants of the swampy district, the Waraus are excellent fishermen and boat builders; they are also inventors of the dugout canoe, which was the earliest seaworthy vessel some 5000 years ago. To them, the palm tree is considered the tree of life, providing them with flour, juice, fruit and branches for thatching and hammock-making. The Waraus, who believe that their ancestors live in the sky land, are unique in that they are the only representatives of the Warauan linguistic group in South America and Venezuela and, as a result their language is known as an 'isolate'.

Arawaks (Lokono): The Arawaks, who were pioneer horticulturists, settled at Hosororo creek on the Aruka River around 3,500 years ago. They also occupied the Corentyne River around 2000 years ago, leaving their unique type of rock engraving, Timehri. Because of the rich supply of protein found along the coastal swamps, they moved hundreds of tons of earth with wooden shovels, to build habitation mounds and raised fields for farming, on the hilltops they planted manioc, which they baked into bread on ceramic griddles. The Arawaks hunted a lot during the rainy season when animals migrated from the lowlands in search of high grounds. Among the game commonly hunted were the deer, labba, tapir, peccary or wild hog, agouti, birds, turtles and parrots.

Caribs (Karinya): One of the better-known tribes, the people settled in villages near streams, rivers or creeks, the earliest of these inhabited the upper Pomeroon River about 3000 years ago.

This tribe was unique in their mastery of painted ceramics and their pottery is distributed as far as the mouth of the Amazon. The Caribs are the people who gave the Caribbean area its name and the word 'Carib' is used to refer to many Amerindian groups scattered throughout the Caribbean islands and South American mainland, north of the Amazon. Their language can be classified together as the Cariban language family, though certain traits of their material culture

seem to suggest an association with Colombia. In Guyana, Carib groups are found in the Essequibo Lake District, in the Pomeroon and North-West Districts, along the Cuyuni, Barama and Barima Rivers and on the Demerara and Mahaicony Rivers (George Mentore 1993).

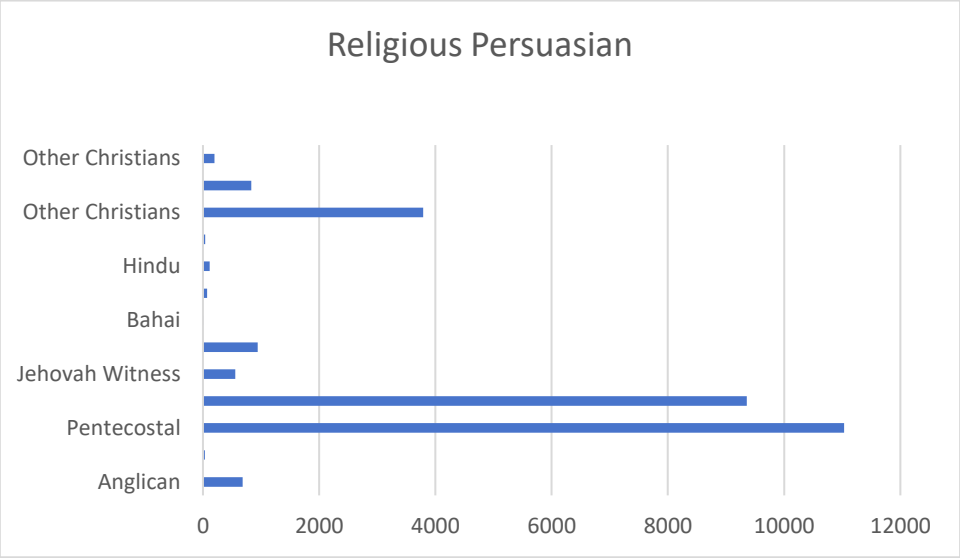


Figure 4: Religious Persuasion of Population in Region 1

3.5. Education

Education services in Moruca are overseen by the Ministry of Education through the Region 1 Regional Democratic Council (RDC), but service delivery is community-based and often supplemented by church missions and NGOs. Each satellite community typically has a nursery and/or primary school. Santa Rosa, being the hub, hosts the largest facilities. The Santa Rosa Secondary School, located in Kumaka, is the main secondary institution serving the wider Moruca sub-district. Students from satellite villages often travel daily by boat or board with relatives closer to the school. Post-secondary education and training is limited to teacher training and skills development programmes offered sporadically by the government or Non-Governmental Organizations. Many students pursue higher education in Mabaruma, Georgetown or abroad through scholarships.

The literacy rate of the population of region one is 25.25%. females appear to have a higher literacy rate than males in the region. 51.4 percent of the population have a secondary level education, while 35.4 % are educated at the primary level. Eight (8%) percent of the population have post-secondary and tertiary /university level education.

3.6. Health

Health delivery in Moruca falls under the Ministry of Health's regional infrastructure, with facilities at different service levels. The Kumaka District Hospital is the primary health facility in the sub-district, providing inpatient and outpatient services, material and childcare, basic laboratory and pharmacy services. Referrals requiring specialized care are sent to the Mabaruma Regional Hospital or the Georgetown Public Hospital.

Each satellite community has either a health post or health center, with a community health worker (CHW) offering first-contact services such as immunization, wound care, and malaria

testing. Medical teams (doctors, dentists, ophthalmologists) visit periodically, either monthly or quarterly, depending on availability.

Malaria, dengue, and respiratory infections are prevalent due to the tropical environment. Recruitment of Indigenous youth into nursing and CHW programmes has improved the local human resource capacity, but retention remains a challenge due to out-migration.

3.7. Economics and Livelihood

The regional economy remains largely a mixed subsistence-market system. Households combine smallholder agriculture, fishing, gathering, artisanal crafts and occasional waged work or mining for income. Market access is constrained by the region's geography (riverine access, seasonal roads), limit cash incomes and increase dependency on local natural resources. For example, cassava (for farina/cassava bread), plantain/banana, rice (in some lowland pockets), vegetables, and small-scale fruit trees are the backbone of household economy and local trade (household consumption plus small sales). These are typically produced on raised sandy ridges and adjacent fields to avoid swamp flooding. Recent investments by the government through community initiatives are helping to scale up commercial cropping. Notably, a 210-acre citrus farm was announced for Santa Rosa to create economies of scale and marketable output[18]. Other projects (solar drier) support high-value agriculture- processing for fruits and cassava products, marking a shift from subsistence production to semi-commercial agriculture. [19]

Small landholdings on higher ridges, seasonal flooding of lowlands, limited mechanization, weak cold-chain/market linkages, and limited extension services reduce productivity and market competitiveness.

Local fisheries (riverine and nearshore) are important for protein and cash income. The adjacent Shell Beach and mangrove systems functions as a nursery ground to sustain artisanal fisheries. The coastal/mangrove ecology is a key natural asset underpinning livelihood. Fish, crabs, and molluscs are utilized for household food security and local trade. Fishing productivity varies with seasons, river conditions, and conservation measures (E.g., turtle protection in Shell Beach) create complementary paid roles but also restrict some traditional uses where strictly prohibition rules apply.

