

CHAPTER 2: OVERVIEW OF POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

2.1 Overview of National Policy and Legal Framework

2.1.1 Institutional Setting of the National Level

Under the Office of the President as of August 2018, there are twenty-five (25) ministries that support the national implementation of environment and social considerations in development projects. The leading ministry in-charge of environmental and social considerations is Environmental Conservation Department, ECD of the MONREC, which was reorganized with the former Ministry of Environmental Conservation and Forestry (MOECF) and Ministry of Mines in March 2016. MONREC is acting as a main ministry for the preparation of environmental related laws/rules/procedures/ policies/guidance, environmental conservation, management of environmental issues, and the development of environment-friendly businesses and sustainable projects in Myanmar.

Key ministries and state-owned enterprises that have jurisdiction or are typically involved in environment and social considerations related to the project include the followings:

- Ministry of Natural Resources and Environmental Conservation (MONREC): Environmental Conservation Department (ECD), Yangon Region under MONREC has the main responsibility in EIA Process for the project.
- Myanmar Investment Commission (MIC), a government agency is responsible for coordinating with ministries (e.g. MOI, MOEE, MOTC, MOC, etc.) and other state entities to facilitate foreign investment in Myanmar. MIC is also responsible for granting MIC permits which enable foreign investors to carry out business activities under the Myanmar Investment Law (2016).

2.1.2 Laws, Rules and Acts related to Environmental and Social Considerations

The laws, rules and acts related to environmental and social considerations in Myanmar are listed in Table 2.1-1.

Table 2.1-1 Legislations related to Environmental and Social Considerations in Myanmar

No.	Laws and Regulations as of January 2019
<i>Environmental Framework</i>	
1	Myanmar Agenda 21 (1997)
2	National Sustainable Development Strategy (2009)
3	The Environmental Conservation Law (2012)
4	The Environmental Conservation Rules (2014)
5	EIA Procedures (December 2015)
6	National Environmental Quality (Emission) Guidelines (December 2015)
7	Draft Guideline on Public Participation in Myanmar's EIA Processes (2017)
8	National Environmental Policy of Myanmar (June 2019)
9	Myanmar Climate Change Policy (June 2019)
<i>Water Environment</i>	
10	The Yangon Water-works Act (1885)
11	The Yangon Port Act (1905)
12	The Canal Act (1905)
13	The Ports Act (1908)
14	The Embankment Act (1909)

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No.	Laws and Regulations as of January 2019
15	The Water Power Act (1927)
16	The Underground Water Act (1930)
17	The Territorial Sea and Maritime Zone Law (1977)
18	The Law on Aquaculture (1989)
19	The Freshwater Fisheries Law (1991)
20	The Marine Fisheries Law (1990/Amendment in 1993)
21	The Law relating to the Fishing Rights of Foreign Fishing Vessels (1989, Amendment in 1993)
22	The Conservation of Water Resources and Rivers Law (2006)
23	The Conservation of Water Resources and Improvement of River Systems Rules (2013)
24	The Myanma Port Authority Law (2015)
25	The Myanma Port Authority Rules (2016)
26	The National Water Policy (NWP) of Myanmar (2014)
Forestry/Biodiversity/Agriculture	
27	The Pesticide Law (1990)
28	The Forest Law (1992)
29	The Forest Rules (1995)
30	The Plant Pest Quarantine Law (1993)
31	The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law (1994)
32	The Animal Health and Development Law (1994)
33	The Fertilizer Law (2002)
34	The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Rules (2002)
35	The Protection of Biodiversity and Protected Area Law (20018)
Land Use	
36	The Land Acquisition, Resettlement and Rehabilitation Act (2019)
37	The Farmland Law (2012)
38	The Farmland Rules (2012)
39	The Vacant, Fallow and Virgin Lands Management Law (2012)
40	The Vacant, Fallow and Virgin Lands Management Rules (2012)
Cultural Heritage	
41	The Protection of Preservation of Cultural Heritage Regions Law (2019)
42	The Heritage Goods Protection Law (or) The Protection and Preservation of Ancient Monuments Law (2015)
Public Health	
43	The Penal Code of Offences Affecting the Public Health, Safety Convenience, Decency and Morals (1961)
44	The Public Health Law (1972)
45	The National Drug Law (1992)
46	The Narcotic Drugs and Psychotropic Substances Law (1993)
47	The Prevention and Control of Communicable Diseases Law (1995, Amendment in 2011)
48	The Traditional Drug Law (1996)
49	The National Food Law (1997)
50	The Control of Smoking and Consumption of Tobacco Product Law (2006)
51	The Law related to Private Health Care Services (2007, Amendment in 2013)
52	The Automobile Law (2015)
Industrial Sector	
53	The Explosives Act (1884)
54	The Explosive Substances Act (1908/Amendment in 2001)
55	The Export and Import Law (2012)
56	The Private Industrial Enterprise Law (1990)
57	The Electricity Law (2014)
58	The Boiler Law (2015)
59	The Salt Enterprise Law (1992)

