

# Environmental and Social Monitoring First Report

Project Number: 48368-001  
August 2017

## MYA: Myingyan Natural Gas Power Project Part 1

Prepared by Environ Myanmar Co Ltd.

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Prepared for :  
International Finance Corporation,  
Asian Development Bank, and  
Multilateral Investment Guaranty Agency

Prepared by  
Environ Myanmar Co Ltd.  
Yangon, Myanmar

Date  
August 2017

Project Number  
MM110014

# MYINGYAN CCPP FIRST ENVIRONMENTAL AND SOCIAL MONITORING REPORT



Revision      This report is a revision of the draft report submitted in March, 2017 and it includes Environ's responses to questions and comments submitted by ADB, IFC and MIGA, and it also reflects updates to the ESMP that were made to satisfy the CP Closing Checklist pre-financial close.

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Description    **First Semi-Annual Monitoring Report**

Ref              MM 110014

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## GLOSSARY OF TERMS AND ACRONYMS

ADB:	Asian Development Bank
CCGT:	Combined Cycle Gas Turbine
COD:	Commercial Operation Date
EHS:	Environmental, Health and Safety
EIA:	Environmental Impact Assessment
EMP:	Environmental Management Plan
EPGE:	Electric Power Generation Enterprise
ESAP:	Environmental and Social Action Plan
ESRS:	Environmental and Social Review Summary
GT:	Gas Turbine
H&S:	Health and Safety
HRSR:	Heat Recovery System Generator
IFC:	International Finance Corporation
IESC:	Independent Environmental and Social Consultant
MEPE:	Myanmar Electric Power Enterprise
MIGA:	Multilateral Investment Guaranty Agency
MOEE:	Ministry of Electricity and Energy
MOI:	Ministry of Industry
MONREC:	Ministry of Natural Resources and Environmental Conservation
PCo:	Project Company
PID:	Project Information Document
PPE:	Personal Protection Equipment
PSs:	Performance Standards
SDCI:	SDCI (Myanmar) Co. Ltd.
SEP:	Stakeholder Engagement Plan
WBG:	World Bank Group

## 1. Introduction

### 1.1 Background

The consortium of Sembcorp Utilities Pte Ltd and MMID Utilities Pte Ltd (“the Sponsors”) have been selected by the Ministry of Electric Power (MOEP) of the Government of Myanmar (GOM) as a private sector Independent Power Producer (IPP) to develop a 225 MW Combined Cycle Gas Turbine (CCGT) Power Plant on a Build, Operate and Transfer (BOT) basis in Myingyan Township, in the Mandalay region in Union Republic of Myanmar. A special purpose company (“Project Company” or “PCo”) has been established in Myanmar and ultimately will be beneficially owned by the Sponsors for the sole purpose of developing and operating the Project. The Project has two phases : Phase 1 : Commercial Operation Date (COD) of Open Cycle Mode is on 21 December 2017 while Phase 2 COD of combined cycle mode is targeted on 20 May 2018. The Myanmar Electric Power Enterprise (MEPE) is a government owned utility enterprise responsible for power, generation, transmission and system operations throughout Myanmar. The Power Purchase Agreement is 22 years from Phase 1 COD.

Environ Myanmar Co Ltd, (Environ), which is a wholly owned subsidiary of Ramboll Environ, was commissioned in 2016 by Sembcorp Myingyan Power Company Limited to act as the Lenders’ Independent Environmental and Social Consultant (IESC) on the Project. In fulfilling the role of Lenders’ IESC, ENVIRON has a duty of care to a consortium of lenders (the ‘Lenders’) to the Project, including the International Finance Corporation (IFC), Asian Development Bank (ADB) and the Multilateral Investment Guarantee Agency<sup>1</sup> (MIGA) which is a member of the World Bank Group (WBG).

### 1.2 Scope of the Environmental & Social Monitoring

This First Environmental and Social Monitoring Report covers the period from July 2016 to November 2016 and provides our findings following a November 2016 monitoring visit to the Project and includes an assessment against Applicable Standards, specifically, the IFC Performance Standards (2012), applicable WBG Environmental, Health and Safety (EHS) Guidelines, and the ADB Safeguard Policy Statement 2009 and related ADB safeguard policies including ADB Social Protection Strategy, 2001, thereby identifying any environmental and social risks associated with the Project’s realisation.

### 1.3 Key Tasks

The primary scope of the work proposed will be applicable to the Project for the construction, completion and operational phase. The IESC should be able to accomplish the following:

- To confirm that the project is compliant with the applicable standards relevant to the environment, local communities, and health and safety
- Should identify any environmental, social, labor and health and safety (H&S) related impacts, risks and or liabilities that may not have been adequately mitigated by the Project management.
- To evaluate and ensure that the implementation of the Project’s environmental, safety and social management systems, its management plans and other related documents are technically adequate.
- To identify and recommend any essential additional preventive and corrective actions to address any ESHS related impacts, risks or liabilities identified to achieve compliance to the lenders’ safeguard policy requirements.

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<sup>1</sup> Insurer for the lenders to Sembcorp Myingyan Power Company Limited.

- To develop the LESC's Environmental and Social Monitoring reports based on the prescribed activities.

#### 1.4 Report Structure

Section 2 : Describes the Project, its location and the 13 villages within the Project's area of influence.

Section 3 : Describes the Myanmar environmental regulations and procedures and the International Environmental and Social Safeguards under which the Project was designed and will be constructed and operated.

Section 4 : Describes Project monitoring during construction, including construction progress to date and planned site visit activities

Section 5 : Gap Analyses that present Environ's findings of the desktop document review, discussions and consultations with Project site staff and other stakeholders, and actual inspection of the existing conditions at the Project construction site and workers' accommodation camps of the contractors and subcontractors, identify the Project's gaps in compliance with the ADB Safeguards and IFC Performance Standards applicable to the Project and provide recommendations to close the sited gaps.

Section 6 : Presents Environ's conclusions and recommendations.

Section 7 : Lists the external reference documents cited in the body of the report.

#### 1.5 Project Categorization

The Lenders have determined that the Project is a Category A project under the IFC PSs and the following categorizations under the ADB Safeguard Policy Statement (2009):

- Environmental: Category A;
- Involuntary Resettlement: Category B; and
- Indigenous Peoples: Category C; and Environ concurs with these assessments.

In accordance with IFC's and ADB's categorization requirements, the Project undertook a full ESIA, with public disclosure and a public consultation process. The initial ESIA was developed in September 2015 and two revisions were subsequently issued (November 2015 and August 2016).

#### 1.6 Documentation Reviewed for the First Semi-Annual Monitoring

The list below includes the main documentation reviewed during the preparation of the first semi-annual monitoring report.

ERM-Siam Co Ltd. 2015. Environmental and Social Impact Assessment (ESIA) Report for Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station, Revision no. 1. November 2015.

ERM-Siam Co Ltd. 2016. Environmental and Social Impact Assessment (ESIA) Report for Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station, Revision no. 2. August 2016.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project ESMP Implementation (Power-point). 15 November 2015.



Sembcorp. Undated. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project HSSE Induction for Visitors (Power-point).

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Traffic Safety Management Plan. Document Number: SDC-HSSEC-SMP-003. 20 July, 2015.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Emergency Preparedness and Response Management Plan (Including Community Emergency Response). Document Number: SDC-HSSEC-SMP-011. 19 July, 2015.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Community Health Management Plan. Document Number: SDC-HSSEC-SMP-015. 20 July, 2015.

Sembcorp. Undated. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Stakeholder Engagement Plan. Document Number: SCI- HSSEC-SMP-001. Undated.  
Sembcorp. Undated. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Community Development Plan. Document Number: SCI- HSSEC-SMP-002.

Sembcorp. 2016. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Workers' Accommodation Management Plan. Document Number: SDC-HSSEC-SMP-016. 20 July, 2016.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Local Recruitment Management Plan. Document Number: SDC-HSSEC-SMP-017. 10 July, 2015.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Influx Management Plan. Document Number: SDC-HSSEC-SMP-018. 10 July, 2015.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Cultural Heritage Management Plan. Document Number: SDC-HSSEC-SMP-020. 19 July, 2015.

Sembcorp. 2015. Myingyan IPP Project – 225 MW Gas-fired Combined Cycle Power Station. Project Security Management Plan. Document Number: SDC-HSSEC-SMP-021. 20 July.

Sembcorp. 2015. Resettlement Framework (RF). MYA: Myingyan Natural Gas Power Project. October, 2015.

Sembcorp. Undated. Code of Business Conduct. MYA: Myingyan Natural Gas Power Project.

## 1.7 November 2016 Site Visit itinerary

<b>Table 1.2: November 2016 Site Visit Itinerary</b>	
<b>Date</b>	<b>Activities</b>
14 November (Mon)	Arrival in Myingyan
15 November (Tues)	8:30 - 9:00 Travel to the Project Site 9:00 - 12:00 Project Briefing 12:00-13:00 Lunch 13:00-16:30 Ride and walk along the track adjacent to the future water supply pipeline route and held an informal discussion in Aye Village with three young women 16:30-17:00 Planning for Next Day Activities

<b>Table 1.2: November 2016 Site Visit Itinerary</b>	
<b>Date</b>	<b>Activities</b>
16 November (Wed)	<p>8:30- 9:00 Travel to the Project Site</p> <p>9:00- 11:00 Discussion with HR Manager and Community Relations , HSE Team Executive; Walk through at the construction site including transmission tower location</p> <p>11:00-12:00 Lunch</p> <p>13:00-17:00 Visit to three workers' accommodation camps (camps of one contractor and two subcontractors) and discussions with camp managers</p>
17 November (Thurs)	<p>8:30- 9:00 Travel to the Project Site</p> <p>9:00- 9:30 Informal discussion with Hpet Taw Village Chief (social) and environmental, continued document review with HSE Project Manager</p> <p>9:30-10:00 Travel to Myingyan Township</p> <p>10:00-11:00 Interview with District Hospital Administrator</p> <p>11:00-12:00 Interview with District Police Chief</p> <p>12:00-12:30 Travel to Project Site</p> <p>12:30- 13:30 Lunch</p> <p>13:30- 15:00 Participated in Teleconference with IFC and Sembcorp (social) and for Environmental, site inspection of the jetty at Nyaung Hla.</p>
18 November (Fri)	<p>8:30 - 9:00 Travel to the Project Site</p> <p>9:00- 12:00 Site Visit Close-Out Meeting and presentation of key findings</p> <p>12:00-13:00 Lunch</p> <p>13:00-15:00 Ride-through Sa Khar Village and visit to the site where one of the four T-Line Towers will be installed. Photo documentation</p> <p>15:00- 17:00 Travel to Airport</p>

## 2. PROJECT DESCRIPTION

This section is intended to provide a brief description of the Project activities and current status. It provides a high-level summary of the Project based on the description in the Project's Final ESIA report and associated documentation, with emphasis on those elements of the Project that could give rise to environmental, social and health impacts.

### 2.1 Location and General Description

The Project site is located approximately 8 km South of the Myingyan Township, which is approximately 500 km North of Yangon and 90 km South-West of Mandalay, Myanmar. The 11.6 hectares predominately greenfield site is immediately North of an existing steel mill (Myingyan Steel Mill No. 4) owned by the Ministry of Industry (MOI), occupying a total area of 280 hectares.

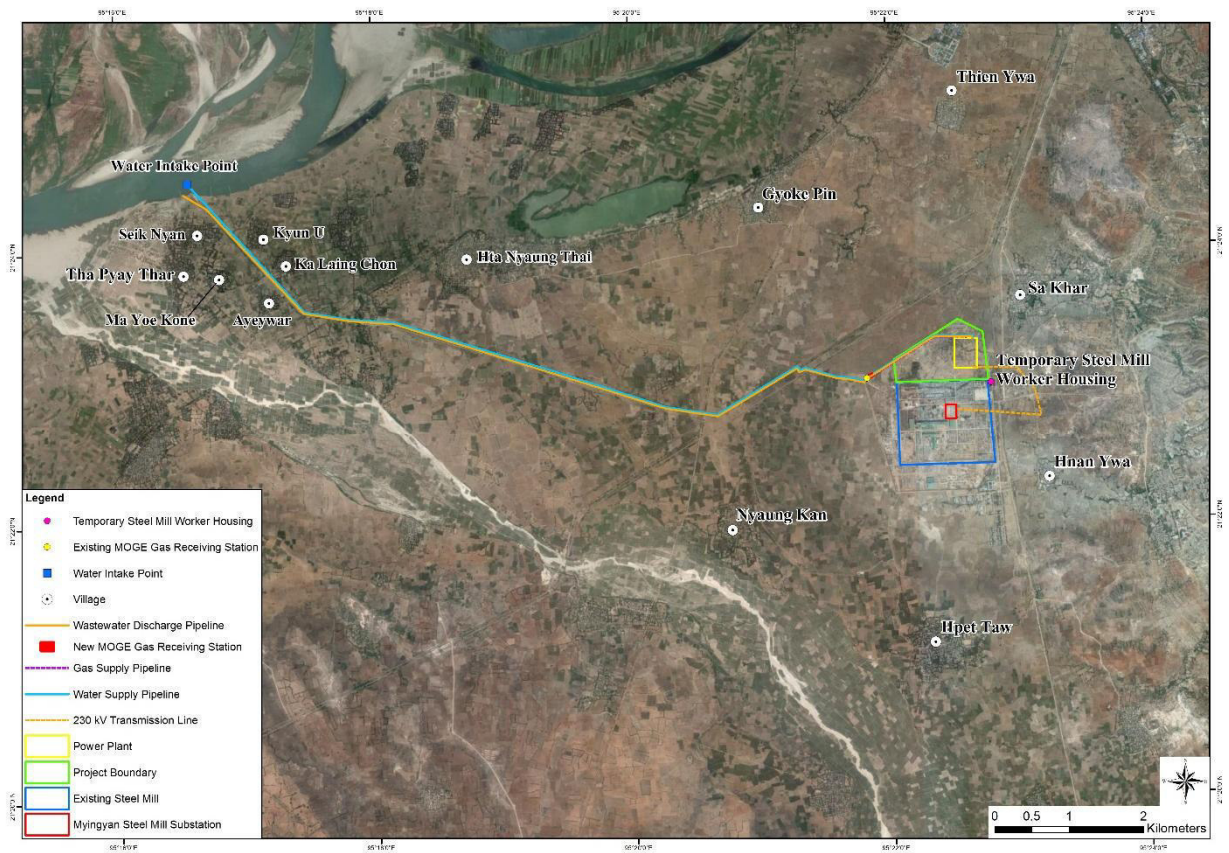


Figure 2.1: Project Location (source: Sembcorp)

The Project Company is constructing a natural gas fired power plant. Project facilities include:

- A 225 MW CCGT power plant comprising two sets of Gas Turbines (GT) units, two sets of Heat Recovery System Generators (HRSG), one steam turbine generating unit with associated auxiliary equipment, switchyard area, cooling water system, demineralized water system, and a wastewater treatment facility.
- A 1.2 km 10" gas supply pipeline from a new gas receiving station installed by Myanmar Oil & Gas Enterprise (MOGE) to supply gas to the Project site, the steel

mill and a temporary Aggreko gas-fired power plant. Work is ongoing on the gas pipeline, and the gas receiving station is almost complete.