Community enterprises are a traditional and growing income source. The Amerindian Peoples Association (APA) and partners have developed tourism packages (canoeing, biking tours, cultural experiences, turtle monitoring tourism) supported by external funding. Tourism in the region is a small, but promising, livelihood area that leverages local culture and coastal biodiversity. [20]

[18] https://www.stabroeknews.com/2024/05/31/news/guyana/santa-rosa-to-get-210-acre-citrus-farm-president/

[19] https://www.kaieteurnewsonline.com/2023/02/26/four-livelihoods-projects-funded-by-french-govt-commissioned-in-moruca-sub-region/

[20] https://www.stabroeknews.com/2023/02/26/sunday/apa-french-govt-kick-start-tourism-in-santa-rosa-

The SBPA also provides employment opportunities for the region's population. SBPA has hired local community members as turtle monitors, boat captains, research assistants and cooks, and procures supplies and crafts from local crafts men and women, duly contributing to local interests, conservation and economic growth of the local population. These roles provide seasonal and project-based cash income and build conservation stewardship.

Local mining activities (artisanal and small-scale) occur in/near Moruca communities (e.g., Chinese Landing). Mining provides substantial income for some households. Simultaneously, it creates many negative environmental impacts (sedimentation, mercury contamination risks, loss of agricultural land), tenure conflicts, and social tensions. Government enforcement and land-title disputes is a recurring local issue. [21]

Timber and non-timber forest products are harvested under community regulation. Selective logging and sawmilling occur in designated areas, but often under agreements with private operators, however these arrangements must be approved by the Village Council. Palm thatch, manicole palm, and nibbi vines are an important ingredient in local construction and craft.

Community Service Officers (CSOs), small government projects, and tourism/conservation contracts provide some paid employment. National cash transfer programs (e.g., social assistance initiatives cited in the national budget) increase disposable income in poor rural areas, though exact local coverage varies. Remittances and causal labour (coastal or urban migration) also supplement incomes.

3.8. Employment

The working age population (15 years - 64) of Region One is 13, 938 persons, with 7,471 males and 6,467 females. A larger proportion of the population of the region is employed. With 82% of males are employed while 76.2% of females are employed. The unemployed data show 18% of males and 23.8 females are unemployed.

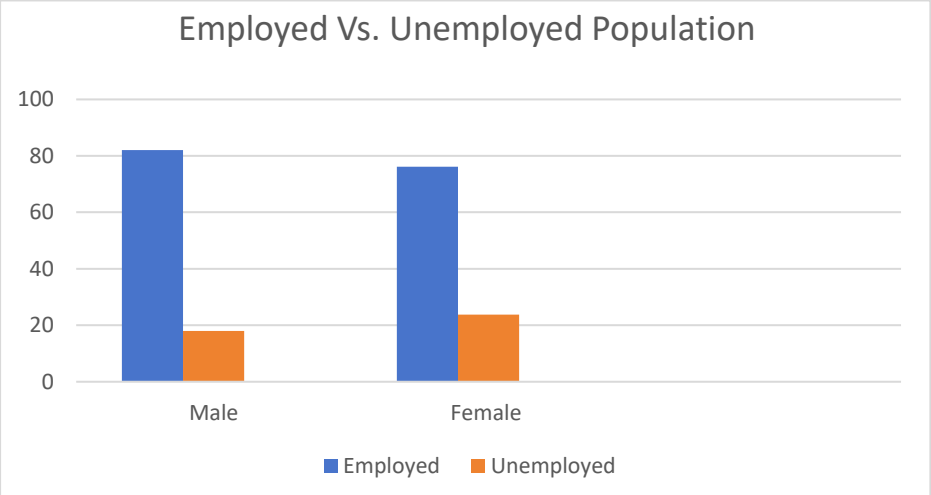


Figure 5: Working Age Population of Region 1 (Male and Female)

[21] https://www.stabroeknews.com/2019/05/10/news/guyana/moruca-residents-seek-govt-intervention-to-settle-mining-lands-dispute/

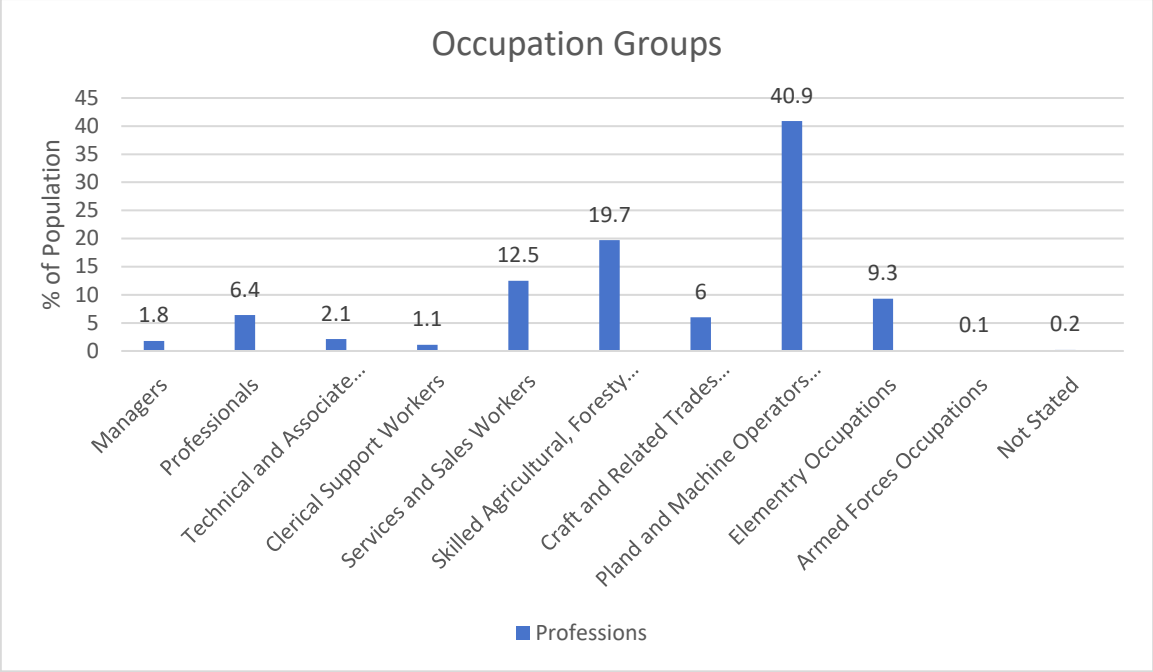


Figure 6: Occupation by Groups in Region 1

3.9. Electricity

Electricity supply in Moruca remains inadequate and unevenly distributed, with most communities relying on decentralized systems rather than the national grid. The primary source of electricity in Santa Rosa/Kumaka is through government supported diesel-powered generation. However, supply is rationed- electricity is provided for specific hours (typically evenings). Many households and institutions (Schools, health posts) rely on small-scale solar panels, often provided under government or donor projects. These are used for lighting, charging phones, and powering small appliances. Some businesses and wealthier households operate personal generators.

Fuel costs are exorbitant / out of reach for most families. The Santa Rosa/Kumaka center has the most reliable electricity supply in the sub-district. Notwithstanding this, blackouts and limited-service hours are still common.

Satellite villages depend heavily on solar power or kerosene lamps. While hospitals and secondary schools are prioritized for energy supply, shortages of fuel or faulty solar equipment sometimes disrupt services, particularly refrigeration of vaccines, laboratory testing, and use of ICT for learning.

3.10. Water

Access to potable water in Moruca varies across communities and remains one of the most pressing development challenges. Households and institutions depend on a mix of traditional sources, rainwater harvesting, and limited centralized systems. The Moruca River and its tributaries are the primary water sources for many households, used for drinking, cooking, bathing and washing. While readily accessible, these waters are vulnerable to contamination from human activity, animal use, and seasonal flooding. Many homes and public institutions have installed tanks and drums to collect rainwater, particularly during the rainy season.