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No.	Laws and Regulations as of January 2019
60	The Science and Technology Development Law (1994)
61	The Myanmar Mines Law (1994)
62	The Myanmar Pearl Law (1995, Amendment in 2014)
63	The Myanmar Gemstone Law (1996)
64	The Prevention of Hazard from Chemicals and Related Substances Law (2013)
65	The Business for Ozone Depleting Substances: Notification No.37/2014
66	The Prevention of Hazard from Chemicals and Related Substances Rules (2016)
67	Central Leading Board: Notification No.2/2016 and No.3/2016 (List of Restricted Chemicals and Prohibited Chemicals)
Special Economic Zone (SEZ)	
68	Myanmar Investment Commission: Notification No. 1/2013 and No.50/2014 (Economic activities which require environmental impact assessment)
69	The Myanmar Special Economic Zone Law (2014)
70	Ministry of National Planning and Economic Development: Notification No. 81/2014 (for the issuance of permit on the application to invest in the Thilawa Special Economic Zone)
71	The Special Economic Zone Rules (2015)
72	TSEZMC Notice to Ensure the Responsible Investment in the Thilawa SEZ (August 2015)
73	Standard Operation Procedures for Investors in Thilawa SEZ (December 2015)
Working Environment	
74	The Worker's Compensation Act (1923)
75	The Factory Act (1951/Amendment in 2016)
76	The Shops and Establishment Act (1951)
77	The Leave and Holiday Act (1951, partially Amendment in 2014)
78	The Labor Organization Law (2011)
79	The Labor Organization Rule (2012)
80	The Labor Dispute Settlement Law (2012/Amendment in 2019)
81	The Employment and Skill Development Law (2013)
82	The Minimum Wage Law/Rules (2013)
83	The Social Security Law (2012)
84	The Social Security Rules (2014)
85	The Law Protecting Ethnic Right (2015)
86	The Payment of Wages law (2016)
87	The Myanmar Occupational Health and Safety Law (2019)
88	Child Rights Law (2019)
Infrastructure/Economic Development/ Administration	
89	The Towns Act (1907)
90	The Village Act (1907)
91	The Myanmar Insurance Law (1993)
92	The Myanmar Hotel and Tourism Law (1993)
93	The Constitution of the Union of Myanmar (2008)
94	The Ward or Village Tracts Administration Law (2012/ Amendment in 2012/2016)
95	The Foreign Investment Law (2012)
96	The Foreign Investment Rules (2013)
97	The Myanmar Citizen Investment Law (2016)
98	The Myanmar Citizen Investment Rules (2017)
Emergency	
99	The Natural Disaster Management Law (2013)
100	The Myanmar Fire-brigade Law (2015)

Source: EMP Study Team

2.1.3 Key Laws and Regulations related to Project's Environmental and Social Considerations in Myanmar

The following are summaries of the key laws, rules and regulations related to the natural and social environment and health considerations in Myanmar that will likely be relevant to the Project.