- A 2.5 km 230 kV overhead transmission line (with eight towers – four in the steel mill site and four in Sa Khar village) between the power plant and a substation in the adjacent steel mill (connection beyond the steel mill is GOM's responsibility). The overhead line construction is complete and physical reinstatement has been completed on land around each of the towers. In August 2017 a power feed from the national grid will start to assist with Project commissioning.
- A buried 14 km 12" diameter river water supply pipeline linked to a water intake pumping station on the Ayeyerwady River, to the West. At the time of this environmental and social monitoring visit the pipeline was complete except for the final section at the river, which will be an elevated structure connected to a floating barge on which the pumps will be located.
- An overhead line adjacent to the river water supply pipeline will supply power to the pumping station. At the time of the IESC inspection the poles had been erected and power cable stringing was underway.
- A buried 14 km 12" diameter wastewater discharge pipeline parallel to the river water supply pipeline. Construction work on this pipeline has finished.

The river water supply and wastewater pipelines are both buried 2 m below the ground surface in a right of way (ROW) 2 m wide, and mostly aligned next to an existing irrigation canal. The ROW has been physically reinstated. Landusers (farmers) will be allowed to reinstate crops (beginning at the end of July 2017) but large trees will not be permitted to avoid damage to the pipelines. The same restriction applies to the gas pipeline.

Heavy plant and equipment was delivered to the site via barge along the Ayeyerwady River to a landing site known as the Nyaung Hla jetty, approximately 32 km south-west of the Project site, then by road. The landing site, which was reinforced for the Project is no longer used. Environ visited the landing site in November 2016 and July 2017 (Photo 001).

## 2.2 Associated Facilities

The Project's Associated Facilities, as defined by IFC PS1, are:

- the new gas receiving station that was recently installed by MOGE; and
- three temporary camps, owned by JEM and two sub-contractors (Bedok and Min Dhama), and two rented houses, which accommodate up to 1,700 workers during the construction phase.

## 2.3 Villages within the Project's Area of Influence

As indicated in the Stakeholder Engagement Plan (SEP), and in **Figure 2.1**, there are 13 villages located in close proximity to the Project site boundary. These include:

- Sa Khar village;
- Hnan Ywa village;
- Hpet Taw village;
- Nyaung Kan village;
- Gyoke Pin village;
- Thien Ywa village;

- Tha Pyay Thar village;
- Kyun U village\* ;
- Ka Laing Chon village\* ;
- Ayeywar village\* ;
- Seik Nyan village\* ;
- Ma Yoe Kone village\* ; and
- Hta Hnaung Taing\* .

According to the SEP, during the last stakeholder engagement meeting undertaken for the ESIA (September 2015), six additional villages were identified (indicated above with an asterisk). These additional villages included villages along the water pipeline alignment from the CCGT power plant to the Irrawady river. While information on these additional six villages was not included in the Revised ESIA (November 2015), Project-related information has since been disclosed to the six additional villages during community consultation meetings in June-July 2016. A subsequent revision to the ESIA was developed in August 2016 and this updated ESIA does contain a select amount of socioeconomic baseline data on these six villages. Additional socioeconomic baseline data on these six villages was submitted by Sembcorp directly to Environ.

### 3. LEGAL AND REGULATORY FRAMEWORK AND APPLICABLE STANDARDS

#### 3.1 Legal and Other Requirements

The Project will conform to the legal and administrative requirements of the Republic of the Union of Myanmar, international treaties to which Myanmar is signatory, and to relevant international standards, including the ADB Safeguard Policy Statements (2009) and the IFC Performance Standards (2012). In addition, the Project will conform to Sembcorp's corporate policies.

Sembcorp's Resettlement Framework (2015) provided detailed information on the multiple laws in Myanmar that address land ownership, transfer, rights use, as well as expropriation by the State.

#### 3.2 Myanmar Regulations and Guidelines

- Myanmar's present standards for electricity generation, power lines, and land acquisition;
- Myanmar Environmental Impact Assessment Procedure; and
- Myanmar National Environmental Quality Guidelines (December 2015).

#### 3.3 Relevant Agencies

There are many Governmental agencies that are viewed as stakeholders to the Project, including, at the Union government level, the Ministry of Electricity and Energy, Electric Power Generation Enterprise, and Ministry of Natural Resources and Environmental Conservation, and at the local level, the township governments of Myingyan and Taung Thar.

#### 3.4 Applicable International Standards

- IFC Environmental and Social Performance Standards (1<sup>st</sup> January 2012) applicable to the project, including:
  - PS1: Assessment & Management of Environmental & Social Risks & Impacts;
  - PS2: Labour and Working Conditions;
  - PS3: Resource Efficiency and Pollution Prevention;
  - PS4: Community Health, Safety, and Security;
  - PS5: Land Acquisition and Involuntary Resettlement;
  - PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
  - PS8: Cultural Heritage;
- WBG Environmental, Health and Safety (EHS) Guidelines in force at the time of this agreement applicable to the Project, including General EHS Guidelines (2007), Thermal Power EHS Guidelines (2008), and Electricity Transmission and Distribution EHS Guidelines (2007); and
- ADB Safeguard Policy Statement 2009 and related ADB safeguard policies including ADB Social Protection Strategy, 2001.

IFC PS7 (Indigenous Peoples) was excluded from the scope of the monitoring assignment on the basis that the Environmental and Social Impact Assessment (ESIA) performed prior to financial close concluded that no Indigenous Peoples are affected by the Project.

The Project was also assessed against the requirements of the Environmental and Social Action Plan (ESAP) agreed between IFC and the Project Company (IFC Project # 36627).

### **3.5 Status of Licenses and Permits**

The Project has not yet been issued with an Environmental Compliance Certificate (ECC) by the Ministry of Natural Resources and Environmental Conservation (MONREC), but approval to commence construction was issued by the Ministry of Electric Power (MOEP). This situation is common in Myanmar due to a backlog of ESIAs awaiting approval by MONREC since the introduction of a new national ESIA standard in 2015.

## 4. PROJECT MONITORING DURING CONSTRUCTION

At the time of the site inspection (14 – 18 November 2016) for the first Semi- Annual Environmental & Social Monitoring, the construction of the major structures was ongoing with some structures complete or nearing completion. The cooling tower excavation and lean concrete for foundation was 100% complete while the electrical building foundation and the demineralized Storage Water Tank # 1 and 2 bituminous foundations were 98% completed. The 230 KV Transmission Towers 1 & 2 piling works have also been 100% completed.

### 4.1 Planned Site Visit Activities

**Table 4.1** below presents the planned site visit activities. The key findings of the site visit conducted from 14-18 Nov 2016 as part of the First Semi-Annual Monitoring program and the recommendations are presented in the gap analyses in Section 5.



**Table 4.1: Semi-Annual Environmental and Social Safeguards Monitoring During Construction**

Description	Site Visit Activities
Environmental Safeguards	<ul style="list-style-type: none"> <li>• Inspect project status and developments</li> <li>• Study project's construction operation and measures imposed for environmental and social management system</li> <li>• Determine the project organization's capacity</li> <li>• Study the project's environmental and management teams, appointment of competent environmental managers, their capacities, activities, and their records</li> <li>• Identify onsite discrepancies between onsite reality and the reviewed documentation</li> <li>• Review monitoring reports on dust and noise level controls and their efficiencies</li> <li>• Monitor vehicular and construction sequencing activities</li> <li>• Sub-contractors' compliance to environmental and social safeguards</li> <li>• Monitor the project's environmental and social performance against all KPIs specified in ESHS</li> <li>• Study environmental monitoring program methods, exercises and records</li> <li>• Other developments and challenges not identified in the ESIA</li> <li>• Study non-compliance incidence reports</li> <li>• Check how the access roads are utilized and what the issues are with local residents</li> </ul>
Social Safeguards	<ul style="list-style-type: none"> <li>• Identify how the lands have been acquired and which involuntary resettlement procedures are followed</li> <li>• Determine ongoing land disputes, if any</li> <li>• Inspect community safety and security measures</li> <li>• Review education programs for environmental management system</li> <li>• Influx of labor, labor camp co.</li> </ul>

**Table 4.1: Semi-Annual Environmental and Social Safeguards Monitoring During Construction**

Description	Site Visit Activities
<p>Health, Safety, and Labour Rights</p>	<ul style="list-style-type: none"> <li>• Inspect health and safety requirements and compliance status</li> <li>• Review training requirements, trainings provided, selection process, and training materials</li> <li>• Interview random employees for degree of their knowledge</li> <li>• Random discussions with employees and the medics about incident status</li> <li>• Check the incident records and methods of proper documentation</li> <li>• Check emergency response procedures, mechanisms, record of drills performed, and actual drill and response</li> <li>• Examine workforce, their appearances, health provisions, and their living and working conditions</li> <li>• Random interviews with employees from different contractors for their perspectives and understanding of their rights</li> <li>• Review of complaint mechanism, reporting procedures, and problem solving methods</li> <li>• Examine labour recruitment practices and the role of local labor force</li> <li>• Review skilled labor management and capacity building programs for local workforce</li> <li>• Check degree of knowledge for environmental management system in different levels of workforce</li> <li>• Identify any grievance evolved, how the grievances are reported, and how are these handled</li> </ul>

## 5. GAP ANALYSES AGAINST THE ADB SAFEGUARDS AND IFC PERFORMANCE STANDARDS

Gap analyses were conducted of the Project's compliance with the ADB Safeguards (i.e., Principles under the Environmental and Involuntary Resettlement Safeguards, as well as SPS Paragraphs nos. 54,57 and 59) and the IFC Performance Standards applicable to the Project (i.e., PS1- PS6), and were based on desktop reviews of Project information provided to Environ and our site visit observations. The gap analyses are presented in **Table 5.1** and **Table 5.2** below. The key findings of Environ's gap analyses are summarized in the following tables and we have included a Significance indicator for each gap, as described below:

<b>Green</b>	No gap
<b>Minor</b>	Minor non-compliance, risk or minor technical breach of Applicable Standards and commitments with no material, actual or likely potential: environmental or social consequences; or significant human injury or harm.
<b>Moderate</b>	Moderate non-compliance or risk with actual or likely potential: localized and short-term environmental or social consequences; minor human injury or harm; or material short-term breach of Applicable Standards and commitments.
<b>High</b>	Major non-compliance or risk with actual or likely potential: spatially extensive and/or long-term environmental or social consequences; serious human injury/death or harm; or material and extensive breach of Applicable Standards and commitments.

<b>Table 5.1: Gap Analysis against the Applicable ADB Principles</b>			
<b>ADB Requirements &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
<b>Environmental Safeguards</b>			
<p><b>Principle 1:</b> Use a screening process for each proposed project, as early as possible, to determine the appropriate extent and type of environmental assessment so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.</p>	<ul style="list-style-type: none"> <li>IFC and ADB had made an assessment as to the applicable investigation, studies needed to be undertaken by the Project. The Myanmar Ministry of Natural Resources and Environmental Conservation (MONREC) required the project proponent (PCo) to conduct a detailed Environmental And Social Impact Assessment (ESIA) on the Project. This was prepared by an international consulting company (ERM) in November 2015 and submitted to the MONREC for review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>No further action is required.</li> </ul>	
<p><b>Principle 2:</b> Conduct an environmental assessment for each proposed project to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the project's area of influence. Assess potential transboundary and global impacts, including climate change. Use strategic environmental assessment where appropriate.</p>	<ul style="list-style-type: none"> <li>As indicated above, MONREC required the PCo to conduct a detailed ESIA on the project. This ESIA was prepared by ERM. PCo submitted the ESIA to the MONREC for review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>No further action is required.</li> </ul>	

<b>Table 5.1: Gap Analysis against the Applicable ADB Principles</b>			
<b>ADB Requirements &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
<p><b>Principle 3:</b> Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative proposed. Also consider the no project alternative.</p>	<ul style="list-style-type: none"> <li>Part of the ESIA, Chapter 2 section 2.7 ESIA Nov 2015</li> </ul>	<ul style="list-style-type: none"> <li>No further action is required.</li> </ul>	
<p><b>Principle 4:</b> Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare an environmental management plan (EMP) that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.</p>	<ul style="list-style-type: none"> <li>Chapters on air, surface water, soil and groundwater and socioeconomic impacts are included in the ESIA. Specific mitigation measures were recommended for each of the receptors discussed.</li> <li>The Environmental &amp; Social Management Plan (ESMP) is shown in Chapter 18 (Nov 2015 ESIA). More specific ESMPs were later prepared by the PCo.</li> <li>The most recent versions of the ESMP, received by Environ at the time of the site visit, were indicated as "issued for Construction".</li> <li>At the time of inspection in November 2016, the Project construction was 60% complete.</li> <li>Overall, Sembcorp has the manpower to carry out the planned Project activities. Onsite, the HSSE teams of Sembcorp Myingyan Power Company Ltd, SDCI and Principal Construction Contractor Jurong Engineering Myanmar Ltd. conduct the Project activities. Refer to Appendix 1: the Organization chart of Sembcorp for HSSE)</li> </ul>	<ul style="list-style-type: none"> <li>Continue the implementation of the Environmental Management Plans.</li> <li>The HSE Team of PCO should undergo trainings on environmental protection such as water quality of surface and groundwater, air quality, solid waste, and medical waste.</li> </ul>	<b>Moderate</b>

<b>Table 5.1: Gap Analysis against the Applicable ADB Principles</b>			
<b>ADB Requirements &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
	<ul style="list-style-type: none"> <li>Although, based on Environ's observations, the subcontractors' HSE teams are more experienced in safety and need training on environmental safeguards, and different levels of workers have different levels of knowledge and appreciation of environmental management.</li> <li>While the Project's Traffic Safety Management plan was previously limited to movement of vehicles inside the construction site, it has been revised to also cover the community access road affected by Project activities. Best Practice including maintaining low speed limits is observed. The Project will use about 40 meters of makeshift tract to bypass a bridge and avoid contributing to vehicular traffic between the jetty and the construction site.</li> </ul>		
<p><b>Principle 5:</b> Carry out meaningful consultation with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned nongovernment organizations, early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout</p>	<ul style="list-style-type: none"> <li>Part of the ESIA procedure is the stakeholder consultation. This was conducted by ERM as part of the development of the ESIA and additional stakeholder consultation was included in its revision no.2 (2016) in accordance with the EIA procedure requirements of MONREC.</li> <li>The Project's Grievance Redress Mechanism follows Sembcorp's Community Grievance Management Policy and is managed by PCo, and does not include an external Grievance Committee.</li> <li>The grievance mechanism log was submitted for our</li> </ul>	<ul style="list-style-type: none"> <li>Refer to <b>Appendix 5</b>, the Stakeholder Engagement Database, for the history of stakeholder engagement conducted by Sembcorp from 2015 to early 2017.</li> <li>PCo to establish a Grievance Redress Committee and procedure to be managed by an individual from outside of PCo/Sembcorp and to involve select community members (see Involuntary Resettlement Safeguards Principle 2 below).</li> </ul>	<b>Moderate</b>