Rainwater is often preferred for drinking as it is cleaner than river water, however during dry spells, shortages occur. Some villages maintain wells or community ponds, though water quality varies and may be unsafe without treatment. Groundwater development is limited due to geological challenges in the north-west district. The GWI has introduced small-scale water supply systems in Santa Rosa/Kumaka and select satellite villages. These typically involve pumps, storage tanks, and communal standpipes.

Majority of residents rely on untreated water from rivers or rain tanks, which poses risks of waterborne diseases (diarrhea, gastroenteritis, parasitic infections). During heavy rains, river water becomes muddy and contaminated, forcing greater reliance on rainwater tanks. Households enjoy in-house piped supply. Most families fetch water daily using buckets, containers or small boats. This burden falls heavily on women and children, who are the primary water collectors. Villages closer to Santa Rosa/Kumaka have relatively better access, while remote communities rely almost entirely on river water.

3.11. Information and Communication Technology

Telecommunications access in Moruca has historically been limited, reflecting the traditional digital divide between Guyana's hinterland and coastal regions. However, in recent years, there have been incremental improvements, driven by both government initiatives and private sector expansion. The main service providers are GTT and Digicel, both of which operate in the Moruca sub-district. Mobile network coverage is concentrated around Santa Rosa/Kumaka and a few satellite villages.

Outlying settlements often experience weak or no signal, requiring residents to travel to higher ground or closer to Kumaka for connectivity. Call quality and data services are often unstable, particularly during rainy seasons when weather affects network strength. Very few households have personal broadband connections. Mobile data is the main form of internet access, but it is expensive relative to income levels. Some schools, government buildings, and community ICT hubs provide limited access, often supported by satellite internet or state-sponsored programmes.

3.12. Culture and Traditions

Traditional language and culture have played, and continue to play an important and sacred role in maintaining the rights and identity of Indigenous communities in Guyana and across the globe. Many communities assert that their language and culture are at the heart of what makes them unique. According to ATSIC (2000) *"Language is at the core of cultural identity. It links people to their land, it protects history through story and song, it holds the key to kinship systems and to the intricacies of tribal law including spirituality, secret/sacred objects and rites. Language is a major factor in indigenous people retaining their cultural identity, many say 'if the Language is strong, then Culture is strong*".[22]

[22] Extract from ***Government of Guyana Response to the United Nations Expert Mechanism on the Rights of Indigenous Peoples: Consultation on the Role of Languages and Culture in the Promotion***

The Moruca sub-district has a rich cultural heritage expressed through annual festivals, ritual practices, storytelling, crafts, and communal ceremonies. Cultural celebrations in Moruca are not merely events of entertainment but fundamental expressions of identity, continuity, and social cohesion, linking the people with their history, spirituality, and the natural environment.

The most prominent celebration in Moruca is the annual Moruca Expo, usually held in Santa Rosa. It serves as both a cultural and economic event, displaying indigenous crafts, cuisine, dances, music, and traditional games, while also promoting local entrepreneurship and tourism. The Expo has become a platform for Indigenous communities to demonstrate resilience, assert cultural pride, and highlight the role of traditional knowledge in development.

Amerindian Heritage month, a national observance, celebrated every September, is deeply significant in Moruca. During the month villages host traditional dance performances, craft exhibitions, cassava bread and farine-making demonstrations, and cultural competitions.

Communities organize benabs (thatched-roof huts) where elders recount oral histories, myths, and stories of ancestors, keeping alive the *Lokono* and *Carib* languages and traditions.

Christianity and Catholicism have a long history in Moruca, with Santa Rosa being the oldest Catholic mission in Guyana (established in the 1800s). Annual feasts such as Easter, Christmas, and the Santa Rosa Feast Day (August 26th) are widely celebrated, often blending Christian rituals with indigenous communal practices, music, and traditional food preparation.

Cassava (bitter cassava) is central to Arawak and Carib culture food, rituals, and identity. The preparation of cassava bread and farine is accompanied by communal gatherings, where women, in particular, uphold traditional methods passed through generations. Some ceremonies use cassava beverages in social bonding, hospitality, and ritual contexts.

Traditional practices include respect for sacred spaces such as groves, river bends, and forest clearings believed to be inhabited by spirits or ancestral presences. Ceremonies, including offering food or symbolic items, are sometimes performed before hunting, fishing, or farming to engender good fortune and safe return.

While increasingly influenced by Catholic rites, funerals and memorials in Moruca still retain elements of indigenous custom, such as extended communal mourning periods, singing, and storytelling about the deceased. Births, marriages, and coming-of-age are also marked with gatherings where traditional food, music, and dance play central roles.

Music and dance are vibrant aspects of Moruca’s celebrations. The use of drums, maracas, and flutes accompanies dances that reenact hunting, farming, or legendary tales.

There is heritage sites of national significance located in the Moruca, and are reminiscent of influential indigenous persons. These sites include the Heroes of Moruca Monument, which commemorates the accomplishments of Indigenous peoples, who contributed significantly to the community. The monument is inscribed with the names of Stephen Campbell, Bridget Daniels, Theresa La Rose, George Robinson, Vibert De Souza, John Atkinson, Jaunita La Rose,

Michael Gomes, Vincent Prince, Isabella Atkinson and Philomena RSM. [23]

Figure 7: Heroes of Moruca Monument

Figure 8: Stephen Campbell Monument

Located within close proximity to the Heroes of Moruca Monument, the Stephen Campbell Monument was built to commemorate the life of Stephen Campbell, who was the first Indigenous person to be elected into Parliament on September 10, 1957.[24]

3.13. Gender Dynamics

Women in Moruca's Indigenous communities, have historically been central to household and subsistence activities. They are primarily responsible for cassava cultivation and processing of the cassava into farine, cassava bread, and beverages, which are vital for both household

[23] https://ntg.gov.gy/monument/heroes-of-moruca-monument/

[24] https://ntg.gov.gy/monument/stephen-campbell-monument/

consumption and local trade.

Women also play a key role in childcare, domestic management, and community socialization, passing on traditional knowledge to younger generations. Men traditionally engage in hunting, fishing, forest resource gathering, and heavier agricultural work, reflecting a gendered division of labour aligned with Indigenous cosmologies that connect men more to forest and river spaces, and women to cultivation and processing. This complementarity reinforces communal survival but also shapes power dynamics, with men historically dominating public leadership spaces while women wield strong influence in household and community-level decision-making through resource control and cultural knowledge.

Formal leadership positions, such as Toshao and Village Council roles, have historically been male dominated. However, in recent decades, women have increasingly been elected to Village Councils and other leadership roles, reflecting broader national and indigenous women empowerment movements. Women leaders often focus on health, education, domestic violence prevention, and social welfare issues, while men traditionally engage more with land rights, infrastructure, and negotiations with external actors. Despite progress in the empowerment of women, women still face challenges in being equally represented in higher-level negotiations (e.g., with Government, NGOs, extractive companies), partly due to cultural norms and domestic expectations. Males are predominant in the region, accounting for 52% of the population while females account for 48% of the region's inhabitants.