Environmental Framework

National Environmental Policy (2019)

National environment policy was renewed in 2019 to deal with the rapid economic and social development. This policy builds on the relevant laws and regulations such as National Environmental Policy (1994), Myanmar Agenda 21 (1997), National Sustainable Development Strategy (2009), Environmental Conservation Law (2008), National Comprehensive Development Plan (2015), Myanmar Sustainable Development Plan (2018), etc. Therefore, this policy recognizes and integrates Myanmar's commitments to Multilateral Environmental Agreements.

This policy provides a long-term and strategic guidance for the achievement of environmental protection and sustainable development of Myanmar in the future. It requires the mainstreaming of environmental protection into planning and decision-making at all levels of government and in all sectors. To pursue this purpose, this policy sets National Environmental Policy Vision & Mission, and 23 National Environmental Policy principles.

The vision of this policy is to become a clean environment, with healthy and functioning ecosystems, that ensures inclusive development and wellbeing for all people in Myanmar. And its mission is to establish national environmental policy principles for guiding environmental protection and sustainable development and for mainstreaming environmental considerations into all policies, laws, regulations, plans, strategies, programmes and projects in Myanmar.

According to the section (7) of this Law, the Government of the Republic of the Union of Myanmar adopts 23 National Environmental Policy principles. Some of the relevant principles are as follow.

- Environmental service provisioning (including waste management, wastewater treatment, drinking water purification, ambient air and water quality monitoring and management) will be included as necessary parts of infrastructure planning and development for urban and human settlement areas, with resource efficient and zero waste approaches used.
- Climate smart approaches to development, including resilience, climate change adaptation and mitigation, and disaster reduction strategies, will be aligned to environmental protection and good natural resource management approaches in the pursuit of low carbon, sustainable development.
- Pollution and waste are to be avoided and minimized at the source as more cost effective than remediation, enterprises will be encouraged to adopt clean production principles and best practices.

The Environmental Conservation Law (ECL) (2012) and Environmental Conservation Rules (ECRs) (2014)

The Environmental Conservation Law (ECL) was enacted in March 2012. This law is the fundamental law of environmental management and environmental conservation in Myanmar prepared by MOECF. Subsequently, the Environmental Conservation Rules (ECRs) were enacted in June 2014 as the detailed enforcement regulations for ECL. ECL stipulates MOECF's responsibility for environmental policy and administration, formulation of environmental management plan, implementation of environmental monitoring, setting of environmental standards, management of hazardous waste, and formulation and implementation of EIA, among others.

Article 7 (o) in ECL stipulates the duties and powers to manage to cause the polluter to compensate for environmental impact, cause to contribute fund by the organizations which obtain benefit from the natural

environmental service system, cause to contribute a part of the benefit from the businesses which explore, trade and use the natural resources in environmental conservation works.

ECL stipulates the point source of pollution for treating, emitting, discharging and depositing the substances which cause pollution in the environment according to the stipulated environmental quality standards.

In order to monitor, control, manage, reduce or eliminate environmental pollution, the owner or occupier of any business, material or place that causes a point source of pollution shall install or use an on-site facility or controlling equipment. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods. (Article 14 and 15).

Article 16 in ECL stipulates the responsibilities of the business owner of an industrial estate or business in SEZ on environmental conservation as follows:

- To be responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for environmental conservation including the management and treatment of waste;
- To contribute the stipulated user's charges or management fees for the environmental conservation according to the relevant industrial estate, special economic zone, and business organization; and
- To comply with the directives issued for environmental conservation according to the relevant industrial estate, special economic zone, or business.

In Article (24) of ECL mentioned that the Ministry may, in issuing the prior permission, stipulate terms and conditions relating to environmental conservation. It may conduct inspection whether or not it is performed in conformity with such terms and conditions or inform the relevant Government departments, Government organizations to carry out inspections.

In Article (29) ECL stipulated as follows;

- Not to violate any prohibition contained in the rules, notifications, orders, directives and procedures issued under this law.

Moreover, ECRs stipulate the basic policy and concept of EIA application for the development of projects (Article 55).

- To prepare the environment impact assessment system and submit to the Ministry (Article 55 (a) in ECRs); and
- To implement and carry out environmental management plan within the time stipulated by the Ministry and submit the performance situation to the Ministry (Article 55 (b) in ECRs).