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project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns and grievances regarding the project's environmental performance.	review and we noted that no actual grievances were recorded, as of August 2016. The three entries included were just examples of grievances.		
<b>Principle 6:</b> Disclose a draft environmental assessment (including the EMP) in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.	<ul style="list-style-type: none"> <li>Public Disclosure and Stakeholder Engagement were conducted by ERM and documented in Annex F as part of the EIA procedure of MONREC requirement.</li> <li>As Environ was informed, during public consultations, the results of the findings of the EIA consultants are presented. The project owner is also obligated to produce copies of findings, recommendations in the local language, and distribute them before the stakeholders' meetings.</li> </ul>	<ul style="list-style-type: none"> <li>Sembcorp to confirm during Environ's 2nd monitoring site visit that they complied with all these requirements during the public meetings that took place to develop the ESIA.</li> </ul>	<b>Moderate</b>
<b>Principle 7:</b> Implement the EMP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.	<ul style="list-style-type: none"> <li>The ESMP is currently being implemented at the project site and associated facilities (i.e., labor accommodation camps and the gas station). Environmental Monitoring as prescribed in the ESMP is being implemented as well. Although ESIA monitoring recommendations were not adopted on some aspects. An example is the monitoring of surface water quality (at the jetty). Only one parameter (i.e., oil &amp; grease) is being monitored. The monthly environmental monitoring report is</li> </ul>	<ul style="list-style-type: none"> <li>Monthly monitoring reporting by SDCI needs improvement. Each report must be completely and properly filled out, and a summary of the data provided in the monitoring report. Missing from the monthly monitoring reports, provided by SDCI, are the notes and observations made during the monitoring; more than just check marks to the monitoring checklist should be provided.</li> </ul>	<b>Moderate</b>

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	<p>prepared by SDCI (Myanmar) Co. Ltd. ("SDCI").</p> <ul style="list-style-type: none"> <li>Monthly Monitoring checklists following IFC Performance Safeguards have been prepared and are currently in use at the site. Observations are discussed between Sembcorp and SDCI and corrections, if any, are made. <ul style="list-style-type: none"> <li>Good dust and noise control measures were observed at the site.</li> <li>The ESIA did not recommend quantitative measurement of dust.</li> </ul> </li> <li>While Monthly Monitoring is conducted at the site by SDCI and subcontractors under the oversight of the PCo, environmental deficiencies have been noted, such as the discharge of wastewater from the workers' accommodation camps to the adjoining property or common drainage outside of the workers' accommodation camps. No grievances or Health and Safety incident reports had been submitted relating to these issues.</li> </ul>	<ul style="list-style-type: none"> <li>The frequency of monitoring (monthly) is sufficient <i>for the items included in the checklist</i>, but proper and detailed observation needs to be documented.</li> <li>HSE of PCo should review the effectiveness of the current Monthly Monitoring checklist to confirm if it provides them the necessary information to ensure that no adverse impacts are generated by the project. This includes construction wastewater (discharges), solid waste, sanitary waste water and dust during the dry season.</li> <li>Environ recommends that PCo ensure that the two EPC contractors are aware of the 20 plans included in the ESMP and that they have carried them forward in their contracts with subcontractors.</li> <li>ADB requires public disclosure of all findings including the monitoring results at all phases of the project. Sembcorp must share this information with the stakeholders.</li> </ul>	
<p><b>Principle 8:</b> Do not implement project activities in areas of critical habitats, unless (i) there are no measurable adverse impacts on the critical habitat that could impair its ability to function, (ii) there is no reduction in the population of any recognized endangered or critically endangered species, and (iii) any lesser impacts are mitigated. If a project is</p>	<ul style="list-style-type: none"> <li>No critical habitat has been observed at the Project site. It is a modified Habitat and has been operating as an industrial site for several years prior to the Project's entry into the site.</li> </ul>	<ul style="list-style-type: none"> <li>No further action is required.</li> </ul>	



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<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
located within a legally protected area, implement additional programs to promote and enhance the conservation aims of the protected area. In an area of natural habitats, there must be no significant conversion or degradation, unless (i) alternatives are not available, (ii) the overall benefits from the project substantially outweigh the environmental costs, and (iii) any conversion or degradation is appropriately mitigated. Use a precautionary approach to the use, development, and management of renewable natural resources.			
<b>Principle 9:</b> Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including direct and indirect greenhouse gases emissions, waste generation, and release of hazardous materials from their production, transportation,	<ul style="list-style-type: none"> <li>Client has prepared Environmental Management Plans in accordance with the WB Group's Environmental, Health and Safety Guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>PCo to prepare or set targets to reduce generation of solid waste (hazardous and non hazardous), conserve water and power use and the generation of green house gases during the construction and into operations phase.</li> <li>HSE Team, including all contractors and subcontractors, need to undergo training on pollution prevention, environmental sustainability principles (conservation of water and energy, indoor air quality) and health (disease prevention, food and water safety).</li> </ul>	<b>High</b>

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<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
handling, and storage. Avoid the use of hazardous materials subject to international bans or phaseouts. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.			
<b>Principle 10:</b> Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities.	<ul style="list-style-type: none"> <li>Health &amp; Safety Procedures are in place. Workers are trained and overall, the construction site has provided a safety working place and strictly implements HSE procedures. For the protection of the community in particular with the movement of vehicles, speed limits have been imposed on project vehicles.</li> <li>An Emergency Response Plan for general emergencies such as fire, chemical spill has been developed, and emergency response procedures are in place.</li> <li>Annual fire drills are held at the construction site. The initial fire drill was held on 3 October 2016.</li> <li>No audit reports on Fire &amp; Life Safety were available for the construction phase at the time of the site inspection.</li> <li>The environmental, social and health and safety (HSSE) training, conducted monthly and attended by EPC's and Sub-contractors' Supervisor, Engineer and Managers, took place on the following dates during this review period:</li> </ul>	<ul style="list-style-type: none"> <li>PCo has committed to provide additional support to site HSE personnel through more frequent site inspections by Sembcorp corporate environmental staff. Environ will also follow up on this during our 2nd Monitoring site visit scheduled in July 2017.</li> <li>The emergency response plan must be expanded to cover disease outbreak as provided in the Community Health Management Plan.</li> </ul>	<b>Moderate</b>

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An assessment of the Project against ADB's Principles under its Safeguard Policy Statement			
	<ul style="list-style-type: none"> <li>- 21 July 2016;</li> <li>- 18 August 2016;</li> <li>- 13 September 2016;</li> <li>- 20 October 2016; and</li> <li>- 17 November 2016</li> </ul> <ul style="list-style-type: none"> <li>• Environmental management trainings are held as part of the HSEE training program : Solid (hazardous and non hazardous) Waste management, and chemical spill management trainings are held.</li> <li>• Medical clinics are present in the subcontractors' area within the Project site. The clinics treat minor bruises, cuts and scratches at the construction site.</li> <li>• No incidents except 4 near misses were recorded at the time of the site visit. Incident records are kept by the contractors/subcontractors.</li> <li>• Workers interviewed included those assigned to the clinic, materials and waste management, as well as construction workers at the transmission tower area.</li> <li>• Workers are aware of the safety requirements that need to be followed.</li> <li>• The workers' preference for wearing Myanmar's traditional clothing made it difficult for workers to initially use proper attire (PPE). Sembcorp had to patiently train workers on safety attire and equipment. Now all workers wear PPE, but some need reminding.</li> </ul>		

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<p><b>Principle 11:</b> Conserve physical cultural resources and avoid destroying or damaging them by using field-based surveys that employ qualified and experienced experts during environmental assessment. Provide for the use of "chance find" procedures that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.</p>	<ul style="list-style-type: none"> <li>As per ADB, the ESMP Review identified that the Chance Find procedure should be strengthened and be in compliance with ADB requirements by making the notification process more specific. It should name organizations (and preferably individuals) and provide full contact details.</li> </ul>	<ul style="list-style-type: none"> <li>The Chance Find procedure included in the Cultural Heritage Management Plan was revised to include the names of organizations, with full contact details provided, that should be contacted in the event of a chance find.</li> <li>No further action required.</li> </ul>	
<b>Involuntary Resettlement Safeguards</b>			
<p><b>Principle 1:</b> Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks.</p> <p>Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.</p>	<ul style="list-style-type: none"> <li>The resettlement framework provides an overview of the involuntary resettlement impacts due to the project. Involuntary resettlement impacts were not envisaged for most of the project components, except the water pipeline connecting the CCGT Power plant to the Irrawady river and the transmission line connecting the power plant to the steel mill substation. The impacts were identified to be not significant and the project categorized as B.</li> <li>The resettlement framework requires the borrower to carry out a census of the affected persons and address potential physical and economic displacement impacts in line with the requirements of ADB and IFC.</li> <li>No census on the people to be economically displaced has been provided.</li> <li>As Environ was informed, the initial land use survey</li> </ul>	<ul style="list-style-type: none"> <li>Environ was informed that there will be no permanent acquisition of lands, for the transmission line as well as the water pipeline alignment. The GoM will carry out negotiations and sign agreements for right of use of the alignment with the individual land owners.</li> <li>As Environ was informed, a census on all Person Affected by the Project (PAPs) who will be physically (temporarily) and economically displaced (both land owners and land users) was not made available by the GOM to Sembcorp.</li> <li>The PAPs who will give up land for the Power Poles are the same as the PAPs who will be temporarily economically displaced for construction of the river water pipeline (147). The number of power poles for which each will be compensated should be provided</li> </ul>	<b>Moderate</b>

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	was conducted by GOM and not made available to PCo.	<p>(total number of poles has been increased to 372).</p> <ul style="list-style-type: none"> <li>We have received a soft copy map of the re-aligned pipeline route with the location of 13 villages, but it is not marked with all features and assets impacted. Refer to <b>Appendix 6</b>, for a map of the water supply pipeline route and where the locations of the three squatters' assets are identified.</li> <li>Soft copy map of Power Pole locations does not include the locations of affected farms (refer to <b>Appendix 7</b>).</li> </ul>	
<p><b>Principle 2:</b> Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring and evaluation of resettlement programs.</p> <p>Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations.</p> <p>Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns</p>	<ul style="list-style-type: none"> <li>Sembcorp has a Stakeholder and Community Engagement Policy and a Stakeholder Engagement Plan (SEP) for the Project, and has committed to ongoing stakeholder engagement with the PAPs.</li> <li>The SEP is well written with objectives, an org chart, roles and responsibilities, stakeholder activities, and KPIs. It also includes the community grievance mechanism.</li> <li>Stakeholder meetings held in 4<sup>th</sup> Qtr. 2016 were focused on negotiations on the crop and land acquisition issues. The Government Administrative Departments of Myingyan and Taung Thar, together with Sembcorp, and witnessed by Environ, held several negotiations (2016 (Oct-Nov-Dec.) and Jan 2017.</li> </ul>	<ul style="list-style-type: none"> <li>Meeting records of any community consultation meetings and/or focus group discussions held by GOM with the six additional villages since the issuance of the ESIA Revision no. 2 (in August 2016) were also not made available to Sembcorp by GOM.</li> <li>PCo should provide a listing and details on all meetings that were held with the PAPs.</li> <li>A grievance redress committee should be formed to process complaints from community members. The Grievance Redress Committee that will be formed should meet ADB 2009 SPS Paragraph 59 criteria.</li> </ul>	<b>High</b>

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	<ul style="list-style-type: none"> <li>• While Environ was informed that the Steering Committee met numerous times with the affected land owners and land users, we have not received any information on the meetings (e.g., dates of the meetings, who attended, feedback received from the PAPs or any other details on these meetings) and as a result we cannot confirm that all PAPs were consulted on their potential land loss or crop damage prior to the date of their negotiation meetings.</li> <li>• Sembcorp also has a Community Grievance Management Policy, which provides guidance for the grievance management mechanism. Sembcorp's grievance mechanism is included in the SEP.</li> </ul>		

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<p><b>Principle 3:</b> Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.</p>	<ul style="list-style-type: none"> <li>PCo and the Government are soon to finalize their negotiations and payment of cash compensation to the PAPs for land acquisition and crop damage.</li> </ul>	<p>The livelihood losses due to the land procurement for the water pipeline and the transmission line are expected to not be significant, as (i) there is no permanent land acquisition, (iii) physical displacement impacts are for the three structures who will assisted to relocate within a few meters of the existing structure, without any disruption of livelihoods, (ii) the impacts are for short term during construction phase, and (iii) all landowners will continue their current activities post construction of the water pipeline and transmission lines.</p> <p>PCo should continue to support the Government in its negotiations and payment of cash compensation to the PAPs for land acquisition and crop damage.</p> <p>After the installation of the river water pipeline and T-line towers, PCo should follow-up with each PAP to ensure that they have resumed their livelihood activities.</p>	<b>Moderate</b>
<p><b>Principle 4:</b> Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic</p>	<ul style="list-style-type: none"> <li>The physical and economic displacement impacts in the project are expected to be minor</li> </ul>	<p>Environ has recommended that PCo supports the relocation of the PAPs whose structures will be impacted along the water pipeline.</p>	<b>Low</b>

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<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
infrastructure and community services, as required.			
<p><b>Principle 5:</b> Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.</p>	<ul style="list-style-type: none"> <li>PCo has prepared a draft Community Development Plan (CDP) that aims to develop projects in the 13 villages that were identified to be within the Project's area of influence with the goal of improving the quality of life in the villages.</li> <li>The CDP demonstrates PCo's sincere intentions to respond to the project requests made in the local communities.</li> </ul>	<ul style="list-style-type: none"> <li>PCo should complete its CDP and add the following to the plan:                             <ul style="list-style-type: none"> <li>Organizational Chart with assigned responsibilities;</li> <li>Identify projects to be implemented in the short, medium and long term;</li> <li>Budgets to be allocated to the identified projects;</li> <li>Schedule to be established for project implementation; and</li> <li>Finalize on the Key Performance Indicators (KPIs).</li> </ul> </li> </ul>	<b>Moderate</b>
<p><b>Principle 6:</b> Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.</p>	Negotiated settlement is being conducted by GOM. Environ has not received copies of any GOM procedures.	<p>PCo should provide the following:</p> <ol style="list-style-type: none"> <li>Details on the final land acquisition process carried out for the affected land owners (only applies to the T-line tower foundation areas), including any preliminary notices provided to land owners, and declaration of cut-off date for eligibility for entitlements.</li> <li>The compensation calculations negotiated by the government were reviewed by Environ and were found equivalent to the replacement costs for the losses. Given that there are no long-</li> </ol>	<b>Moderate</b>



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		term livelihood impacts and the PAPs will continue to utilize their land parcels for similar purposes, post construction of the transmission line and water pipelines, it is expected that the PAPs will maintain their pre- project incomes.	
<b>Principle 7:</b> Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.	<p>The government compensation calculations are presented in Environ's Land and Crop Compensation Report. The government pricing has the following components:</p> <ul style="list-style-type: none"> <li>• Crop Loss (acres) based on actual land that would be affected during and post construction where crops could not be grown either temporarily or permanently (in the case of the 4 tower footprints);</li> <li>• Current market price for the crop/ crops grown by the land owner as surveyed by the government. Three crop cycles per year were compensated based on the effective yield of the land in the area for the type of crop identified;</li> <li>• A fixed land loss compensation was initially proposed for the T-line tower footprints of 42,000 kyats/ tower;</li> <li>• An additional 100,000 kyats/ T-line tower was subsequently offered based on the latest benchmark set by another project in the vicinity.</li> <li>• A fixed land loss compensation proposed for the water supply pipeline power poles of 10,000 kyats per power pole.</li> <li>• For farmers cultivating higher value crop (onions), additional compensation was made to the affected</li> </ul>	<ul style="list-style-type: none"> <li>• The list of 137 PAPs (Myingyan Township 94 + Taung Thar Township 43) included in the 31-page <i>Land and Crops Compensation Inventory</i>, was superseded by the list included in Appendix A to the Observer Report which includes a new total 147 PAPs (Myingyan Township 106 + Taung Thar Township 41). Final number of PAPs of the River Water Intake system was 147 and complete compensation lists of the RoW RWI system were provided by Sembcorp on April 13, 2017. Separately, an executive summary spreadsheet was also provided for Environ's review on 16<sup>th</sup> March 2017.</li> <li>• No further action is required.</li> </ul>	