Women increasingly participate in income-generating activities, such as selling farine, craft-making, and small-scale commerce. These activities, while often informal, provide women with greater economic independence. Groups such as the Moruca Embroidery Group (women's embroidered goods from Santa Rosa/Waramuri) produce handicrafts for local markets and occasionally for tourism. Men remain more active in fishing, logging, and occasional mining-related work, which increases occupational risks, migration, and cyclical income flows.

Like many Indigenous and hinterland communities in Guyana, Moruca faces challenges with domestic and gender-based violence. Contributing factors include alcohol misuse, economic hardship, and traditional patriarchal norms. Access to justice and survivor support services is limited due to geographic remoteness, limited police presence, and cultural barriers to reporting. National efforts, such as the Spotlight Initiative and local women's groups, have started to increase awareness about GBV prevention and provide some community-based support, but gaps remain.

Women's health services in Moruca, including antenatal care and reproductive health, are limited compared to urban areas. The current Kumaka Hospital and health posts provide basic maternal care, but specialized services require travel to Mabaruma or Georgetown.

3.14. Youth

Girls in Moruca generally outperform boys academically, mirroring national rural and hinterland trends. Girls are more likely to complete secondary school and pursue teacher training, nursing or other professional tracks. Boys, on the other hand, are more likely to leave school early to engage in fishing, farming, or short-term income opportunities (such as mining in nearby regions). This dynamic creates both opportunities and risks. While girls' increasing educational attainment can empower women, boys' underachievement may reinforce cycles of poverty and contribute to social issues such as substance abuse or migration to gold-mining

areas.

Adolescent girls face specific challenges related to early pregnancy, limited access to sexual and reproductive health education, and stigma within conservative communities.

3.15. Land Tenure and Resource Use

Moruca is covered under communal land tenure granted through the Amerindian Act (2006), which recognizes Indigenous communities' rights to collective ownership of their traditional lands. The land is vested in the Village Council, held in trust for the entire community, and cannot be sold or transferred to non-Indigenous persons.

The Village Council, led by a Toshao, exercises governance over land allocation, use and management within the titled area. Decisions on land use typically require community consultations, and, in some cases, general meetings involving consensus from households.

In addition to statutory recognition, customary practices govern how families and clans occupy and use land. These include:

- Inheritance of household plots and farming lands
- Informal allocation for new families by the Village Council
- Protection of sacred and culturally significant sites from certain types of development

Land and boundary disputes are mediated by the Village Council, with escalation to the National Toshao's Council or Ministry of Amerindian Affairs if unresolved. While the Amerindian Act gives villages autonomy, forestry, mining, and environmental laws apply, and permits for external operators must be granted with the community's free, prior and informed consent (FPIC).

Resource use in the Moruca sub-district is deeply embedded in Indigenous traditions, collective practices and cultural worldviews that extend beyond purely economic functions. While farming, fishing, and hunting form the basis of subsistence, the ways in which land, water, and forest resources are accessed, managed, and shared reflect long-standing customary systems of regulation and respect.

Resource access is largely collective. Lands and waterways are customarily shared among community members, with unwritten rules that emphasize respect, reciprocity, and sustainability. Fishing grounds, hunting zones, and forested areas are open to the community but governed by informal restrictions on overharvesting. For instance, hunting in certain areas is avoided during breeding seasons, and fishing traditionally shifts depending on river levels and spawning cycles. These practices reflect adaptive stewardship developed over generations.

Resource use also carries spiritual and cultural significance. Certain groves, forest patches and riverside areas are considered sacred and are not disturbed. Plants and wildlife are harvested not only for food and medicine but also for ceremonial and ritual purposes, reinforcing the link between ecology and cultural identity. The continued observance of taboos, offerings, and rituals associated with resource use underscores the worldview that nature is both provider and kin.

Communities in Moruca often use resources across overlapping territories. Fishing spots,

cassava farms, and hunting grounds may extend beyond a single village's boundaries, with reciprocal arrangements, among neighboring settlements. Although territorial lines are not rigidly demarcated, there is a widely respected understanding of community spaces, with disputes addressed directly through the Village Council and traditional leadership.

4.0. Social Risks, Potential Impacts and Opportunities

Table 4 highlights potential social risks and impacts, with opportunities.

CATEGORY	RISK/IMPACT	OPPORTUNITIES
Physical and Cultural Heritage	Disturbance to sacred or culturally significant sites during land clearing, storage or camp setup.	Collaborate with Village Council to conduct participatory mapping before works; establish buffer zones, where required; avoid works in identified heritage areas.
Cultural erosion	Erosion of intangible heritage if external workers do not respect local customs.	Implement cultural awareness training for all workers; Enforce Workers' code of conduct, as outlined in Labour Management Procedures.
Labour influx and SEA/SH/GBV Risk	Increased risk of Sexual Exploitation and Abuse/Sexual Harassment/Gender-Based Violence (SEA/SH/GBV) against women and girls from non-local workers	Enforce SEA/SH/GBV plan; Enforce workers' code of conduct; Maintain established confidential reporting channels; SEA/SH/GBV awareness training for workers.
Gender and inclusion	Underrepresentation of women/youth.	Engage youth/women in consultations; Implement GBV Plan as outlined in Annex One.
Communication barriers	Misunderstanding due to literacy/language differences	Use visual aids, translations, and bilingual interpreters, where required.
Economic Participation	Exclusion from project jobs / procurement opportunities	Local labour prioritization and Indigenous vendors, where applicable.
Health services strain	Increased demand on existing health services during construction	Coordinate with MOH to ensure mobile or temporary health services for workers and residents
Social tension	Community conflicts due to outsider labour	Awareness trainings for workers, community focal points.

CATEGORY	RISK/IMPACT	OPPORTUNITIES
Waste and environmental impacts	Improper waste disposal contaminating rivers or farmland	Implement Waste Management Plan with segregation; establish disposal sites away from water sources; conduct monitoring
Climate change vulnerability	Access road flooding or heat stress affecting project and community	Provide shaded rest areas and hydration points for workers.
Resource management	Use of local resources (sand, rock, timber) for construction	Material sourcing plan

Table 5: Opportunities with Enhancement Measures

Category	Opportunity / Benefit	Enhancement Measure
Healthcare Access	Improved local access to specialized and emergency healthcare.	Integrate traditional medicine into outreach; translate hospital service information where required; maintain mobile outreach clinics.
Employment and Skills	Job creation and skill-building for Indigenous workers	Provide on-the-job technical training, as outlined in Labour Management Procedures.
Local Enterprise Development	Boost to local suppliers (food, lodging, transport)	Prioritize local procurement, where appropriate.
Cultural Inclusion	Recognition of Indigenous customs in project design and operations	Include indigenous spaces in hospital design
Strengthened Governance	Enhanced collaboration with Village Council	Provide continuous updates to the Village Council and include in decision-making as it relates to the community.
Resilience to Climate Change	Climate-resilient infrastructure reduces disruption to health services	Incorporate climate-resilience systems into hospital design; ensure drainage and flood protection measures; store emergency supplies.

5.0. Consultation and Engagement Process

During the preparation of this report, consultations specifically for the SCA/IPP in Moruca could not be conducted as originally scheduled. This was due to a combination of logistical constraints, telecommunications difficulty, and the timing coinciding with the national elections season, when many community members and leaders were actively engaged in campaigning activities. These factors significantly limited the availability of key stakeholders and the feasibility of meaningful consultations.