ECRs stipulate as the prohibitions in Article (69).

- Not to emit, ask to emit, dispose, ask to dispose, pile and ask to pile, by any means, hazardous waste or hazardous substances stipulated by notification according to any rules in this rule at any place which may affect the public directly or indirectly.
- Not to carry out any activity which can damage the ecosystem and the natural environment which is affected due to such system, except for the permission of the Ministry for the interests of the people.

EIA/Environmental Standards

The EIA Procedures (2015)

The EIA Procedure formulated by MOECA (now MONREC) in coordination with the Asian Development Bank (ADB) was enacted in December 2015. This EIA Procedure covers the following contents: screening of projects, qualification for conducting the initial environmental examination (IEE)/EIA, categorization of

projects for IEE/EIA/environmental management plan (EMP), preparation of IEE/EIA report and EMP, public involvement, procedure on how to get the approval of IEE/EIA report from the Environmental Conservation Department (ECD) under MONREC (previously MOECAP), environmental compliance certificate (ECC), and monitoring process after getting the approval of the IEE/EIA report.

In EIA procedure, responsibility for all adverse impacts for the project proponent are stipulated from Article (102) to (105).

In Article (102), the project proponent shall bear full legal and financial responsibility for;

- all of the Project Proponent's actions and omissions and those of its contractors, subcontractors, officers, employees, agents, representatives, and consultants employed, hired, or authorized by the Project acting for or on behalf of the Project, in carrying out work on the Project; and
- PAPs until they have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project, and shall support programs for livelihood restoration and resettlement in consultation with the PAPs, related government agencies, and organizations and other concerned persons for all Adverse Impacts.

For the implementation of EMP, EIA procedure stipulated that all project commitments, and conditions, and is liable to ensure that all contractors and subcontractors of the Project comply fully with all applicable Laws, the Rules, this Procedure, the EMP, Project commitments and conditions when providing services to the Project. (Article (103) of EIA procedures)

The Project Proponent shall be responsible for, and shall fully and effectively implement, all requirements set forth in the ECC, applicable Laws, the Rules, this Procedure and standards. (Article (104) of EIA procedures)

The Project Proponent shall timely notify and identify in writing to the Ministry, providing detailed information as to the proposed Project's potential Adverse Impacts. (Article (105) of EIA procedures)

From Article (106) to (110), EIA procedure stipulates the basic concepts and the conformities that the project proponent have to follow.

- The Project Proponent shall, during all phases of the Project (pre-construction, construction, operation, decommissioning, closure and post-closure), engage in continuous, proactive and comprehensive self-monitoring of the Project and activities related thereto, all Adverse Impacts. Article (106)
- The Project Proponent shall notify and identify in writing to the Ministry any breaches of its obligations or other performance failures or violations of the ECC and the EMP as soon as reasonably possible and in any event, in respect of any breach which would have a serious impact or where the urgent attention of the Ministry is or may be required, within not later than twenty-four (24) hours, and in all other cases within seven (7) days of the Project Proponent becoming aware of such incident. Article (107)
- The Project Proponent shall submit monitoring reports to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP, or periodically as prescribed by the Ministry. Article (108).

Article (109) stipulated about the requirements for the monitoring reports as follows;

- a) documentation of compliance with all conditions;
- b) progress made to date on implementation of the EMP against the submitted implementation schedule;
- c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar

- d) future difficulties;
- e) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;
- f) accidents or incidents relating to the occupational and community health and safety, and the environment; and
- g) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required.

In EIA procedures, the basic concepts for monitoring and inspection which have to follow by project proponent are prescribed below.

Article (113) EIA procedures, for purposes of monitoring and inspection, the Project Proponent:

- a) shall grant to the Ministry and/or its representatives, at any time during normal working hours, access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed; and
- b) from time to time as and when the Ministry may reasonably require, shall grant the Ministry access to the Project's offices and to the Project site and any other location at which the Project activities or activities related to the Project are performed.