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	PAP for permanent land loss due to the power poles along water supply pipeline. This additional compensation was paid in kind (i.e. fertilizer in 25 Kg bags) to the 55 affected PAP.		
<b>Principle 8:</b> Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring reporting framework, budget, and time-bound implementation schedule.	<ul style="list-style-type: none"> <li>PCo has developed a Resettlement Framework for the Project (November, 2015).</li> <li>The Resettlement Framework was submitted on October 27, 2016 to the Ministry of Natural Resource and Environmental Conservation of Myanmar.</li> </ul>	<ul style="list-style-type: none"> <li>As per the Lenders, Environ's Observer Report serves the purposes of a Resettlement Action Plan, and no further action is required.</li> </ul>	
<b>Principle 9:</b> Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and a form and language(s) understandable to affected persons and other stakeholders.  Disclose the final resettlement plan and its updates to affected persons and other stakeholders.	<ul style="list-style-type: none"> <li>Environ is not aware if the Resettlement Framework has been made publicly available in Myingyan and in the 13 affected villages.</li> </ul>	<ul style="list-style-type: none"> <li>In consultation with the Lenders, Sembcorp should determine the path forward to meet this requirement given the sensitivity of the information to be provided.</li> </ul>	<b>Moderate</b>

<b>Table 5.1: Gap Analysis against the Applicable ADB Principles</b>			
<b>ADB Requirements &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
<p><b>Principle 10:</b> Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.</p>	<ul style="list-style-type: none"> <li>Environ assumes that the full costs of resettlement are included in the presentation of the Project's costs and benefits.</li> </ul>	<ul style="list-style-type: none"> <li>No further action is required.</li> </ul>	
<p><b>Principle 11:</b> Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout project implementation.</p>	<ul style="list-style-type: none"> <li>It was PCo's intention that all compensation would be paid to the PAPs before construction commences along the river water pipeline right-of-way (ROW) and T-line tower areas.</li> </ul>	<ul style="list-style-type: none"> <li>As Environ was informed by Sembcorp, Environ attended all negotiation meetings and compensation ceremonies that took place with the PAPs, and details of these events that were made available to Environ are included in the Observer Report.</li> <li>PCo's should complete payment of all compensation to the PAPs as soon as possible since construction has begun along the water supply pipeline (ROW).</li> </ul>	<b>Moderate</b>

<b>Table 5.1: Gap Analysis against the Applicable ADB Principles</b>			
<b>ADB Requirements &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>An assessment of the Project against ADB's Principles under its Safeguard Policy Statement</b>			
<p><b>Principle 12:</b> Monitor and assess resettlement outcomes, their impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.</p>	<ul style="list-style-type: none"> <li>Resettlement activities (i.e., compensation for economic displacement) are still ongoing.</li> </ul>	<ul style="list-style-type: none"> <li>The involuntary resettlement impacts are expected to not be significant and permanent impacts are expected only for the transmission tower footings, and other lands to be utilized for the water pipeline and transmission line construction will be available back to the landowners for continued use of their land parcels.</li> <li>Though the impacts are not expected to be significant, once resettlement is complete, PCo should monitor and assess resettlement outcomes on the PAPs to ensure that the PAPs standard of living are maintained at pre-project levels and not worse off than before.</li> </ul>	<b>Moderate</b>

ADB 2009 SPS General Requirements Relevant to Non-Resettlement Community Impacts, Audit Findings and Recommended Remedial Actions			
General Requirements	Audit finding/ Gap analysis	Recommended Remedial Actions	Significance (High, Medium or Low)
<p><b>SPS Paragraph no. 54</b>  <b>Consultation and Participation.</b> ADB will require borrowers/clients to engage with communities, groups, or people affected by proposed projects, and with civil society through information disclosure, consultation, and informed participation in a manner commensurate with the risks to and impacts on affected communities.</p>	<ul style="list-style-type: none"> <li>As part of the ESIA preparation, 20 public meetings, 9 face-to-face meetings and 2 focused group discussion were held. The project has a stakeholder engagement plan requiring monthly information distribution to village leaders and quarterly face-to-face meetings. Although there are photographs of community meetings during the construction period, the record of these meetings was not available during the site inspection.</li> <li>The ESIA indicates that there were 3 monthly public meetings to disclose project information and to gather stakeholder feedback (July, August and September 2015) with each of the 7 initial villages identified as being within the Project's Area of Influence. During the last meeting prior to completion of the ESIA, 6 additional villages were identified. Environ was provided information on public meetings held with these 6 villages in June 2016, but we are not aware of any other public meetings held with these villages. Information on these 6 additional villages is included in the Stakeholder Engagement Plan.</li> <li>The PCo has ongoing open communication with the village leaders through which project information is channelled. The leaders were observed to be visiting the Project site and were welcomed by the management during Environ's site visit. For feedback, question and suggestion boxes are installed in the villages.</li> </ul>	<ul style="list-style-type: none"> <li>The PCo should continue to engage in open communication with the village leaders through which project information is channelled, and with the PAPs.</li> <li>Refer to Appendix 5, the Stakeholder database, which is based upon the Stakeholder Engagement Plan, Appendix C (Table 9.4)</li> </ul>	<p><b>Moderate</b></p>

<p><b>SPS Paragraph no. 57</b> <b>Monitoring and Reporting.</b> Borrowers/clients are required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports on their implementation performance.</p>	<ul style="list-style-type: none"><li>• Consolidated reports on the results of workers' medical examination and community engagement activities were not available' during the site inspection.</li></ul>	<ul style="list-style-type: none"><li>• Strengthen monitoring and reporting by implementing the monitoring and reporting provisions in the Community Health Management Plan and Stakeholder Engagement Plan</li></ul>	<p><b>High</b></p>
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Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
<b>PS1 Assessment and Management of Environmental and Social Risks and Impacts</b>			
Environmental and Social Assessment and Management System			
<i>Policy</i>	<ul style="list-style-type: none"> <li>Sembcorp has a Project policy and it is prominently displayed in the Sembcorp offices at the Project site.</li> </ul>	<ul style="list-style-type: none"> <li>No further action recommended. Sembcorp may revise the policy for the operation phase of the Project.</li> </ul>	
<i>Identification of Risks and Impacts</i>	<ul style="list-style-type: none"> <li>An Environmental and Social Impact Assessment (ESIA) was prepared for the project with an Environmental Management Plan and Monitoring Program. There were two revisions to the ESIA, Revision no. 1 (November 2015) and Revision no. 2 (August 2016).</li> <li>The ESIA Revision no. 1 (November 2015) included socioeconomic baseline data on the original 7 villages identified to be potentially affected by the Project, which includes:                             <ul style="list-style-type: none"> <li>oSa Khar;</li> <li>oHnan Ywa;</li> <li>oNyaung Kan;</li> <li>oHpet Taw;</li> <li>oThien Ywa;</li> <li>oGyoke Pin; and</li> <li>oTha Pyay Thar</li> </ul> </li> <li>An additional 6 villages were added after the ESIA Revision no. 1 (2015) was prepared and they include:</li> </ul>	<ul style="list-style-type: none"> <li>The socioeconomic baseline data of six villages along the water pipeline alignment that were missed in the original ESIA have been covered in the revised ESIA dated August 2016. However, there is no specific description of the assessment of community assets.</li> </ul>	<b>Moderate</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>○Ayeywar;</li> <li>○Ka Laing Chon;</li> <li>○Kyun U;</li> <li>○Seik Nyan;</li> <li>○Ma Yakone; and</li> <li>○Hta Nyamung Thai.</li> </ul> <ul style="list-style-type: none"> <li>• Socio-economic baseline data is presented in the EIA (November 2015) for the first seven affected villages, and select socio-economic baseline data is presented in the EIA Revision (August 2016) for the additional six affected villages. Additional socioeconomic baseline data on the 6 additional villages now included in the Project's area of influence, while not included in the ESIA Revision 2, was provided directly to Ramboll Environ,</li> </ul>		
<i>Management Programs</i>	<ul style="list-style-type: none"> <li>• Environmental and Social Management Plans have been prepared.</li> <li>• Some of the Plans have undergone revisions. The latest available plans reviewed, received by Environ at the time of the site visit had been issued to contractors for use during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• The updated list of plans was included in Appendix 2 to our draft 1<sup>st</sup> monitoring report (the IFC AMR, Section IV). Environ has now put the list of plans in a stand-alone appendix to the revised 1<sup>st</sup> Monitoring Report (refer to <b>Appendix 8</b>), after updating the list with any plan revisions that took place before financial close (i.e., Traffic Safety Management Plan).</li> <li>• Environ recommends that PCo ensure that the two EPC contractors are aware of the 20 plans included in the ESMP and that they have carried them forward in their contracts with subcontractors.</li> </ul>	<b>High</b>
Organizational Capacity and Competency	<ul style="list-style-type: none"> <li>• Overall, Sembcorp has the manpower to carry out the planned Project activities. Onsite the HSSE teams of Sembcorp Myingyan Power Company Ltd, SDCI and</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental management trainings held for the subcontractors, as part of the HSEE training program,</li> </ul>	<b>Moderate</b>



<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<p>Principal Construction Contractor Jurong Engineering Myanmar Ltd. conduct the Project activities. Refer to the Project's Organization Charts in Appendix 1.</p> <ul style="list-style-type: none"> <li>Although, based on Environ's observations, the subcontractors' HSE teams are more experienced in safety and need training on environmental safeguards, and different levels of workers have different levels of knowledge and appreciation of environmental management.</li> <li>The environmental, social and health and safety (HSSE) training, conducted monthly and attended by EPC's and Sub-contractors' Supervisor, Engineer and Managers, took place on the following dates during this review period: <ul style="list-style-type: none"> <li>21 July 2016;</li> <li>18 August 2016;</li> <li>13 September 2016;</li> <li>20 October 2016; and</li> <li>17 November 2016</li> </ul> </li> <li>Environmental management trainings are held as part of the HSEE training program : Solid (hazardous and non hazardous) Waste management, and chemical spill management trainings are held.</li> <li>During the site visit, Sembcorp and PCo environmental and management teams provided presentations on their respective departments' organizations, responsibilities and activities.</li> <li>The HSSE team of Sembcorp Myingyan Power Company Ltd., SDCl (Myanmar Co Ltd) and Principal Construction</li> </ul>	<p>should be expanded with an emphasis on managing compliance with the Lenders' environmental safeguards.</p> <ul style="list-style-type: none"> <li>PCo has committed to provide additional support to site HSE personnel through more frequent site inspections by Sembcorp corporate environmental staff. Environ will also follow up on this during our 2nd Monitoring site visit scheduled in July.</li> <li>During the November 2016 site visit, we were informed that a Community Relations Officer had not yet been hired and the Development Manager was fulfilling this role on an interim basis.</li> <li>As Environ was informed, a Community Relations Manager was hired in early May, prior to financial close, and is now supporting the Community Relations/Development Manager. Environ will meet with the Community Relations team during the 2nd Monitoring site visit to assess the adequacy of the team in relation to the community relations work to be accomplished (i.e., ongoing engagement with the 13 affected villages for the life of the facility).</li> </ul>	