Nevertheless, the preparation of the draft SCA/IPP has been informed by a series of prior stakeholder engagements held with communities in the project area since project inception. These previous discussions consistently highlighted core concerns such as the potential impacts of worker influx, respect for cultural sensitivities, and the importance of community involvement in project implementation. At least one round of consultations will be conducted with the village council, the community and other stakeholders on the SCA/IPP as part of the free prior and informed consent process (FPIC).

Since implementation of the HCNS Project commenced, various rounds of stakeholder consultations were conducted. As part of the Baseline Assessment, consultations were carried out in accordance with the IDB's ESPS10 (Stakeholder Engagement and Disclosure) to ensure transparency, inclusivity, and culturally appropriate engagement with the Moruca community. This round of consultations occurred in January 2023 with staff and management of the existing hospital, and with community members, including the Village Council. This round of consultations presented the scope of the project, collected any relevant baseline information on the environmental, social, health and safety aspects that should be taken into consideration for preparation of the ESA/ESMP, and any other general feedback regarding the project.

In July 2025, another round of consultations was conducted with the Moruca community. This round of consultation aimed to disclose key environmental, social, health and safety aspects of the proposed workers' camp for the Moruca hospital construction, and to gather feedback for integration into project planning and mitigation measures. **(See Consultation Report in ESA/ESMP).** In addition, other consultations will be conducted on the ESA/ESMP and the hospital design and there will be continued engagement with stakeholders following FPIC.

Key steps included:

Formal Notification: an official letter of notice was sent to the Santa Rosa Village Council announcing the disclosure of the ESA/ESMP and inviting stakeholders to a public meeting.

Public Disclosure Meeting: held on July 10, 2025, at the Santa Rosa Secondary School, facilitated by the Ministry of Health and the PCI-Sinopharmintl Consortium, with participation from the Village Council, residents, regional authorities, and project contractors.

Presentations: covered the project scope, workers' camp layout, environmental and social safeguards, waste management, worker influx and the Grievance Redress Mechanism (GRM).

Feedback channels: included verbal discussions during the meeting and exchange of focal points contact of information for any feedback and concerns.

Key Concerns: key concerns centered around foreign worker behaviour and discipline, foreign worker housing, cultural sensitivity, and communication challenges.

To ensure transparency and inclusivity, further consultations will be carried out in tandem with the presentation of the hospital design and the ESA/ESMP. At this stage, the draft SCA/IPP will be presented to targeted groups of the community for discussion and feedback. Feedback and inputs from stakeholders will then be incorporated, and the documents updated accordingly, ensuring that community perspectives and priorities are fully reflected before finalization.

6.0. Grievance Redress Mechanism

The HCNS Project has a designated GRM established and operational. The GRM is culturally designed to:

- Operate through the Village Council (to be included in receiving complaints and resolution processes)
- Allow anonymous submissions, especially for Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH) and Gender-based Violence (GBV).
- Be responsive to low literacy by accepting oral reports
- Free of cost and respects traditional conflict resolution processes
- Monitored monthly and tracked

More detailed information on the GRM and its process can be accessed here: https://health.gov.gy/projects/. GRM Forms can be accessed here: https://health.gov.gy/wp-content/uploads/2025/06/HCNS-PROJECT-GRIEVANCE-REPORT-FORM-test.pdf

During consultations that occurred in July 2025 **(see Consultation Report in ESA/ESMP)**, the GRM was presented to participants, including how to access, types of complaints that can be reported, and focal points for handling grievances. GRM forms were left with the Village Council for the community to access

7.0. Gender Based Violence Prevention and Response

The HCNS Project recognizes that construction activities, particularly those involving an influx of non-local labour, can increase the risk of gender-based violence (GBV), including sexual exploitation and abuse, and sexual harassment (SEA/SH). These risks are heightened in remote Indigenous communities, and limited access to survivor services may affect reporting and response.

This SCA includes a full GBV Action Plan, including detailed implementation steps, responsibilities, and referral pathways, is provided in **Annex One.**

8.0. Monitoring and Evaluation

Monitoring will involve:

- Monthly reports on Environmental and Social Compliance
- Continuous improvement loop through community feedback

Table 6: Key Performance Indicators

Indicator	Responsibility	Timeline
# of Village Council engagements held to review/discuss project progress, activities	PEU, Contractor, Village Council	semi-annually
# of local workers employed (by gender and skill level)	Contractor	Monthly
# of local suppliers engaged from Indigenous communities	Contractor	Monthly
% of workers completing cultural awareness and GBV training	Contractor	Before mobilization, refresher every 6 months
# of cultural or sacred sites identified and protected	Contractor, Village Council	Pre-construction verification and ongoing
# of grievances received regarding social issues (such as GBV, labour disputes, conflicts,)	Contractor	Monthly

9.0. Indigenous Peoples Plan

9.1. Purpose

This IPP ensures the rights, needs, and voices of Indigenous Peoples (IPs) in Moruca are respected, that they benefit equitably from the project, and that any adverse social or cultural impacts are avoided or minimized. It is guided by IDB ESPS7, which mandates Free, Prior and Informed Consent (FPIC) principles, equitably benefit-sharing, and culturally appropriate mitigation.

9.2. FPIC and Engagement Status

- Consultations followed FPIC-aligned practices: voluntary, prior to final designs
- Community has been fully informed of project benefits and risks
- No major dissent recorded thus far
- Repeat consultations planned before construction commences on hospital
- Information disclosed via notices, formal communication (Written letters)
- Indigenous representatives involved in community discussions

9.3. Indigenous-Specific Risks and Impacts

Table 7: Indigenous-Specific Risks and Impacts

Impact Area	Risk	Mitigation
Governance and Customary Law	Undermining Village Council authority if project decisions bypass traditional governance processes	Route any project decision that could potentially affect the community through Village Council / Toshao;
Territorial Integrity	Encroachment on Indigenous Land for construction or material sourcing without consent	Maintain FPIC for all land use; maintain agreed boundaries; prohibit unauthorized resource extraction
Traditional Economy and Livelihoods	Disruption of agriculture, fishing, hunting, and foraging due to restricted access or environmental impacts.	Schedule works to avoid any critical harvest/hunting seasons; prioritize Indigenous suppliers for goods and services, where applicable.
Cultural Autonomy in Health	Risk of replacing traditional healing practices without integration into hospital operations	Incorporate culturally appropriate design into the new hospital;
Language and Knowledge Systems	Loss of Indigenous language use in healthcare and project	Translate hospital and project information into any local

Impact Area	Risk	Mitigation
	communications	languages, as required;
Climate Change Vulnerability	Flooding or weather extremes affecting hospital access, resource availability and livelihoods.	Integrate climate-resilient design into the hospital and its environs; plan for emergency access routes; store emergency medical and food supplies.

9.4. Indigenous-Specific Opportunities and Enhancement Measures

Table 8: Indigenous Specific Opportunities and Enhancement Measures

Category	Opportunity / Benefit	Enhancement Measure
Governance and Participation	Strengthened role of Village Councils in project oversight and decision-making	Ensure Village Council participation in decision-making and resolution processes as it relates to the community.
	Job creation and income opportunities for Indigenous men, women and youth	Prioritize Indigenous workers in recruitment and procurement, where applicable; provide skills training Establish materials procurement agreements with the village council and villagers, where applicable.
Cultural Integration in Health Services	Increased trust in healthcare services through recognition of traditional practices	Integrate culturally adaptive health education and treatment approaches; integrate cultural appropriate design into the hospital.
Language and Communication	Preservation and use of Indigenous languages in service delivery and community engagement	Translate project and hospital materials into local languages, as required.
Climate Resilience	Increased preparedness for climate-related risks through Indigenous knowledge and practices	Incorporate Indigenous knowledge into hospital site design, flood prevention, and emergency access planning.