In the event of an emergency, or where, in the opinion of the Ministry, there is or may exist a violation or risk of violation of the compliance by the Project with all applicable environmental and social requirements, the Project shall grant full and immediate access to the Ministry at any time as may be required by the Ministry. Article (115) EIA procedures.

The Project Proponent shall further ensure that the Ministry's rights of access hereunder shall extend to access by the Ministry to the Project's contractors and subcontractors. (Article (117) of EIA procedures).

National Environmental Quality (Emission) Guidelines (2015)

MOECA (now MONREC) formulated the National Environmental Quality (Emission) Guidelines (NEQG) in coordination with ADB in December 2015. The NEQG determines the guideline values for general emission such as air emissions, wastewater, noise levels, odor, and those for sector-specific emission such as emission from forestry, agribusiness/food production, chemicals, oil and gas, infrastructure, general manufacturing, mining, and power.

Water Environment

The Conservation of Water Resources and Rivers Law (2006)

The aims of this law are as follows: (a) to conserve and protect the water resources and river system for the beneficial utilization of the public; (b) to enable smooth and safe waterways navigation along rivers and creeks; (c) to contribute to the development of the state economy through improving water resources and river system; and (d) to protect environmental impact.

However, this law is under the jurisdiction of the Ministry of Transport. This law focuses on transportation safety and its development. However, it lacks actual numerical criterion for natural environment.

The National Water Policy (NWP) of Myanmar (2014)

The National Water Policy (NWP) of Myanmar, the first integrated water policy for the watersheds, rivers, lakes and reservoirs, groundwater aquifers and coastal and marine waters of entire Myanmar was prepared by the National Water Resources Committee Expert Group, after which it was approved by the National Water Resources Committee on 13 March 2014.

The NWP was formalized by the approval of the Vice-President and as a consequence to this formalization, the NWP can and should be used as an umbrella and as guidance for:

- All further policy development on water resources or subjects that relate to or have an impact on Myanmar's water resources;
- Further development of legal instruments such as the Water Framework Directive and a system of institutions and laws to protect and manage Myanmar's water resources;
- Strategies, master plans, development plans and projects that relate to or have an impact on Myanmar's water resources.

The objective of the National Water Policy is to take cognizance of the existing situation, to propose a framework for creating a system of laws and institutions and for a plan of action with a unified national perspective including the Myanmar Water Framework Directive (MWFD).

Forestry/Biodiversity/Agriculture

The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law (1994)

The objectives of this law are to implement the Government policy for wildlife protection and natural areas conservation, to carry out in accordance with the relevant International Conventions, to protect endangered species of wildlife and their natural habitats, to contribute for the development of research on natural science, and to protect wildlife by the establishment of zoological/botanical gardens. It prescribes the formation of the committee for protection of wildlife and natural areas with its function and duties and the determination of natural areas and endangered species of wild animal which are to be protected.

Land Use

The Land Acquisition, Resettlement and Rehabilitation Act (2019)

The Land Acquisition, Resettlement and Rehabilitation Act, amended in 2019, serves as the fundamental law for land acquisition in Myanmar that sets out the procedure of land acquisition and compensation. The act further outlines relevant procedures, including notice periods, procedures for objections to acquisition (Article 5), method of valuation of land, process for taking possession of land (Article 16 and 17), court processes and appeals (Article 18 and 24), procedures for the temporary occupation of land (Article 35), and the acquisition of land for companies (Article 38). The act requires that compensation 'at market value' is provided to those from whom the land is acquired (Article 23).

The Farmland Law and Rules (2012)

The law determines the land use rights of farmland and the granting of land use rights to eligible farmers. It allows the right to sell, mortgage, lease, exchange, and give either whole or part of the right to use the farmland. The law determines the formation as well as the roles/responsibilities of farmland administrative bodies at various levels. The Farmland Law and Rules determine procedures such as the application for farmland registration and obtaining land use certificates, application of transfer of farmlands for other purposes, and indemnities and compensation.