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	Contractor Jurong Engineering Myanmar Ltd. are onsite each day.		
Emergency Preparedness and Response	<ul style="list-style-type: none"> <li>Emergency Response Plan for general emergencies such as fire, chemical spill has been developed.</li> <li>Emergency response procedures are in place.</li> <li>Annual fire drills are held at the construction site. The initial fire drill was held on 3 October 2016.</li> <li>No audit reports on Fire &amp; Life Safety were available for the construction phase at the time of the site inspection.</li> </ul>	<ul style="list-style-type: none"> <li>The emergency response plan must be expanded to cover disease outbreak as provided in the Community Health Management Plan.</li> </ul>	<b>Moderate</b>
Monitoring and Review	<ul style="list-style-type: none"> <li>At the time of inspection in November 2016, the Project construction was 60% complete.</li> <li>The HSSE team (Project HSE Manager, Sembcorp and SDCI HSE Manager) conducts monthly Environmental and Social monitoring. A checklist system, following the IFC Performance Safeguards, is utilized for this purpose. Observations are discussed between Sembcorp and SDCI and corrections, if any, are made. The monthly environmental monitoring report is prepared by SDCI (Myanmar) Co. Ltd. ("SDCI").</li> <li>Environmental monitoring program methods, exercises and records, as prescribed in the EMPs, are being implemented.</li> <li>ESIA monitoring recommendations were not adopted on some aspects.</li> <li>Good dust and noise control measures were observed at the Project Site. However no quantitative measurement of dust is conducted. The EMP in the ESIA also did not</li> </ul>	<ul style="list-style-type: none"> <li>The monthly monitoring reporting by SDCI needs to be more detailed, and it should include the notes and observations made during the monitoring; more than just check marks to the monitoring checklist should be provided.</li> <li>Each report must be completely and properly filled out, and a summary of the data provided in the monitoring report.</li> <li>Monthly monitoring is sufficient <i>for the items included in the checklist</i>, but proper and detailed observation needs to be documented as noted.</li> <li>Sembcorp should also review the effectiveness of the current Monthly Monitoring checklist to see if it provides the necessary information to ensure that <i>no</i> impacts are generated by the Project. This includes construction wastewater (discharges), solid waste, sanitary waste water and dust during</li> </ul>	<b>High</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<p>recommend quantitative measurement of dust. Only visual observation is conducted to determine if more water spraying is required.</p> <ul style="list-style-type: none"> <li>While Monthly Monitoring is conducted at the site by SDCI and subcontractors under the oversight of the PCo, environmental non compliance has not been recorded or realized, such as the discharge of wastewater from the workers' accommodation camps to the adjoining property or common drainage outside of the workers' accommodation camps. No Health and Safety incident report had been submitted covering these incidents.</li> </ul>	<p>the dry season.</p> <ul style="list-style-type: none"> <li>PCo should review the ESMP requirements and ESIA recommendations with subcontractors to ensure all monitoring are conducted at the frequency and covering the parameters required.</li> <li>PCo to consider including quantitative dust monitoring during significant construction activities where dust is generated (e.g. during heavy vehicle movement in and out of the site).</li> </ul>	
Stakeholder Engagement			
<i>Stakeholder Analysis and Engagement Planning</i>	<ul style="list-style-type: none"> <li>Sembcorp has a Stakeholder and Community Engagement Policy and a Stakeholder Engagement Plan (SEP) for the Project, and PCo has committed to ongoing stakeholder engagement with the local communities and PAPs.</li> <li>The SEP is well written with objectives, an org chart, roles and responsibilities, stakeholder activities, and KPIs. It also includes the community grievance mechanism.</li> <li>For the development of the ESIA, Sembcorp and ERM conducted public meetings in all 13 local villages.</li> <li>PCo has prepared a draft Community Development Plan (CDP) that aims to develop projects in the 13 villages as were identified to be within the Project's area of influence with the goal of improving the quality of life in the villages.</li> <li>The CDP demonstrates PCo's sincere intentions to respond to the project requests made in the local communities.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to <b>Appendix 5</b>, the Stakeholder Engagement Database, for the history of stakeholder engagement conducted by Sembcorp from 2015 to early 2017.</li> <li>As Environ was informed, records of any community consultation meetings and/or focus group discussions held by GOM with the original seven villages (Sa Khar, Hnan Ywa, Nyaung Kan, Hpet Taw, Thien Ywa, Gyoke Pin and Tha Pyay Thar) since the issuance of the ESIA Revision no.1 (in November 2015) were not made available to Sembcorp by GOM.</li> <li>Meeting records of any community consultation meetings and/or focus group discussions held by GOM with the six additional villages since the issuance of the</li> </ul>	<b>Moderate</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
		<p>ESIA Revision no. 2 (in August 2016) were also not made available to Sembcorp by GOM.</p> <ul style="list-style-type: none"> <li>PCo should complete its CDP and add the following to the plan:                             <ul style="list-style-type: none"> <li>- Organizational Chart with assigned responsibilities;</li> <li>- Identify projects to be implemented in the short, medium and long term;</li> <li>- Budgets to be allocated to the identified projects;</li> <li>- Schedule to be established for project implementation; and</li> <li>- Finalize on the Key Performance Indicators (KPIs).</li> </ul> </li> </ul>	
<i>Disclosure of Information/ Informed Consultation and Participation</i>	<ul style="list-style-type: none"> <li>As part of the ESIA preparation, 20 public meetings, 9 face-to-face meetings and 2 focused group discussions were held. The Project's stakeholder engagement plan requires monthly information dissemination to the 13 village leaders and quarterly face-to-face meetings. Although there are photographs of community meetings during the construction period, the record of these meetings was not available during the site inspection.</li> <li>The ESIA indicates that there were 3 monthly public meetings to disclose project information and to gather stakeholder feedback (July, August and September 2015) with each of the 7 initial villages identified as being within the Project's Area of Influence. During the last meeting prior to completion of the ESIA, 6 additional villages were identified. Environ was provided information on public meetings held with these 6</li> </ul>	<ul style="list-style-type: none"> <li>PCo should provide Environ with records of the meetings they have conducted with communities and PAPs since June 2016.</li> </ul>	<b>High</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<p>villages in June 2016, but we are not aware of any other public meetings held with these villages. Information on these 6 additional villages is included in the Stakeholder Engagement Plan.</p> <ul style="list-style-type: none"> <li>The PCo has ongoing open communication with the village leaders through which project information is channelled. The leaders were observed to be visiting the Project site and were welcomed by the management during Environ's site visit. For feedback, question and suggestion boxes are installed in the villages.</li> <li>Stakeholder Meetings held in 4<sup>th</sup> Qtr. 2016 were focused on negotiations on the crop and land acquisition issues. The Government Administrative Departments of Myingyan and Taung Thar, together with Sembcorp and witnessed by the LESC, held several negotiations (2016 (Oct-Nov-Dec.) and Jan 2017.</li> <li>As Environ was informed, PCo has been meeting frequently with PAPs, but we have no details on these meetings.</li> </ul>		
<i>Indigenous Peoples</i>	<ul style="list-style-type: none"> <li>Not applicable – no Indigenous People have been identified in the Project's area of influence.</li> </ul>	<ul style="list-style-type: none"> <li>No action is required.</li> </ul>	

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
<i>Private Sector Responsibilities Under Government-Led Stakeholder Engagement</i>	<ul style="list-style-type: none"> <li>PCo has been collaborating with the Government in stakeholder engagement in the affected local communities.</li> </ul>	<ul style="list-style-type: none"> <li>PCo should continue to support the Government in its engagement with the affected local communities.</li> <li>Details on how Sembcorp has been collaborating with the GOM will be collected during Environ's 2nd monitoring site visit.</li> </ul>	<b>Moderate</b>
External Communications and Grievance Mechanism			
<i>External Communications</i>	<ul style="list-style-type: none"> <li>As noted in the ESIA, PCo has engaged with multiple stakeholders including national and local governmental agencies and local communities.</li> <li>No minutes of meetings with stakeholders including national and local governmental agencies and local communities were made available to Environ, but we did receive a copy of the Stakeholder Engagement Database (refer to <b>Appendix 5</b>).</li> </ul>	<ul style="list-style-type: none"> <li>PCo should continue to engage with all stakeholders.</li> <li>More frequent contact should be given to the 6 most affected villages, especially the PAPs living in these villages.</li> <li>Environ, during its 2nd monitoring site visit will strive to gain more information on PCo's external communications.</li> </ul>	<b>High</b>
<i>Grievance Mechanism for Affected Communities</i>	<ul style="list-style-type: none"> <li>Sembcorp has a Community Grievance Management Policy, which provides guidance for the implementation of the grievance mechanism procedures. Sembcorp's Community Grievance Mechanism is incorporated into the Project's Stakeholder Engagement Plan and includes detailed procedures.</li> <li>In addition, a framework for a grievance mechanism for affected persons (PAPs) is included in the Resettlement Framework (see PS5 section below).</li> </ul>	<ul style="list-style-type: none"> <li>While the community grievance mechanism is well structured and detailed, most timeframes for actions are too long. For example, acknowledgement of receipt of the grievance and also for responses on Level 1 and 2 grievances to the claimant should be shortened to one week.</li> </ul>	<b>Moderate</b>

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>Suggestion boxes to enable anonymous submission of grievances are located at the Project site and, as we were informed, in the 13 villages.</li> <li>No complaints from the four interviewed community members (three young women living in Ayewar Village and the Hpet Taw Village Chief) were heard during the site visit.</li> <li>We received a copy of the Project's grievance mechanism records and there were no grievances registered as of August 2016. The three entries posted were just examples.</li> <li>PCo has confirmed that no grievances have been submitted to date.</li> </ul>		
Ongoing Reporting to Affected Communities	<ul style="list-style-type: none"> <li>See Disclosure of Information section above.</li> </ul>		
<b>PS2 Labor &amp; Working Conditions</b>			
Working Conditions and Management of Worker Relationship			

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
<i>Human Resources Policies and Procedures</i>	<ul style="list-style-type: none"> <li>We are in receipt of 9 combined Human Resources (HR) policy/procedures that address various HR topics: recruitment (with no discrimination); medical examination, if required for the position; performance appraisals; salary and overtime payments; and various types of paid leave (annual leave, medical leave, casual leave, maternity leave) and unpaid leave. All of the policy/procedures are based on Myanmar labor laws and regulations. While the policy/procedures are brief (about 5 pages each) they cover all the key points and are acceptable.</li> <li>A sample employment contract was reviewed and it was in compliance with PS2 requirements.</li> <li>The Project's HR individual policies/procedures, described above, apply to Sembcorp workers (full-time, part-time and temporary) and contract employees but subcontracted employees are not mentioned.</li> <li>We also are in receipt of the Project's Local Recruitment and Procurement Management Plan, which addresses the hiring of skilled labor and capacity building for the local workforce but it is not very detailed. Meetings with the Sembcorp HR Manager took place during the First Monitoring site visit and information was requested on employee training (i.e., courses, frequency and who took classes). A more in-depth review will be done during the Second Monitoring Assignment.</li> <li>Labour is recruited through construction contractors and subcontractors</li> </ul>	<p>Human Resources documentation now includes:</p> <ul style="list-style-type: none"> <li>Code of Business Conduct;</li> <li>9 individual policies/procedures, as described to the left;</li> <li>A sample employment contract;</li> <li>Employment statistics (total male and female contractor workers, information on Pco's direct employees is pending, refer to table in section 4.2);</li> <li>Local Recruitment and Procurement Management Plan; and</li> <li>Workers Grievance Mechanism is in place but the written procedure needs more details.</li> </ul> <p>During Environ's 2nd Monitoring site visit, we will discuss with PCo how they ensure through their monthly monitoring of contractors/subcontractors that subcontractor employees are treated fairly and paid in accordance with local labor laws.</p>	<b>Moderate</b>



<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
<i>Working Conditions and Terms of Employment</i>	<ul style="list-style-type: none"> <li>See Human Resources Policies and Procedures section.</li> </ul>	<ul style="list-style-type: none"> <li>See recommendations noted under the Human Resources Policies and Procedures section above.</li> </ul>	
<i>Workers' Training</i>	<ul style="list-style-type: none"> <li>Training courses of workers, including those of the Subcontractors, are held monthly.</li> <li>Environmental management trainings are held as part of the HSEE training program: Solid (hazardous and non-hazardous) Waste management, chemical spill management trainings are held.</li> </ul>	<ul style="list-style-type: none"> <li>Continue implementing the planned training programs.</li> </ul>	<b>Moderate</b>
<i>Workers' Accommodations</i>	<ul style="list-style-type: none"> <li>The Project's Workers Accommodation Management Plan applies to only one member of the EPC consortium (SDCI Myanmar Co. Ltd.). In Section 4.9 of the EPC Contract with SDCI Myanmar Co. Ltd and Jurong Engineering the environmental, social and labor requirements are described and they include the ESIA and IFC Performance Standards (2012) but we were unable to find a section in the contract that describes the requirements for the workers accommodation camps. While the subcontractors' camps we visited had dining halls, shops and recreational areas, the sleeping accommodations, for unskilled laborers, in particular, were substandard with up to 30 people sleeping on slabs in an open room.</li> </ul>	<ul style="list-style-type: none"> <li>PCo should work with the contractors and subcontractors to upgrade the workers sleeping accommodations where possible.</li> <li>PCo should ensure that the EPC Contracts are amended and that the contractors are aware of the 20 plans included in the ESMP, which includes the Workers Accommodation Management Plan, and their need to comply with these plans.</li> </ul>	<b>High</b>

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<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>These subcontractors' workers' accommodation camps are not in compliance with PS2 and with Sembcorp's Workers Accommodation Management Plan.</li> </ul>		
<i>Workers' Organizations</i>	<ul style="list-style-type: none"> <li>We were unable to find any reference to workers' rights to organize in the ESMP.</li> </ul>	<ul style="list-style-type: none"> <li>Workers' rights to organize should be explicitly stated in the Human Resources Policy or Code of Business Conduct.</li> </ul>	<b>Moderate</b>
<i>Non-Discrimination and Equal Opportunity</i>	<ul style="list-style-type: none"> <li>Sembcorp's Code of Business Conduct prohibits any form of discrimination and emphasizes equal opportunity for all.</li> <li>Environ observed no activities during the 1st Monitoring site visit that would violate the Code of Business Conduct.</li> </ul>	<ul style="list-style-type: none"> <li>Contractors/subcontractors policies and/or practices will be reviewed during the 2nd monitoring site visit to assess if they reflect Sembcorp's Code of Business Conduct.</li> </ul>	<b>Moderate</b>
<i>Retrenchment</i>	<ul style="list-style-type: none"> <li>Retrenchment is not addressed in the ESMP.</li> </ul>	<ul style="list-style-type: none"> <li>The ESMP should identify potential impacts of the retrenchment phase and identify policies and procedures to minimize its impacts.</li> </ul>	<b>Moderate</b>
<i>Grievance Mechanism</i>	<ul style="list-style-type: none"> <li>While we were informed during the November 2016 site visit that a workers' grievance mechanism exists, we were not able to find any document in the ESMP that provides the workers' grievance mechanism procedures.</li> <li>After the site visit, a one-page outline of the workers' grievance mechanism procedures was submitted to Environ.</li> <li>A suggestion box to receive anonymous grievances, inquiries and/or suggestions is located near the main door to Sembcorp's project office. As we understand, suggestion</li> </ul>	<ul style="list-style-type: none"> <li>Based on the explanation provided to Environ, a satisfactory workers' grievance mechanism is in place but its procedures are not properly documented.</li> <li>PCo should provide Environ with more detailed documentation on its workers' grievance mechanism procedures.</li> </ul>	<b>Moderate</b>

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	boxes where both workers' and communities' grievances can be submitted are now checked weekly.		
<i>Protecting the Work Force</i>			
<i>Child Labor</i>	<ul style="list-style-type: none"> <li>Semborp's Code of Business Conduct prohibits child labor.</li> </ul>	<ul style="list-style-type: none"> <li>Environ did not observe any child labor during its 1st Monitoring site visit.</li> <li>During Environ's 2nd Monitoring site visit, we will discuss with PCo how they ensure through their monthly monitoring of contractors/subcontractors that no minors are hired.</li> <li>We will also discuss with PCo the terms of the EPC Contract since it appears that the prohibition of child labor is not explicitly stated.</li> </ul>	<b>Moderate</b>
<i>Forced Labor</i>	<ul style="list-style-type: none"> <li>Semborp's Code of Business Conduct prohibits forced labor.</li> </ul>	<ul style="list-style-type: none"> <li>During Environ's 2nd Monitoring site visit, we will discuss with PCo how they ensure through their monthly monitoring of contractors/subcontractors that workers are fully paid and that they are free to leave.</li> </ul>	<b>Moderate</b>
<i>Occupational Health &amp; Safety</i>	<ul style="list-style-type: none"> <li>The ESMP includes an Occupational Health &amp; Safety Plan.</li> <li>Monitor vehicular and construction sequencing activities were observed.</li> <li>The Traffic Safety Management Plan is being implemented inside the construction site. Best Practice, including driving at low speed limits, was observed.</li> <li>Workers are well groomed and willing to observe safety rules.</li> <li>Workers at the Construction site are aware of the safety requirements that need to be followed, and health and safety requirements are strictly observed.</li> </ul>	<ul style="list-style-type: none"> <li>During the Second Monitoring site visit, Environ will discuss with PCo the process of monitoring the OHS of all contractors and will summarize the performance of the Project for the Lenders in our next report.</li> <li>The Occupational Health and Safety Management Plan was revised to serve as a comprehensive HSSE Plan.</li> <li>The Traffic Safety Management Plan was revised pre-financial close to include the following measures:</li> </ul>	<b>Moderate</b>

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<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>PPE free zones (under a canopy) were installed which serve as rest areas for workers at the construction site.</li> <li>Medical clinics are present in the subcontractors' area within the Project site. The clinics treat minor bruises, cuts and scratches at the construction site.</li> <li>No incidents except 4 near misses were recorded at the time of the site visit</li> <li>Incident records are kept by the contractors/subcontractors. Workers preference to wear the Myanmar traditional clothing made it difficult for workers to initially use proper PPE. Sembcorp had to patiently train workers on safety attire and equipment and to continue to provide reminders.</li> </ul>	<ul style="list-style-type: none"> <li>The traffic management procedures and requirements in the plan now also cover the community access road affected by Project activities.</li> </ul>	
Workers Engaged by Third Parties	<ul style="list-style-type: none"> <li>We are not in receipt of any contractor's or subcontractor's HR policies/procedures so we cannot confirm if PCo's HR policies/procedures have been incorporated into their HR policies/procedures</li> </ul>	<ul style="list-style-type: none"> <li>Subcontractors' compliance to environmental and social safeguards was observed for certain risk aspects (such as the wearing of PPE) but there is a need for improvement in some aspects, as noted during the inspection (e.g., workers' accommodation camps).</li> <li>During Environ's 2<sup>nd</sup> Monitoring site visit, we will re-inspect the subcontractors' workers' accommodation camps to assess any improvements in their sleeping accommodations for unskilled workers.</li> <li>PCo should provide copies of the contractors' and subcontractors' HR policies/procedures.</li> </ul>	<b>High</b>
Supply Chain	<ul style="list-style-type: none"> <li>As per IFC, this Supply Chain risk aspect is not applicable to this project.</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>	