9.5. Indigenous People Action Plan

Table 9: IPP Action Plan

Objective	Action	Timeline	Responsibility
Ensure inclusive participation	Engage Council and community reps through all stages	Start to closeout	PEU, MOH
Protect cultural heritage	Avoid sacred sites; involve Village Council in site screenings	Before construction, during	Contractor, PEU
Promote Indigenous Employment	Maintain hiring targets of up to 60% for local Indigenous labour.	Construction phase	Contractor
Prevent SEA/SH/GBV	Culturally adapted GBV Action Plan	Ongoing	PEU, MOH, Contractor
Support traditional practices	Recognize traditional medicine practices, where applicable	Operations phase	MOH
Ensure effective communication	Translate materials and use visual/oral tools, where required	Throughout	PEU, MOH, Contractor
Support awareness, cultural mediation, and local monitoring	Participatory monitoring of the ESA-ESMP, IPP action plan and gender action plan	On-going during construction	Village Council

Annex One – Gender Based Violence Action Plan

1. PURPOSE

This GBV Action Plan sets out measures to prevent, mitigate, and respond to sexual exploitation and abuse, sexual harassment, and gender-based violence (SEA/SH/GBV) risks associated with the Moruca hospital construction project. It applies to all project workers (local and non-local), contractors, subcontractors, and any third-party actors, and ensures that prevention and response mechanisms are culturally appropriate for Indigenous communities.

2. OBJECTIVES

- Prevent all forms of GBC, including SEA/SH, during project implementation
- Provide safe, accessible, and culturally respectful grievance and referral mechanisms
- Promote gender equality and women's participation in project benefits
- Ensure accountability for perpetrators and protection for survivors

3. RISK ASSESSMENT SUMMARY

Based on consultations and regional context:

- **Labour influx risk** due to non-local workers
- **Cultural norms and power dynamics** that may silence reporting by women and girls
- **Limited access to survivor services** in remote areas
- **Potential transactional sex risks** related to economic disparities

4. PREVENTION AND MITIGATION MEASURES

Table 10: GBV Prevention and Mitigation Measures

Measure	Activity	Responsibility	Timeline	Indicator
Ensure inclusive participation	Maintain and enforce a signed Code of Conduct for all workers, including GVC prohibitions, consequences and reporting duties.	Contractor	Before worker mobilization; ongoing monitoring	At least 4 consultation meetings per year held with Village Council and community reps, documented through signed attendance sheets and meeting minutes.
Protect cultural heritage	Deliver induction and refresher training for all workers on GBC awareness, cultural respect and reporting procedures, as outlined in Labour Management Procedures.	Contractor, PEU	Pre-mobilization and quarterly	100% of site screening checklists completed with Village Council input. Zero incidents of disturbance to identified sacred sites.
Promote Indigenous Employment	Hold culturally tailored GBV prevention sessions in Moruca with separate meetings for women, men and youth.	Contractor, Village Council, PEU	Quarterly	At least 60% of unskilled labour positions for local Indigenous labour, where applicable, verified through employment records.
Prevent SEA/SH/GBV	Limit non-work-related interactions between non-local workers and community members, especially minors, prohibit relationships with anyone under 18.	Contractor, Village Council	Ongoing	100% of workers trained on GBV/SH/SEA code of conduct before deployment; Zero verified cases of GBV/SH/SEA linked to project activities.
Support traditional practices	House non-local workers in controlled accommodations; establish visitor	Contractor	Ongoing	At least one formal consultation per year with traditional medicine practitioners on referral

Measure	Activity	Responsibility	Timeline	Indicator
	restrictions and monitoring			pathways and integration with hospital services, where applicable
Ensure effective communication	Proactively recruit and support Indigenous women in project roles, ensuring equal pay	Contractor	Throughout construction	100% of project information materials translated into the local language(s) and disseminated; At least two culturally adapted communication tools (e.g., posters, community radio messages, where applicable) produced and used during the project cycle.
Ensure inclusive participation	Display posters/signs in local languages, where required on GBV reporting and survivor rights.	Contractor	Throughout project	

RESPONSE AND REFERRAL MECHANISMS

Confidential Reporting Channels

- Local focal points in the community approved by the Village Council.
- Multiple reporting options: verbal to focal point, phone, grievance boxes, email.
- Option to report anonymously, as outlined in GRM Plan.

Survivor Support and Referrals

- Link survivors to nearest medical, psychosocial, and legal support services
- Establish partnerships with the Ministry of Human and Social Services GBV Unit or Non-Governmental Organizations
- Guyana Police Force Domestic Violence Units (Where appropriate)
- Ensure survivor consent before any referral or disclosure

Accountability Measures

- Investigate allegations promptly with confidentiality
- Apply disciplinary measures: termination, legal action, and blacklisting from project
- Maintain records securely with restricted access.

APPENDIX EIGHTEEN – CONSULTATION PLAN: TEMPORARY FACILITIES

Consultation Plan for Disclosure of Environmental & Social Assessment and Environmental and Social Management Plan for Workers' Camp

Construction of Moruca Hospital in Region No.1

Health Care Network Strengthening (HCNS) in Guyana Project (GY-L1080)

June 18, 2025

PCI-SINOPHARMINTL CONSORTIUM

GESS GeoEnvironmental & SURVEYING SOLUTIONS

Introduction

This document outlines the public consultation process to be implemented by Contractor for the Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) prepared for the Workers' Camp to be utilized by the contractor for the construction of the new Moruca Hospital, Region No. 1. The contractor is a consortium made up of Powerchina International Group Limited and Sinopharm International. The consultation process ensures that relevant environmental, social, health and safety management measures, outlined in the ESA and ESMP, are disclosed and effectively communicated to stakeholders. The consultation process will be carried out in accordance with the Inter-American Development Bank's (IDB) Environmental and Social Performance Standard (ESPS) 10: Stakeholder Engagement and Disclosure.

The ESA and ESMP serves as Powerchina International Groups and Sinopharm International consortium guiding document for the construction and utilization of the temporary workers' camp for the construction of the new Moruca Hospital. It provides detailed project information, identifies potential environmental and social impacts, and outlines management strategies to mitigate risks related to the construction and operation of the camp. The ESA and ESMP reflects the expectations of both the Ministry of Health (MoH) and the IDB, and it directs the Contractor in implementing robust safety, environmental, and social safeguards. These measures aim to protect workers, the local community, and the surrounding environment, while ensuring full compliance with national regulations and relevant IDB policies.

The Contractor will update the ESA and ESMP for the Workers' Camp as necessary and annex it to the overarching ESA and ESMP for the design and construction of the Moruca Hospital. Updates will be made in response to changes in construction activities, equipment and facilities, the number of camp residents, and other relevant factors during the construction and operational phases of the camp. Revisions will also reflect feedback received from stakeholders during the disclosure and consultation process.

The main objectives of the proposed ESA and ESMP are as follows:

1) To identify and analyse potential impacts and risks that may be associated with the construction and operation of the workers' camp.