Heritage

The Protection and Preservation of Cultural Heritage Regions Law (2019)

This law prescribes the determination of cultural heritage regions for protection and preservation so as not to deteriorate due to natural disaster or man-made destruction. This law aims to implement the protection and preservation policy with respect to perpetuation of cultural heritage.

Public Health

The Public Health Law (1972)

It is concerned with protection of people's health by controlling the quality and cleanliness of food, drugs, environmental sanitation, epidemic diseases and regulation of private clinics.

Article (3) prescribed that advising the health problems, medical checkup, supervising, prohibition, etc. would be carried out to improve and protect the public health.

According to article (5), the organization which is developed by this law or the government organizations could check and instruct about the health-related cases to the factories, shops, places and buildings etc. at any time.

The Prevention and Control of Communicable Diseases Law (1995, revised in 2011)

This law describes functions and responsibilities of health personnel and citizens in relation to prevention and control of communicable diseases. It also describes measures to be taken in relation to environmental sanitation, reporting and control of outbreaks of epidemics and penalties for those failing to comply. The law also authorizes the Ministry of Health to issue rules and procedures when necessary with approval of the government.

In order to prevent the outbreak of Communicable Diseases, article (3a) has prescribed that the Department of Health shall implement the following project activities:

(a) immunization of children by injection or orally;

Article (4), when a Principal Epidemic Disease or a Notifiable Disease occurs:

(a) immunization and other necessary measures shall be undertaken by the Department of Health, in order to control the spread thereof:

(b) the public shall abide by the measures undertaken by the Department of Health under subsection (a).

Article (9), the head of the household or any member of the household shall report immediately to the nearest health department or hospital when any of the following events occurs:

(a) rat fall

(b) outbreak of a Principal Epidemic Disease;

(c) outbreak of a Notifiable Disease

Article (11), in order to prevent and control the spread of a Principal Epidemic Disease, the Health Officer may undertake the following measures:

(a) investigation of a patient or any other person required:

(b) medical examination;

(c) causing laboratory investigation of stool, urine, sputum and blood samples to be carried out;

(d) causing investigation by injection to be carried out;

(e) carrying out other necessary investigations.

The Prevention of Hazard from Chemical and Related Substances Law (2013)

The Prevention of Hazard from Chemical and Related Substances Law, the central law of chemicals management in Myanmar enacted in 2013, stipulates that when chemicals and related substances is to be

transferred, stored, used, or disposed, operating approval certificate should be obtained in accordance with the regulations based on the international treaties.

The Automobile Law (2015)

Pyidaungsu Hluttaw enacted “The Automobile Law” in September 2015 to protect the environment and community. The main objective of this law are as follows:

- (a) For the safe driving of motor vehicles in public areas through registration according to official rules and regulations.
- (b) For the easy flow of road users and for the protection against road risks and vehicle perils.
- (c) To reduce environmental pollution caused by motor vehicles.

According to the section (49) of Automobile Law, no one is allowed to do the following in public places:

- (a) Driving above the speed limit or below the minimum speed.
- (b) Driving a motor vehicle which endangers others.
- (c) Driving a motor vehicle after the consumption of narcotic drugs or alcohol.

According to the section (54) of Automobile Law, no one is allowed to do the following:

- (a) Working as a motor vehicle assistant without assistant permit.
- (b) Driving a motor vehicle while in an inappropriate mental or physical state.
- (c) Driving a motor vehicle loaded above the loading capacity.

Working Environment

The Worker’s Compensation Act (1923)

It stipulates that employer is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. Such compensation also must be made for diseases which arise as a direct consequence of employment, such as carpal tunnel syndrome.

The Payment of Wages Law (2016)

The Payment of Wages Law (2016) replaces the Payment of Wage Act (1937). It defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday and allows legal action against delayed payment or un-agreeable deduction.

According to article (3), the employer must pay in local currency or foreign currency recognized by the central bank of Myanmar. Payment can be totally in cash or half the cash and half in things. An employee shall receive the payment for 60 days when he/she is in alternative civil service.

Article (4) stipulated that an employer must pay for part-time, daily, weekly or other part-time job when the work is done or at the agreed time. For the permanent worker, wages must pay per monthly basis. All wages must be paid during the working day.