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<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
<i>Influx Management</i>	<ul style="list-style-type: none"> <li>The laborers are recruited through contractors and there is no influx of job seekers.</li> <li>No influx of camp followers was reported.</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>	
<b>PS3 Resource Efficiency and Pollution Prevention</b>			
General	<ul style="list-style-type: none"> <li>The Project has developed Environmental Management Plans to cover important environmental aspects.</li> <li>The Environmental Management Plans are currently being implemented through a monthly monitoring checklist system.</li> </ul>		
Resource Efficiency	<ul style="list-style-type: none"> <li>Resource Efficiency                             <ul style="list-style-type: none"> <li>- Water use;</li> <li>- Energy conservation (fuel use and electricity); and</li> <li>- Construction materials and supplies.</li> </ul> </li> <li>There is no Conservation Plan with targets on reduction of water and energy (fuel use and electricity consumption).</li> <li>Recycling and re-use of materials are practiced at the Project site.</li> </ul>	<ul style="list-style-type: none"> <li>Sembcorp should document electricity and water consumption for one year to determine electricity and water consumption during construction to be used in setting targets for Operations.</li> <li>A Water and Energy Conservation Management Plan should be developed with targets on the reduction of levels of consumption over the short- and medium- term during construction and operations.</li> </ul>	<b>Moderate</b>
<i>Greenhouse Gases</i>	<ul style="list-style-type: none"> <li>The Project is implementing the Air Quality and Dust Management Plan.</li> <li>A separate Vehicle maintenance program is strictly being implemented. This is intended to reduced smoke and emissions at the Project site.</li> </ul>	<ul style="list-style-type: none"> <li>Contractors to continue implementing Air Quality and Dust Management Plans.</li> <li>Contractors need to improve documentation of compliance to the Management plans (Air Quality, Dust and Vehicle Maintenance).</li> </ul>	<b>Moderate</b>

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<i>Water Consumption</i>	<ul style="list-style-type: none"> <li>There is no water management and conservation plan.</li> <li>Water is drawn from tube wells inside the Project site and in the workers' accommodation camps.</li> <li>Bottled drinking water is provided to all workers.</li> <li>Potability tests are conducted.</li> </ul>	<ul style="list-style-type: none"> <li>Proper water management is observed at the Project site and at workers' camps and no leaking faucets were observed.</li> <li>The Project's good water management practices should be documented in a water management and conservation plan.</li> </ul>	<b>Moderate</b>
Pollution Prevention	<ul style="list-style-type: none"> <li>A Surface and Groundwater Management Plan is available and has been revised.</li> <li><u>Air emissions monitoring</u>; is considered under Air quality.</li> <li>No quantitative dust level measurement was conducted. This was not included in the recommendations in the EMP in the ESIA.</li> <li><u>Noise</u>: The Project is implementing its Noise and Vibration Management Plan. Measurement of noise levels is conducted by contractors.</li> <li>Noise measurements are performed by the contractors. Noise levels reported are in compliance with the Myanmar Noise levels and IFC Noise Guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>The quality of groundwater should be monitored once per year.</li> <li>Details on the revision to the Surface and Groundwater Management Plan will be checked during the second LESC monitoring in July to confirm that the plan now satisfies the Lenders' requirements. The revised Surface and Groundwater Management Plan will also be checked at the same time to confirm that it now includes annual monitoring of the quality of Groundwater.</li> <li>Consider quantitative dust monitoring during dust generating construction activities.</li> <li>No action required in regards to noise levels.</li> </ul>	<b>Moderate</b>
<i>Waste</i>	<ul style="list-style-type: none"> <li>The Project is implementing its Waste Management Plan (Non-hazardous).</li> <li>Solid wastes are managed well.</li> <li>Sanitary wastewater management should be improved (liquid wastewater) by a subcontractor (Min Dhama) as liquid effluents remained stagnant inside their workers' camp</li> </ul>	<ul style="list-style-type: none"> <li>Sembcorp should conduct a due diligence on the contracted companies which collect both non-hazardous and hazardous wastes.</li> <li>Sembcorp should document the final disposal of all wastes collected from the Project site.</li> </ul>	<b>High</b>

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<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<p>during the time of inspection. This was immediately addressed after the inspection. According to Sembcorp, the sanitary wastewater is now collected by the municipal sanitary dept.</p>	<ul style="list-style-type: none"> <li>PCo should ensure that the subcontractor takes efforts immediately to clean up the sanitary waste already disposed on the site.</li> <li>During Environ's 2nd Monitoring site visit in July, we will check to see if any changes to the Hazardous and Non Hazardous Waste Management Plan have been made since the last visit in Nov 2016.</li> <li>Also during the 2nd Monitoring site visit, there will be the need to revisit the Min Dhama and Bedok camps and observe where the discharges are now draining.</li> </ul>	<b>High</b>
<i>Hazardous Materials Management</i>	<ul style="list-style-type: none"> <li>A Hazardous Waste Management Plan is included in the ESMP, and it has been issued to contractors.</li> <li>Medical waste was not properly stored and labelled; this was addressed after the site visit inspection. Although there was very little medical waste, such as cotton or bandages, which were being generated, at the time of the First IESC Monitoring site visit.</li> <li>As Environ was informed, Sembcorp has not done any due diligence of its waste contractors (i.e., where waste are being treated or finally disposed).</li> </ul>	<ul style="list-style-type: none"> <li>Suppliers and service providers should be audited by Sembcorp, especially those dealing with hazardous waste management, as to the location where wastes are finally disposed, and if they observe proper final disposal procedures.</li> <li>PCo should monitor the storage and labeling of medical waste.</li> <li>Environ will review current procedures during the Second Monitoring site visit.</li> </ul>	<b>Moderate</b>
<i>Pesticide Use and Management</i>	<ul style="list-style-type: none"> <li>No pesticide is being used at the Project site.</li> <li>Landscaping activities are manually implemented without the use of toxic chemicals.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that no toxic pesticides are used by the contractors in eliminating plant pest.</li> </ul>	<b>Minor</b>

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<b>PS4 Community Health, Safety and Security</b>			
Community Health and Safety	<ul style="list-style-type: none"> <li>In monitoring the Project for compliance with PS 4, Environ used the Project's Community Health Management Plan (CHMP) as a reference. The CHMP identified six potential issues:                             <ul style="list-style-type: none"> <li>(i) increase in vector-borne diseases;</li> <li>(ii) increase in sexually transmitted infections (STI);</li> <li>(iii) increased potential for traffic accidents and incidents;</li> <li>(iv) increased potential for contamination of surface and groundwater use for household consumption;</li> <li>(v) increase in dust leading to health implications; and</li> <li>(vi) increased pressure on community infrastructure and services.</li> </ul> <p>To mitigate these impacts, the CHMP has 27 recommendations.</p> </li> <li>Among these recommendations, 17 were fully complied. The project has fully complied with all the applicable CHMP recommendations intended to mitigate the potential increase of incidence of STI and traffic accidents as well as the increase of dust level.</li> <li>Three recommendations were partially complied at the time of the site visit. These recommendations are as follows:                             <ul style="list-style-type: none"> <li>(i) reduce the presence of standing water;</li> <li>(ii) installation of nets in windows and doors, and</li> <li>(iii) regular inspection and maintenance of storm drainage.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The access road near the Project site needs improvement. Dust and vibration could be an issue to villagers, although the villagers have not complained about this since the start of construction in April 2016.</li> <li>While the Project's Traffic Safety Management plan was previously limited to movement of vehicles inside the construction site, it has been revised to also cover the community access road affected by Project activities.</li> </ul>	<b>Moderate</b>



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	<ul style="list-style-type: none"> <li>The temperature in the Myingyan area reaches 43<sup>o</sup> C in April.<sup>2</sup> Considering that malaria risk of Myingyan is generally considered low, the need to install nets in windows and doors may not be very compelling.<sup>3</sup></li> <li>One recommendation was not complied: to establish vector-borne diseases outbreak response plans for personnel. This response plan is not part of the EPRP. Six recommendations are considered not applicable because the situation that they intend to mitigate did not exist during the site inspection. These situations include incidence of HIV/AIDS among workers, absence of recipient water bodies for discharges and contamination of backfill materials.</li> <li>The Project registered zero footprint on seven indicators on community health, safety and security. The incidence of STI including of HIV/AIDS as well as malaria and dengue was nil. So was the number of accidents and crimes involving the project workers. There was also no reported presence of camp followers and service girls in communities adjacent to the Project site. The houses close to the perimeter fence were put up before the Project and the newly-opened shops were reportedly owned by community members and even by workers.</li> </ul>		

<sup>2</sup> <http://weather-finder.com/Myanmar/Myingyan/April/>

<sup>3</sup> [http://www.fitfortravel.nhs.uk/destinations/asia-\(east\)/myanmar/myanmar-malaria-map.aspx](http://www.fitfortravel.nhs.uk/destinations/asia-(east)/myanmar/myanmar-malaria-map.aspx)

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	<ul style="list-style-type: none"> <li>The following measures were implemented to ensure community safety and security:                             <ol style="list-style-type: none"> <li>(1) watering of earth roads four times a day during the dry season;</li> <li>2) setting the speed limit of Project vehicles to between 15-40 kph;</li> <li>3) maintenance of roads around the Project site;</li> <li>4) installation of road signs in roads around the Project site;</li> <li>5) designating night time for trucks to travel;</li> <li>6) use of a private jetty for transport of construction materials;</li> <li>7) use of about 40 meters of makeshift tract to bypass a bridge and avoid contributing to vehicular traffic between the jetty and the construction site;</li> <li>8) vehicle maintenance program;</li> <li>9) defensive driving training; and</li> <li>10) driving license requirement and verification.</li> </ol> </li> <li>To mitigate noise impacts, piling is done only at night time.</li> <li>The Code of Business Conduct states that Sembcorp is committed to contributing positively to communities where they operate; the focus is on charitable contributions and community investments.</li> </ul>		
<i>Infrastructure and Equipment Design and Safety</i>	<ul style="list-style-type: none"> <li>The Project has a company which is contracted for Project Management</li> </ul>	<ul style="list-style-type: none"> <li>PCo should work with the management of the Myingyan Steel Plant and Aggreko Power Plant and coordinate with</li> </ul>	<b>Moderate</b>

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<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>Sembcorp and Contractors' Project team HSSE team examine and monitor safety of equipment use, safe implementation of construction activities.</li> <li>Project HSSE Sembcorp and Contractor have competent engineers who monitor and document Occupational Health and Safety during work hours. Extra safety measures are undertaken during night activities.</li> <li>The active construction area during the site inspection was isolated from the nearest house by a two perimeter fence with an estimated 75-meter buffer zone between the fences.</li> </ul>	<p>local authorities to prevent the expansion of the informal settlement outside the project site.</p> <ul style="list-style-type: none"> <li>Pco should implement the proposal in the Community Development Plan to contribute to road repairs and maintenance.</li> </ul>	
<i>Hazardous Materials Management</i>	<ul style="list-style-type: none"> <li>No hazardous materials were stored and transported to and from the project site during the construction stage when the First IESC Monitoring site inspection was done..</li> </ul>	<ul style="list-style-type: none"> <li>No action is required beyond that which is already included in the recommendations for compliance with PS3.</li> </ul>	
<i>Ecosystem Services</i>	<ul style="list-style-type: none"> <li>The Project should have no impact on ecosystem services, and no ecosystem services used by the community was affected at the time of the First IESC Monitoring site inspection.</li> <li>One Ecosystem service is the use of the jetty by other users.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the other users of the jetty continue to use the river without interference and conflict arising from the use of the private jetty by the Project</li> </ul>	<b>Minor</b>
<i>Community Exposure to Disease</i>	<ul style="list-style-type: none"> <li>Community Exposure to Disease is addressed in the Community Health Management Plan.</li> <li>The project implemented the following measures to avoid worker-community transmission of diseases:</li> </ul>	<ul style="list-style-type: none"> <li>Standing water at the Min Dharma Co Ltd and Bedok Construction Engineering workers' accommodation camps should be removed. During the Second Monitoring site visit, Environ will re-visit the two camps to confirm if the water has been removed.</li> </ul>	<b>Moderate</b>

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	<ul style="list-style-type: none"> <li>(i) isolation of workers' camps through physical distance from the community or high wall;</li> <li>(ii) recruitment of workers from the community;</li> <li>(iii) installation of perimeter fence in workers' camps and security control at the gate;</li> <li>(iv) provision of staff food arrangement;</li> <li>(v) provision of small shops in one camp;</li> <li>(vi) enforcement of curfew in workers' camp;</li> <li>(vii) allowing families to stay at the camp;</li> <li>(viii) busing of workers to and from camp sites daily;</li> <li>(ix) conduction of workers' annual medical examination; and</li> <li>(x) implementation of the Security Management Plan.</li> <li>• Vectors are controlled through spraying and fogging, grass-cutting and waste management. However standing water was seen in two camps.</li> </ul>	<ul style="list-style-type: none"> <li>• Pco should discourage workers from patronizing the food shops set up close to its gate for health reasons. See recommendation below.</li> </ul>	
<i>Emergency Preparedness and Response</i>	<ul style="list-style-type: none"> <li>• Refer to section in PS1.</li> <li>• The Project has an General Emergency Response on chemical spill, fire.</li> <li>• The Plan covers road accidents caused by project-related vehicles.</li> <li>• An annual fire drill is performed; and the first one took place on 3 October 2016.</li> <li>• Workers are trained on emergency response.</li> <li>• Emergency Response team is organized and trained.</li> <li>• During the reporting period, emergency/fire drills were conducted only with the workers and employees at the construction site, and did not include members of the local communities.</li> <li>• No audit reports on Fire &amp; Life Safety were available for the construction phase at the time of the site inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• The emergency preparedness and response plan must be expanded to cover disease outbreak management as provided in the Community Health Management Plan.</li> <li>• During the Second Monitoring site visit, Environ will request evidence of the communications of the Emergency Response Plan to the affected communities and relevant Government agencies, as requested by the Lenders.</li> </ul>	<b>Moderate</b>