2) To recommend effective mitigation and management measures that can avoid or minimize identified impacts and risks. To guide environmental and social management matters during construction and use of the project campsite;

3) To ensure that all potential environmental and/or social issues are avoided or minimized through the implementation of recommended measures.

4) To ensure that both construction and operation of the campsite is conducted in compliance with the relevant legislations and national policies and those of the IDB, including the IDB's Environmental and Social Policy Framework, as is outlined in the ESA-ESMP.

Key Objectives of the Consultation Process

The public consultation process for this ESA and ESMP is designed to be participatory, inclusive, and transparent. Its primary aim is to provide all stakeholders, particularly those potentially affected by the workers' camp, with the opportunity to review and contribute to the development and implementation of the ESMP. The consultation process will allow stakeholders to voice concerns, seek clarification, and suggest improvements. This approach aligns with the IDB's Environmental and Social Performance Standard (ESPS) 10, which emphasizes stakeholder engagement and disclosure as essential components of responsible project management.

The following are the key objectives of the consultation process to be conducted by Powerchina International Group Limited and Sinopharm International consortium on the ESA and ESMP for the temporary workers' camp:

- Informing the stakeholders about the project and disseminate information about the temporary workers' camp, including its design, features, planned construction activities, potential impacts and planned mitigation measures.
- Initiating open dialogue to clarify the project elements and activities, and provide a platform for stakeholders to discuss the project, ask questions, raise concerns, share expectations, and give recommendations as it relates to the potential environmental, social, heal and safety impacts and mitigation measures.
- Receiving feedback from stakeholders on environmental, social health and safety concerns and recommendations associated with the project activities.

  To facilitate meaningful dialogue and ensure stakeholder understanding, the Consortium will engage stakeholders using the following five guiding questions:

1) Is the community aware of the project to construct a new hospital at Three Miles, Kumaka (in the sub-region of Moruca, Region No. 1), including the status of the project?
2) Is the community aware that an ESA and ESMP was prepared for the Contractor's workers' camp?
3) Do you feel that the environmental and social impacts of the workers' camp have been clearly explained and adequately addressed in the ESA and ESMP?
4) What concerns or suggestions do you have regarding the proposed mitigation measures for the workers' camp during construction and operation, as well as to improve the transparency and communication of the ESA/ESMP and its implementation throughout the project?
5) What communication channels or mechanisms would you prefer for receiving updates and providing feedback throughout the project?
6) Are there any socio-cultural concerns that needs to be address or incorporated into the management measures?

Consultation and Communication

The Contractor will seek to draw upon the following tools in the Project's established public consultation process:

a) Notification Mechanism:

Powerchina International Group Limited and Sinopharm International consortium will undertake a comprehensive and transparent disclosure process to ensure stakeholders in Santa Rosa village, Region No. 1, are informed of the ESA and ESMP for the workers' camp and have ample opportunity to provide feedback. The Consortium will formally announce its intention to disclose the ESA and ESMP through an official letter addressed to the Santa Rosa Village Council (VC) (see Annex A). This letter will inform the Council of the proposed document and invite them to participate in a Public Disclosure Meeting on a specified date and place where the document will be shared and discussed with all participants.

Additionally, stakeholders will be encouraged to visit the Ministry of Health's (MoH) website, where updated versions of the ESA and ESMP document and other relevant project documents are being posted as they become available. This online platform will serve as an accessible resource for those unable to attend the in-person disclosure meeting but wish to view the document.

b) Engagement Session:

Powerchina International Group Limited and Sinopharm International consortium will use in-person engagement to reach a wide audience. This will entail:

- **Face-to-face dialogues:** As part of its stakeholder engagement efforts, the Consortium will convene a Public Disclosure Meeting in Santa Rosa. This face-to-face session will be conducted in collaboration with the MoH, the MoAA, the RDC Sub-Office, and the Santa Rosa Village Council. The meeting is intended to engage a diverse group of stakeholders, including:
    - Members of the Santa Rosa Village Council, including the Toshao
    - Representatives from the Kumaka District Hospital
    - Invited officials from the MoH, RDC and MoAA

All participants in Santa Rosa will be notified in advance through the Village Council office. Participants from Georgetown will be notified by PCI-Sinopharmintl Consortium through the MoH.

The primary objective of this meeting is to present the contents of the ESA and ESMP, address stakeholder concerns, and gather feedback to enhance the environmental and social performance of the project. The ESA/ESMP document will be presented as a Summarized Handout, which highlights key points, objectives and important details to accompany the full ESA/ESMP document. Presenters will host the in-person discussion including a Q&A session where key parts of the document are discussed. Printed copies of the full ESA/ESMP will be distributed to all participants for their perusal at their own pace after the meeting.

Key meeting information are as follows:

- Proposed Venue: Santa Rosa Secondary School
- Proposed Date and Time: July 10th, 2025, and 1:30 pm.
- Agenda: *See Annex B*

To ensure transparency and demonstrate a commitment to meaningful stakeholder participation, a Consultation Report will be prepared and published on the MoH's official website within seven (7) days of the meeting. This report will include:

- A copy of the presentation delivered
- Samples of informational materials shared
- A summary of stakeholder comments and responses
- An attendance register (with sensitive personal information redacted)
- Photographs documenting the meeting

During the face-to-face Public Disclosure Meeting, participants will be encouraged to provide their email addresses and WhatsApp numbers on the Attendance Register. These contact details will be used, with consent, for:

- Disseminating project updates and documents.
- Sharing responses to stakeholder queries; and
- Receiving ongoing feedback from community members.

This approach supports two-way communication and enables broader stakeholder participation throughout the duration of the project, in line with IDB's ESPS 10 on stakeholder engagement.

c) Comments on Contributions Received:

Powerchina International Group Limited and Sinopharm International consortium will compile and summarize all comments and feedback received during the consultation process. The key issues raised by stakeholders and the Contractor's corresponding responses or actions will be clearly outlined in the Consultation Report. This Report will be published on the MoH's website to ensure transparency and continued public access to project information.

Once the Consultation Report is published, the Santa Rosa Village Council will be officially notified via phone, email, or written correspondence, enabling them to inform local residents that the Report is available online. This process ensures that stakeholders are not only heard but are also kept informed of how their input has influenced the project, in accordance with the principles of accountability and inclusive engagement under IDB's ESPS 10.

The ESA and ESMP will then be updated/revised based on the recommendations provided during the disclosure session.

Stages of the Consultation Process

1. The schedule of the consultation has been organized in two stages for an overall consultation process of 10 days:

- Stage 1: 7-day Pre-Consultation Phase – starts June 25th, 2025

During this period, the Consortium will formally announce the disclosure of the proposed ESA and ESMP for the workers' camp. To initiate this process, an official letter will be sent to the Santa Rosa Village Council on June 25th, 2025. This letter will:

- Inform the Council of the availability of the proposed ESA and ESMP
- Invite them to participate in a Public Disclosure Meeting to be held on July 10th, 2025
- Include a package containing both hard and soft copy of the ESA and ESMP document and feedback forms.
- Stakeholders can send their comments or questions in advance via email at morucaprojectpowerchina@gmail.com or by phone at +592 750 0692

- Stage 2: A one-day consultation on the ESA and ESMP – July 10th, 2025

On July 10th, 2025, the PCI-Sinopharmintl Consortium, accompanied by Environmental and Social specialists, will host a face-to-face disclosure meeting in Santa Rosa village. The purpose of this meeting is to formally present the final draft of the ESA/ESMP prepared for the workers' camp and to gather the views, suggestions, and concerns of local stakeholders.