According to article (5), if the owner encounters difficulty to pay the wages because of significant happenings, including natural disaster, the employer must report to the Department with solid evidence that wages will be paid at the mentioned day upon the workers’ agreement.

From article (7) to (13), there is prescribed about deductions. It is mentioned briefly as follow;

- Can deduct from wages for absences, cost of livings, pre-issued, expensed and saved amount with the judgement of the court of arbitrator jury council.

- The total amount of other deductions, except when the employee fails to perform their duties, shall not be more than 50% of the employee's wages.
- Employer must get permission from the department concerning "why" and "how" to making deductions from wages.
- Employers shall fine for direct damage or a breach of the employment contract by the employees.
- If a worker encounters any unreasonable deduction or payment, he/she ask directly or via a registered labor organization.
- The inspector shall issue a decree after reviewing the case.
- There is description about overtime wages in article (14). If an Employee carries out overtime work, he/she must be allowed the presiding overtime rate as set by the Law.

The Factory Act (1951)

The Factory Act stipulates the work condition of the workers in the factory such as working hours, worksite safety and health measures. According to the act, worker at age 18 or over shall not work exceed 8 working hours per day or 44 hours per week, and the working days shall not exceed 6 days per week. As for worksite safety, the factory shall be kept clean with proper ventilation, light and heat and the workspace shall be situated away from drains, latrines or other things which create a bad or unhealthy smell. Some of the important sections of the Act are as follow.

Weekly working hours (Section 59)

- No adult worker shall be required or allowed to work in a factory for more than forty-fours hours in a week;

Daily working hours (Section 62)

- Subject to the provision of section 59 no adult worker shall be required or allowed to work in a factory for more than eight hours in any day.

First aid appliances (Section 47)

- In every factory the manager shall provide and maintain a first-aid box or a cupboard equipped with the prescribed contents in suitable place as may be directed by the Inspector so as to be readily accessible during all working hours, and where more than one maintained for every additional one hundred workers or part thereof.
- In every factory wherein more than two hundred and fifty workers are employed there shall be provided and maintained a first-aid room or dispensary of the prescribed dimension, containing the prescribed equipment, and shall be kept under the supervision of such medical officer and nursing staff as may be prescribed.

Canteens for workers (Section 48)

- The President may make rules requiring that in any specified factory or class of factories where in more than two hundred and fifty workers are ordinarily employed, a canteen adequate for the use of workers shall be provided and maintained by the occupier.

Rest sheds, rest rooms and lunch rooms (Section 49)

- In every factory wherein more than one hundred workers are ordinarily employed adequate and suitable rest-sheds or rest rooms and an adequate and suitable lunch room, with drinking water facilities, where workers can take meals brought by them, shall be provided and maintained for the use of the workers:

- The rest-sheds, rest rooms or lunch room to be provided shall be sufficiently lighted, ventilated and maintained as far as practicable in a cool and clean condition.

Wages for overtime (Section 73)

- Where a worker in a factory works for more hours than those specified in section 59 and 62, he shall in respect of the overtime so worked be entitled to be paid at the rate of twice his ordinary rate of wages.

Prohibition of employment of young children (Section 75)

- No child who has not completed his fourteenth year shall be required or allowed to work in any factory.

The Shops and Establishment Act (1951)

It stipulates the payment of wage, work hours, holidays at shops and commercial establishment.

The Leave and Holidays Act (1951, partially revised in 2014)

This act has been used as the basic framework for leaves and holidays for workers with minor amendment in 2006 and 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leaves for workers including medical leave, earned leave and maternity leave.