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	The project has a community emergency response plan as part of its EPRP. The plan describes the activities, resources and responsibilities. The plan has been disclosed to the communities. But the plan does not include a disease outbreak management plan which should cover Hepatitis B which incidence is reportedly high among workers,		
Security Personnel	<ul style="list-style-type: none"> <li>• PCo has security personnel at the Project site.</li> <li>• Security personnel at the gate check Gate Passes issued to guests prior to the visit, material delivery, all other vehicles entering and exiting.</li> <li>• Identification cards are issued to visitors and surrendered when exiting the Project site.</li> <li>• No information was provided whether any changes have been made on the existing engagement with security forces during the reporting period.</li> <li>• The project has private security personnel and does not use government security personnel. There has been no record in the Myingyan District Police Station of any incident involving project workers or of its contractors.</li> </ul>	<ul style="list-style-type: none"> <li>• During the 2nd Monitoring site visit, Environ will review current procedures and obtain additional information for the lenders (i.e., if the guards are armed or not; if the guards are trained to deal with conflicting situations; if there is a procedure in place with the local government (police) to provide additional support, if needed, and if this is covered under a written agreement).</li> </ul>	<b>Minor</b>
<b>PS5 Land Acquisition and Involuntary Resettlement</b>			
General	<ul style="list-style-type: none"> <li>• An assessment of the land acquisition and resettlement impacts are addressed in Environ's Land Acquisition and Resettlement Plan Observer Report.</li> </ul>	<ul style="list-style-type: none"> <li>• According to the Lenders, Environ's Observer Report satisfies the Lenders' requirements for the Resettlement Plan.</li> </ul>	<b>Moderate</b>

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Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>A Resettlement Framework was prepared in October 2015, but it does not provide any details on what is required for compliance with PS5.</li> <li>A census on all PAPs (both land owners and land users) was not provided.</li> </ul>	<ul style="list-style-type: none"> <li>As Environ was informed, a census on all PAPs (both land owners and land users) who will be physically (temporarily) and economically displaced (both land owners and land users) was not made available by GOM to Sembcorp.</li> <li>The list of 137 PAPs (Myingyan Township 94 + Taung Thar Township 43) included in the 31-page <i>Land and Crops Compensation Inventory</i>, was superseded by the list included in <b>Appendix A</b> to the Observer Report, which includes a new total of 147 PAPs (Myingyan Township 106 + Taung Thar Township 41). Final number of PAPs of the River Water Intake system was 147 and complete compensation lists of the RoW RWI system was provided by Sembcorp on April 13, 2017. Separately, an executive summary spreadsheet was also provided for Environ's review on 16<sup>th</sup> March 2017.</li> </ul>	<b>Minor</b>
Project Design	<ul style="list-style-type: none"> <li>While it was initially planned that 4-5 houses and/or businesses would need to be physically displaced along the river water pipeline right-of-way, now only temporary physical displacement of one business (a tea house) will be required (for approximately one month).</li> <li>In addition, PAPs in four locations (total number to be confirmed) will be economically displaced, and were compensated, based on their land loss; and include PAPs living or working:               <ol style="list-style-type: none"> <li>along the water supply pipeline right-of-way;</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>We have received a soft copy map of the re-aligned pipeline route with the location of 13 villages, but it is not marked with all features and assets impacted. <b>Appendix 6</b> does include a map of the water supply pipeline route and the locations of the three squatters' assets are identified.</li> <li>A soft copy map was provided of Power Pole locations including locations of affected farms (i.e., squatters, refer to <b>Appendix 7</b>).</li> </ul>	<b>Minor</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	2.) where the T-line and the four T-line tower foundations will be installed; 3.) where there is the risk of crop damage along the pipeline right-of-way or under the power lines; and 4.) where power poles need to be installed along the water supply pipeline right-of-way.		
Compensation and Benefits for Displaced Persons:	The land and crop compensation calculations are presented in Environ's Land and Crop Compensation Report. The Government pricing has the following components: <ol style="list-style-type: none"> <li>1. Crop Loss (acres) based on actual land that would be affected during and post construction where crops could not be grown either temporarily or permanently (in the case of the 4 tower footprints);</li> <li>2. Current market price for the crop/ crops grown by the land owner as surveyed by the Government. Three crop cycles per year would be compensated based on the effective yield of the land in the area for the type of crop identified;</li> <li>3. A fixed land loss compensation initially proposed for the T-line tower footprints of 42,000 kyats/ T- line tower;</li> <li>4. An additional 100,000 kyats/ T-line tower was subsequently offered based on the latest benchmark set by another project in the vicinity;</li> <li>5. A fixed land loss compensation proposed for the water supply pipeline power poles of 10,000 kyats per power pole; and</li> <li>6. For farmers cultivating higher value crop (onions), additional compensation was made to the affected PAP for permanent land loss due to the water supply power poles. This additional compensation was paid in kind (i.e. fertilizer</li> </ol>	<ul style="list-style-type: none"> <li>• As Environ was informed by Sembcorp, Environ attended all negotiation meetings and compensation ceremonies that took place with the PAPs, and details on these events that were made available to Environ are included in the Observer Report.</li> <li>• In regards to mitigation measures for potential damage to crops from delivery of pipes and materials to the excavation sites along the water supply pipeline route, the Piping Contractor used the Irrigation Department embankment route. As such, there were no potential damages to crops from delivery of pipes and materials to site.</li> <li>• Mitigation measures for potential damage to crops from tower erection and stringing for the T- Line Towers included that tower erection and stringing areas for the transmission line towers were fully compensated by the Government based on a 30m X 30m footprint for each transmission line tower and 10m span width between transmission towers.</li> </ul>	<b>Minor</b>

Table 5.2: Gap Analysis Against the IFC Performance Standards			
Performance Standards & Risk Aspects	Environ Myanmar's Findings & Observations from its 1 <sup>st</sup> Semi- Annual Project Construction Monitoring	Recommendations and/ or Status	Significance (High, Medium or Low)
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	in 25 Kg bags) to the 55 affected PAP.		
Community Engagement:	<ul style="list-style-type: none"> <li>As part of the ESIA development, three public meetings were conducted with each of the initial 7 villages identified to be within the Projects AOI (2015). Based on information received, only one public meeting was held with each of the six additional villages (June 2016).</li> <li>Sembcorp has a Stakeholder and Community Engagement Policy and a Stakeholder Engagement Plan (SEP) for the Project, and PCo has committed to ongoing stakeholder engagement with the PAPs.</li> <li>The SEP is well written with objectives, an org chart, roles and responsibilities, stakeholder activities, and KPIs. It also includes the community grievance mechanism.</li> <li>While Environ was informed that the Steering Committee met numerous times with the affected land owners and land users, we have not received any information on the meetings (e.g., dates of the meetings, who attended, feedback received from the PAPs or any other details on these meetings) and as a result we cannot confirm that all PAPs were consulted on their potential land loss or crop damage prior to the date of their negotiation meetings.</li> </ul>	<ul style="list-style-type: none"> <li>As Environ was informed, no additional information is available from GOM in regards to consultation meeting records.</li> <li>A listing and details on all meetings that were held with the PAPs where Environ was present (i.e., negotiation meetings and compensation ceremonies) was included in the Observer Report.</li> <li><u>Community Relations Officer</u>: According to Sembcorp, a full-time Community Relations Officer was hired and would start work in early May.</li> </ul>	<b>Moderate</b>



<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>During the 1<sup>st</sup> Monitoring site visit, due to time constraints, Environ was only able to have two informal conversations with members of the local communities, in addition to the hospital administrator and police chief, and from these conversations was able to learn that these stakeholders were well aware of the Project but this was not sufficient to make an overall assessment of the level of communication, consultation and community support for all PAPs.</li> </ul>		
Grievance Mechanism	<ul style="list-style-type: none"> <li>The framework for a grievance mechanism for stakeholders affected by the Project (the PAPs) is included in the Resettlement Framework and its procedures appear to be consistent with the Project's Community Grievance Mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>The grievance mechanism's records, focused solely on the PAPs, should be recorded in a separate category in the Project's Community Grievance Mechanism database.</li> </ul>	<b>Moderate</b>
Resettlement and Livelihood Restoration Planning and Implementation	<ul style="list-style-type: none"> <li>Socio-economic baseline data is presented in the EIA Revision 1 (November 2015) for the first seven affected villages, and select socio-economic baseline data is presented in the EIA Revision 2 (August 2016) for the additional six affected villages. Additional socioeconomic baseline data on the 6 additional villages now included in the Project's area of influence, while not included in the ESIA Revision 2, was provided directly to Ramboll Environ. However, the baselines do not identify the persons who will be economically displaced by the Project. In addition, there is no specific description of the assessment of community assets.</li> <li>A Resettlement Framework was prepared in October 2015,</li> </ul>	<ul style="list-style-type: none"> <li>No action is required since the Resettlement Framework was accepted and approved by IFC and is supplemented by the Observer Report.</li> </ul>	

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<p>but it does not provide any details on what is required for compliance with PS5.</p> <ul style="list-style-type: none"> <li>Eligibility Cut-off Date: According to Sembcorp, once the final pipeline route was confirmed by EPGE, the cut-off date was set at January 1, 2017.</li> </ul>		
Physical Displacement	<ul style="list-style-type: none"> <li>While it was initially planned that 4-5 houses and/or businesses would need to be physically displaced along the river water pipeline right-of-way, now only temporary physical displacement of one business (a tea house) will be required (for approximately one month).</li> </ul>	<ul style="list-style-type: none"> <li>After the pipe is buried, PCo should follow-up with the PAP to assess if he has resumed his previous level of business activities and to document outcomes.</li> </ul>	<b>Moderate</b>
Economic Displacement	<p>PAPs in four locations (147+3); total number to be confirmed) will be economically displaced, and will be compensated, based on their land loss; and will include PAPs living or working:</p> <ol style="list-style-type: none"> <li>along the water supply pipeline right-of-way;</li> <li>where the T-line and the four T-line tower foundations will be installed;</li> <li>where there is the risk of crop damage along the pipeline right-of-way or under the power lines; and</li> <li>where 340-350 power poles need to be installed along the water supply pipeline right-of-way.</li> </ol> <ul style="list-style-type: none"> <li>PAPs who will be economically displaced each will receive a one-time cash compensation for their loss.</li> <li>The compensation scheme for farmers and squatters is described in Environ's Land and Crop Compensation Report. Compensation rates vary by crops raised.</li> </ul>	<ul style="list-style-type: none"> <li>PCo reached agreement with EPGE over the additional amount of the compensation to be paid by PCo to the PAPs.</li> </ul> <p>The PAPs who will give up land for the Power Poles are the same as the PAPs who will be temporarily economically displaced for construction of the river water pipeline (147). A list with the number of power poles for which each PAP will be compensated should be provided (total number of poles is between 340 - 350).</p> <ul style="list-style-type: none"> <li>After the pipe is buried and T-Line towers installed, PCo should follow-up with the PAPs to assess if they have resumed their previous levels of business activities and to document outcomes.</li> </ul>	<b>Moderate</b>

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
Private Sector Responsibilities under Government-Managed Resettlement	<ul style="list-style-type: none"> <li>For the Project, GOM managed the land acquisition process, stakeholder engagement and negotiations with the PAPs, and determined the amount of compensation due each PAP and Pco, on behalf of GOM, effected payment at group compensation ceremonies. For further details, refer to the Observer Report.</li> <li>In response to their requests, PCo made a one-time additional cash payment to the three land owners who will be giving up land for the four T-Line towers' foundations</li> </ul>	<p>Environ attended the compensation ceremonies to witness the process of compensation payments to the affected persons. Based on a comparison of the compensation amounts paid and the quantification of losses and crop productivity in the area, Environ confirms that the compensation amounts paid are equivalent to the replacement costs.</p> <p>Sembcorp has been actively engaged with the GoM in providing additional compensation to PAPs where the government compensation levels were found to be below replacement cost.</p> <p>Sembcorp to continue working with GoM to obtain (for its records) complete documentation of the compensation awards to PAPs, and share with Environ.</p>	<b>Low</b>
<b>PS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>			

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
Natural Habitat	<ul style="list-style-type: none"> <li>The area surrounding the Project has long been modified to agricultural use. It is no longer a natural habitat.</li> <li>Project area is modified, and has been converted to industrial use for many years.</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>	
Legally Protected and Internationally Recognized Areas	<ul style="list-style-type: none"> <li>The site is not a legally protected and internationally recognized area.</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>	
Critical Habitat	<ul style="list-style-type: none"> <li>The Project area has long been converted to industrial use.</li> <li>The area surrounding the Project has long been modified to agricultural use though bird species may still be diverse with some migratory birds.</li> </ul>	<ul style="list-style-type: none"> <li>No action required</li> </ul>	
Invasive Alien Species	<ul style="list-style-type: none"> <li>No invasive alien species had been introduced since the start of construction and during landscaping of the site.</li> </ul>	<ul style="list-style-type: none"> <li>The Project should not introduce any alien species especially invasive ones which will compete with the indigenous plant species.</li> </ul>	<b>Minor</b>
Management of Ecosystem Services	<ul style="list-style-type: none"> <li>The Jetty is located along the Ayeyarwaddy.</li> <li>The Ayeyarwaddy is a major and important river transport route in Myanmar.</li> <li>It is also a source of fishfood.</li> <li>No adverse impact is expected due to the jetty. There are many other users of the river. The Jetty is privately owned and there are no other current users of the jetty.</li> </ul>	<ul style="list-style-type: none"> <li>There is a small informal community living in the area near the jetty, and this community that utilizes the river must not be affected by the movement of materials at the jetty.</li> <li>The river must be protected from contamination since it also a fishing ground in Myanmar.</li> <li>Proper waste management including solid waste must be observed by the contractors and suppliers.</li> </ul>	<b>Moderate</b>

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
		<ul style="list-style-type: none"> <li>Ensure that no oil spill and solid waste are dumped by vessels at Nyaung Hla jetty.</li> <li>Spill kits must be onboard at all times by the marine vessels in case of oil spill from the boats</li> </ul>	
Sustainable Management of Living Natural Resources	<ul style="list-style-type: none"> <li>The Project site is an industrial area.</li> </ul>	<ul style="list-style-type: none"> <li>Continue implementing pollution prevention measures as described in the EMPs.</li> </ul>	<b>Moderate</b>
Supply Chain	<ul style="list-style-type: none"> <li>As per IFC, this risk aspect is not applicable to the Project.</li> </ul>		
<b>PS7 Indigenous Peoples</b>			
	<ul style="list-style-type: none"> <li>As noted in the ESIA, there are no Indigenous People in the Project's area of influence, therefore, PS7 is not applicable to the Project (as noted in the IFC ESRS).</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>	
<b>PS8 Cultural Heritage</b>			

<b>Table 5.2: Gap Analysis Against the IFC Performance Standards</b>			
<b>Performance Standards &amp; Risk Aspects</b>	<b>Environ Myanmar's Findings &amp; Observations from its 1<sup>st</sup> Semi- Annual Project Construction Monitoring</b>	<b>Recommendations and/ or Status</b>	<b>Significance (High, Medium or Low)</b>
<b>Overview of Performance Standards on Environmental and Social Sustainability</b>			
	<ul style="list-style-type: none"> <li>As noted in the IFC ESRS, PS8 is not applicable to the Project.</li> <li>As per ADB, the ESMP Review identified that the Chance Find procedure should be strengthened and be in compliance with ADB requirements by making the notification process more specific. It should name organizations (and preferably individuals) and provide full contact details.</li> </ul>	<ul style="list-style-type: none"> <li>The Chance Find procedure included in the Cultural Heritage Management Plan was revised to include the names of organizations, with full contact details provided, that should be contacted in the event of a chance find.</li> <li>No further action required.</li> </ul>	

## 6. CONCLUSIONS AND RECOMMENDATIONS

As of the date of this report, the Project construction is ongoing, and PCo is striving to manage completion of the Project in accordance with the Applicable International Standards. There are a number of gaps in compliance with these standards, as described in **Section 5**. The gap analyses included in **Section 5** are organized in the order of the ADB Principles and IFC Performance Standards.