All feedback received during the meeting will be documented and reviewed. Relevant and substantiated inputs will be incorporated into the final version of the ESA and ESMP, which will be submitted to the Ministry of Health and the IDB in July 2025.

This continued engagement reflects the Consortium's commitment to transparency, responsiveness, and alignment with IDB's ESPS 10 – Stakeholder Engagement and Disclosure.

Approval and Implementation of the ESA and ESMP for the Workers' Camp

Upon conclusion of the public disclosure process, the ESA and ESMP for the workers' camp will be revised/updated and the Consortium anticipates submitting the final version of the document to the MoH and the IDB for final review and consideration in July 2025.

Following the IDB's review and formal approval of the ESA and ESMP, the Consortium will proceed with the implementation of the Plan, in full alignment with the approved environmental and social safeguards, national regulations, and IDB's Environmental and Social Performance Standards.

Stakeholders

The successful construction and operation of the Moruca Hospital workers' camp hinges on responsible environmental and social management. As detailed in the draft ESA and ESMP for this aspect of the project, ongoing engagement with identified stakeholders is crucial for mitigating potential impacts and maximizing benefits for the local community. This table outlines those key stakeholders, explaining their specific relevance to the workers' camp construction and operation, and justifying the necessity of their active participation throughout the project's lifecycle to ensure a collaborative, sustainable, and beneficial outcome for all.

Table 6.1 - Stakeholder Identification and Justification for Engagement

Stakeholder Group	Justification for Engagement	Relevance to Project
Santa Rosa Village Council	Key decision-making body for the village, landowner for the campsite, and principal representative of the local community. Free, Prior, and Informed consultation and support are crucial for project legitimacy and community acceptance.	Granting permission for the workers' camp location. Enforcing local guidelines and regulations relevant to campsite activities. Representing community concerns regarding potential environmental and social impacts from the camp.
Kumaka District Hospital	Located near the project site. May experience direct and indirect impacts (e.g., increased demand for services, traffic). Opportunity for collaboration and potential benefits (e.g., improved infrastructure, resource sharing).	Potential increase in demand for medical services due to the influx of workers. Ensuring no disruption to existing hospital operations during camp construction and operation. Potential beneficiary of project outcomes (e.g. staff housing).
Ministry of Health (MoH)	The project proponent and overall responsible agency for the Health Care Network Strengthening Project. Their approval and oversight are essential for project implementation and compliance.	Overall responsibility for the HCNS project and its compliance with national health objectives. Review and approval of the ESA/ESMP.
Ministry of Amerindian Affairs	Responsible for protecting the rights and well-being of Indigenous communities. Ensuring compliance with the Amerindian Act (2006) and promoting culturally appropriate engagement are essential.	Overseeing the project's compliance with regulations related to indigenous populations and promoting culturally sensitive engagement.
Regional Democratic Council (Region 1)	Regional administrative body. Consultation is needed to ensure alignment with regional development plans and compliance with regional regulations.	Represents the broader regional interests and ensures the project contributes to regional development goals. Compliance with regulations related to construction and environmental protection.

The above table will be expanded to include a broader list of stakeholders as part of the project-level ESA and ESMP.

Invitation Letter

June 26th, 2025

Toshao Raul Hendricks

Santa Rosa Village Council

Santa Rosa, Moruca sub-region, Region No.1

Guyana.

Dear Toshao Hendricks,

Subject: Notification of Draft ESA/ESMP and Invitation to Consultative Meeting

As you may be aware, the Ministry of Health is undertaking the Health Care Network Strengthening (HCNS) project (GY-L1080) to improve healthcare access across Guyana. This project includes the construction of a new regional hospital at Three Miles Kumaka, Moruca sub-region. To ensure the project proceeds in an environmentally and socially responsible manner, an Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) are required, as per the Inter-American Development Bank's (IDB) policies. As the contractor, PCI-Sinopharmintl Consortium has developed a draft ESA and ESMP that focuses specifically on the construction and operation of the temporary workers' camp that is needed to support the hospital's construction. This plan addresses potential impacts related to the camp, including areas such as waste management, community relations, and workers safety, etc., and forms part of the project-level ESA and ESMP, which is currently being developed by the contractor, and which will also be consulted on with Santa Rosa's Village Council and other stakeholders once drafted.

Your village's participation and insights are highly valued in this process to ensure the project do not negatively impact on the community and the environment. In this regard, we kindly invite you to an engagement session to review and discuss the draft ESA and ESMP for the Workers' Camp. The meeting is proposed to be held at the Santa Rosa Secondary school on July 10th, 2025, at 1:30 pm.

We also seek your support in mobilizing the members of the Village Council to participate in this important discussion. Additionally, representatives from the Ministry of Amerindian Affair, Ministry of Health, Kumaka District Hospital and RDC sub-office will also be invited to participate in the session. PCI-Sinopharmintl Consortium's Technical staff and Environmental and Social Specialists will also be in attendance.

Enclosed with this letter are both hard and soft copies of the draft ESA and ESMP for review by participants from the village. All participants are welcome to send any comments or questions in advance via email at morucaprojectpowerchina@gmail.com or by phone at +592 759 8933.

Participation of your village is crucial to ensure that the project aligns with the needs and concerns of the vilage. We look forward to your confirmation of the proposed venue, date and time, and to engaging with the community during this important process.

Thank you for your cooperation and support.

Sincerely,

.....

Project Manager

PCI-Sinopharmintl Consortium

Cc. Mr. Malcolm Watkins, Permanent Secretary

Ministry of Health

Mr. Ryan Toolsiram, Permanent Secretary

Ministry of Amerindian Affairs

Mr. Vishraj Singh, Project Coordinator

Project Implementation Unit

Ministry of Health

Notice of Meeting

PCI-SINOPHARMINTL CONSORTIUM

Notice of Meeting

Dear Stakeholders,

You are invited to attend a meeting on the development of the Moruca Regional Hospital. **The primary focus of this engagement is to present details on the construction of temporary facilities.** These activities will be done before construction activities commence on the new hospital.

The meeting will be held on July 10, 2025, at 1:30 pm, at the Santa Rosa Secondary School.

We invite all to attend this meeting to learn about the Moruca Regional Hospital Project, ask questions, and discuss any concerns with members of the project team.

Light refreshments will be served. Looking forward to seeing you!

Kind regards,

Kato & Moruca Hospital Management Team of PCI-SINOPHARMINTL CONSORTIUM

11. REFERENCES

The following documents were referenced when preparing this plan:

- IDB's Environmental and Social Policy Framework (September 2020);
- Project Specific Environmental and Social Framework (Moruca)
- Environmental & Social Management Requirements Ver-1.3/2021 (CENTRAL HOUSING & PLANNING AUTHORITY).
- Guyana Environmental Protection Act 1996. Part IV Environmental Impact Assessment, Part V Prevention and control of pollution, Environmental Protection Regulations.
- Contract -Design and Build Kato Hospital in Region No. 8
- Environmental Protection Water Quality Regulations 2000
- Environmental Protection Noise Management Regulations 2000
- Environmental Protection Air Quality Regulations 2000
- GY-L1081 ESAESMP WORKERS CAMP, East Bank Demerara Road Improvement (Good Success to Timehri)