A key issue to be given a closer review in the Second Semi-Annual Monitoring period is, subject to Environ's receipt of copies of all contracts with subcontractors, the extent to which Sembcorp's and PCo's policies, plans and procedures included in its ESMP are being incorporated into contractors' contracts with subcontractors and the subcontractors' implementation of these policies, plans and procedures. The Grievance Redress Committee, envisioned in the ADB-approved Resettlement Framework to manage a mechanism that meets ADB 2009 SPS Paragraph 59 criteria, needs to be established as soon as possible. Based on our observations, more direction and training needs to be given to the subcontractors in regards to their awareness of and compliance with environmental and social safeguards.

While Sembcorp participated in the compensation ceremony meetings conducted by GAD with the PAPs whose lands are affected by the transmission line and the water pipeline alignments, complete records of consultations have not been made available to Sembcorp by GAD. Environ will followup on this outstanding information in its next monitoring mission.

We anticipate that our receipt and review of the outstanding requested information, identified in the recommendations in **Section 5**, would close a lot of the gaps and bring the Project closer to compliance with the Applicable International Standards.

Environ, during its upcoming 2<sup>nd</sup> monitoring site visit, will strive to obtain as much of the outstanding Project information as possible to close the noted gaps.

## 7. REFERENCES

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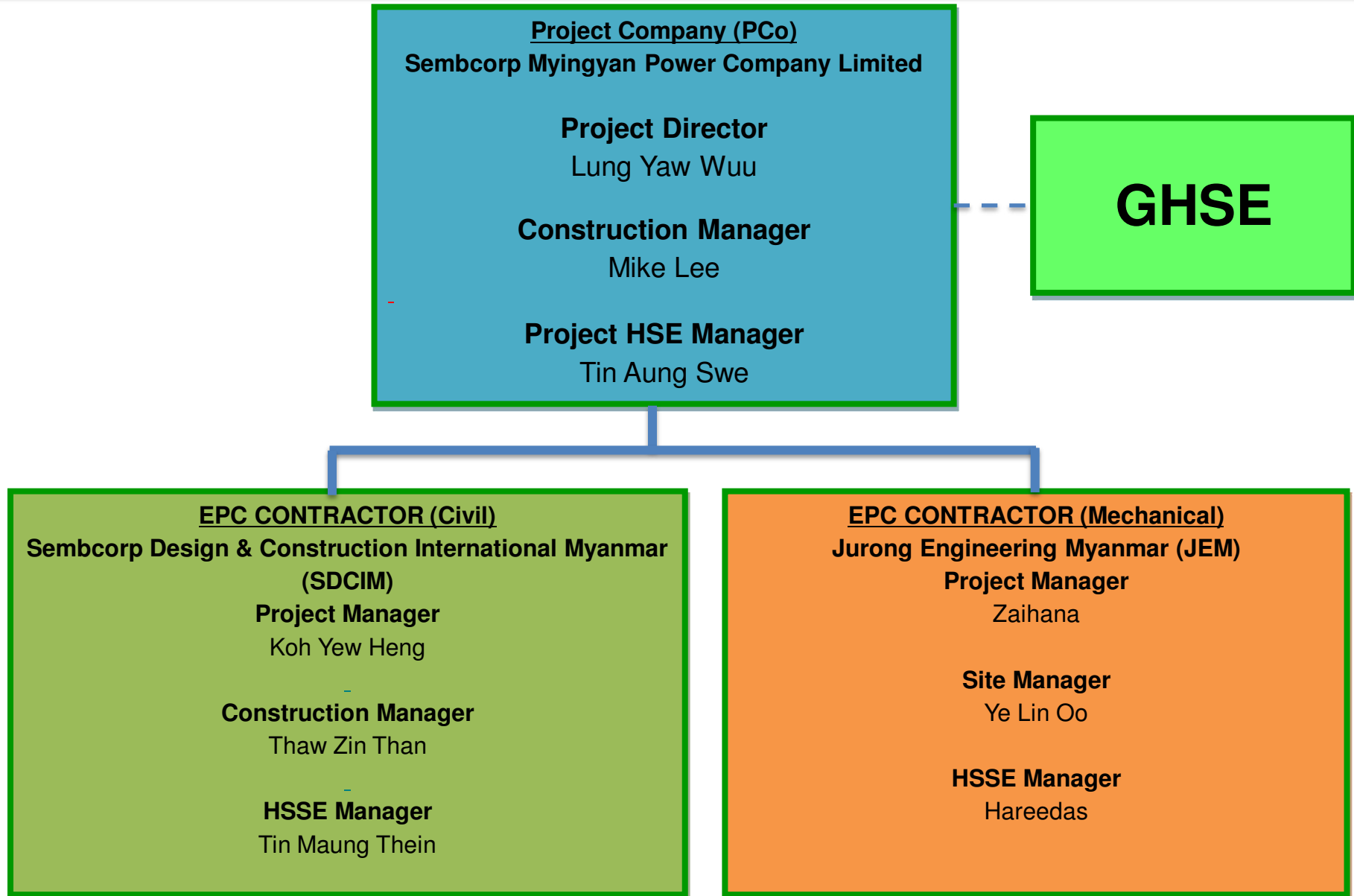


## APPENDICES

## **APPENDIX 1**

### **PROJECT ORGANISATION CHARTS**

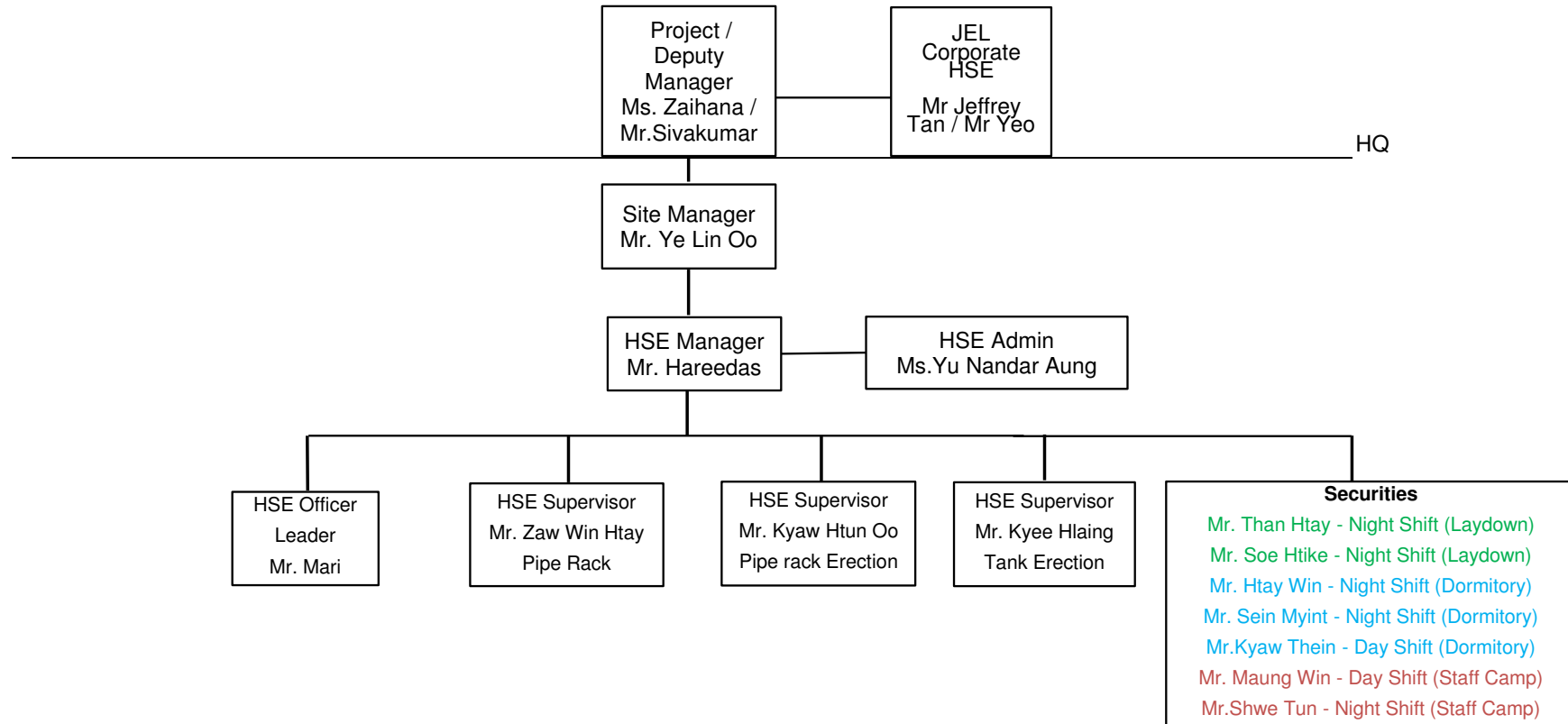
## 2.3 - Project HSSE Organization Chart





# Jurong Engineering (Myanmar) Limited Myingyan 225MW CCPP Project Site Safety Organizational Chart

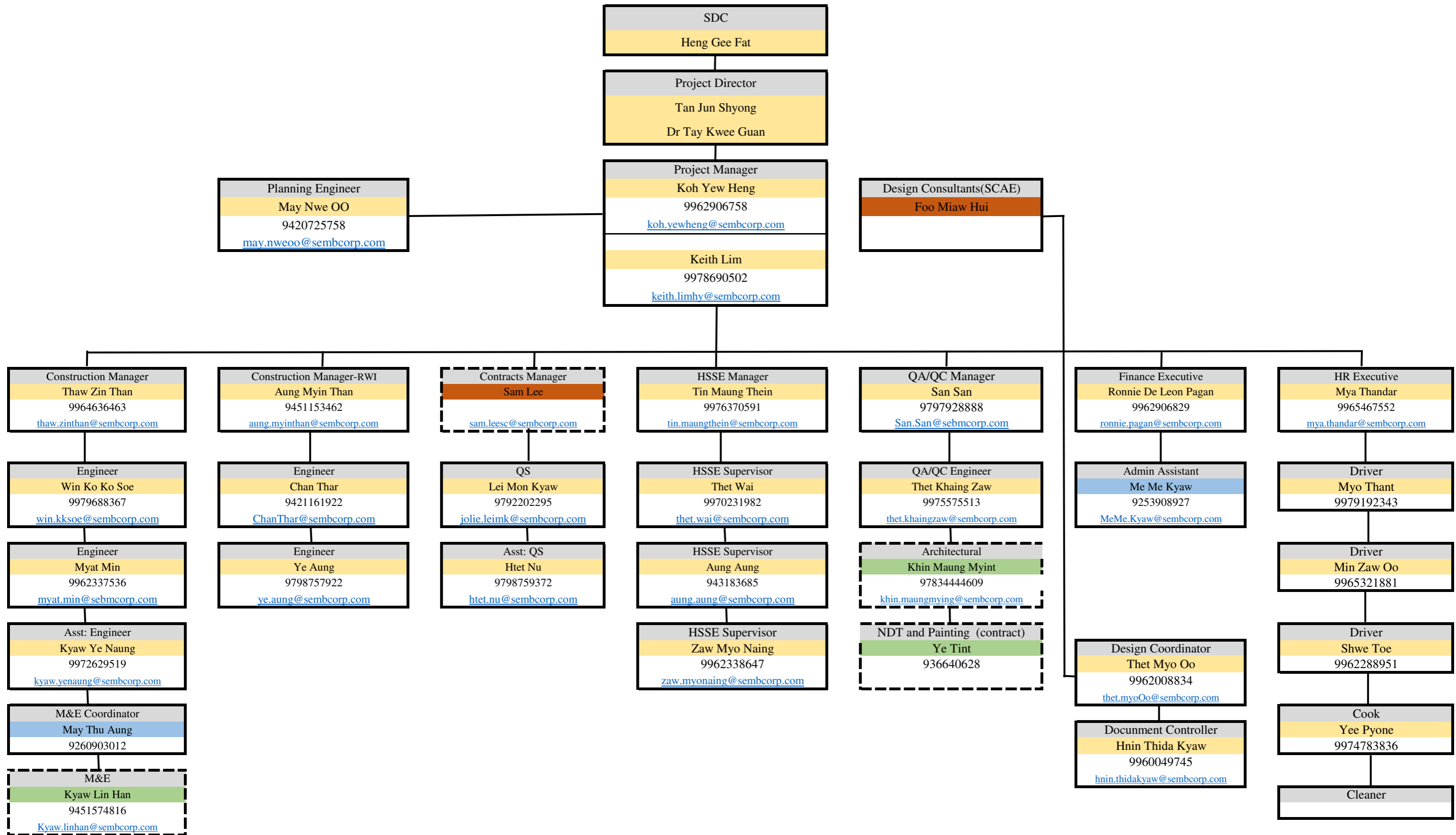
12-Dec-16



Prepared by: Mr. Hareedas \_\_\_\_\_  
HSE Manager

Approved by: Mr. Ye Lin Oo \_\_\_\_\_  
Site Manager

**MYINGYAN 225MW COMBINED CYCLE POWER PROJECT  
SDCI(MYANMAR) Project Organization Chart**



## **APPENDIX 2**

### **PHOTOS OF THE CORRECTIONS UNDERTAKEN AFTER THE SITE VISIT INSPECTION**

Clean up the effluent from the MinDhama Workers camp to prevent diseases



As requested by the land owner, drained water from the bathing area was reused for a banana plantation (MinDhama Workers Camp)



Clean up the effluent from the Bedok Workers Camp to prevent disease



Already clean up the choked drain and the drain will be maintained regularly (Bedok Workers Camp)





**APPENDIX 3**  
**LIST OF PERSONS MET AND CONFERRED WITH DURING THE NOVEMBER**  
**2016 SITE VISIT**

## **People Met and Conferred with during the 14-18 November 2016 Site Visit**

### **Sembcorp Utilities Pte. Ltd**

Lung Yaw Wu - Senior Vice President  
Htoon Nay Htoon - Commercial Manager  
Tin Maung Thein - HSSE Manager  
Aung Lwin Oo - Development Manager  
Koh Yew Heng - Manager for Projects  
PG Ramesh - Manager for Projects  
Tin Aung Swe - Project HSSE Manager  
Mya Thandan - Human Resources Manager  
Henry Aung Kyow Khie Hoon - Human Resources and Administration Manager (Singapore)  
Jessica Tan Shi Han - Community Relations Executive (Singapore)

### **Sembcorp Design Corporation**

Koh Yem Heng - Project Manager  
Zaw Myo Neing - Safety Supervisor

### **Jurong Engineering**

Hareedas Perumal - HSE Manager  
Ye Lin Oo - Site Manager  
Victor Aung Myin - Camp Administration Manager

### **Bedok Construction and Engineering Co Ltd.**

Ma Sam Htwe - Kitchen Staff  
Thann Win - Camp Manager

### **Min Dhama Co. Ltd.**

Kyaw Min Tun - Safety Officer  
Htun Linn Naing - Project Manager

### **Myingyan District Hospital**

Dr. Kay Thi Win - Hospital Director

### **Myingyan District Police Station**

Kyaw Oo - Chief

### **Hpet Taw Village**

Soo Tun - Chief

### **Ayeywar Village**

Three unidentified women