The Labour Organization Law (2011)

The Labour Organization Law replaced the Trade Union Act enacted in 1927 for protecting the rights of the workers, having good relations among the workers or between the employer and the worker, and for forming and carrying out the labour organizations systematically and independently. Under the law, the labour organization has the right to carry out freely in drawing up their constitution and rules. It has the right to negotiate and settle with the employer if the workers are unable to obtain the right of the workers contained in the labor laws. On the other hand, the employer shall recognize the labour organizations and assist as much as possible if the labour organizations request for help for the interest of his workers. The rights and responsibilities of labor organization from article (17) to (20) as follows;

- The labour organizations shall have the right to carry out freely in drawing up their constitution and rules, in electing their representatives, in organizing their administration and activities or in formulating their programmes.
- The labour organizations have the right to negotiate and settle with the employer if the workers are unable to obtain and enjoy the rights of the workers contained in the labour laws and to submit demands to the employer and claim in accord with the relevant law if the agreement cannot be reached.
- The labour organization has the right to demand the relevant employer to re-appoint a worker if such worker is dismissed by the employer and if there is cause to believe that the reasons of such dismissal were based on labour organization membership or activities, or were not in conformity with the labour laws.
- The labour organizations have the right to send representatives to the Conciliation Body in settling a dispute between the employer and the worker. Similarly, they have the right to send representatives to the Conciliation Tribunals formed with the representatives from the various levels of labour organizations.
- In discussing with the Government, the employer and the complaining workers in respect of worker's rights or interests contained in the labour laws, the representatives of the labour organization also have the right to participate and discuss.

The Social Security Law (2012)

The Social Security Law, enacted in 2012, was amended the Social Security Act in 1954. It stipulates the formation and implementation of social security systems.

Kinds of social security funds are

- (a) Health and social care fund
- (b) Family assistance fund
- (c) Injury fund
- (d) Invalidity benefit, superannuation benefit and survivors' benefit fund
- (e) Unemployment benefit fund
- (f) Other social security fund (e.g. housing plan).

In article (11a), the following establishments shall be applied with the provisions for compulsory registration for social security system and benefits contained in this Law if they employ minimum number of workers and above determined by the Ministry of Labor in co-ordination with the Social Security Board:

- Industries which carry out business whether or not they utilize mechanical power or a certain kind of power, businesses of manufacturing, repairing and servicing, or engineering businesses, factories, warehouse and establishments;
- Government departments, Government organizations and regional administrative organizations which carry out business;
- Development organizations;
- Financial organizations;
- Companies, associations, organizations, and their subordinate departments and branch offices which carry out business;
- Shops, commercial establishments, public entertaining establishments;
- Government departments and Government organizations which carry out business or transport businesses owned by regional administrative body, and transport businesses carried out with the permission of such department, body or in joint venture with such department or body;
- Constructions carried out for a period of one year and above under employment agreement;
- Businesses carried out with foreign investment or citizen investment or joint ventured businesses;
- Businesses relating to mining, gem, petroleum and natural gas contained in any existing law;
- Ports and out-ports contained in any existing law;
- Businesses and organizations carried out with freight handling workers;
- Ministry of Labor and its subordinate departments and organizations;
- Establishments determined by the Ministry of Labor, from time to time, that they shall be applied with the provisions of compulsory registration for Social Security System and benefits contained in this Law in coordination with the Social Security Board and with the approval of the Union Government.

According to article (15), health and social care fund; family assistance fund; invalidity benefit, superannuation benefit and survivors 'benefit fund; unemployment benefit fund; Social security housing

plan fund etc., are included in the social security fund. The employers and workers of establishments shall pay contributions after affecting compulsory registration or voluntarily to the above funds.

Article (18b) stipulated that the employer shall deduct contributions to be paid by worker from his wages together with contribution to be paid by him and pay to the social security fund. The employer shall also incur the expense for such contribution.

In article (48b), the employers may affect insurance by registering voluntarily for the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system and by paying stipulated contribution to employment injury benefit insurance fund.

The inapplicability to the workmen's compensation act has stipulated in article (49) as follows.

- The employers and insured of establishments where the employer had registered compulsorily where the employer had registered voluntarily who have paid contribution to employment injury benefit fund shall not apply to the provisions contained in the Workmen's Compensation Act in respect of the employment injury benefit.
- The insured who has affected insurance for employment injury benefit shall only be entitled to employment injury benefits contained in this Law.

In article (75), the employers of establishments shall prepare the records and lists of worker's daily attendance; appointment of new workers, employing worker; promotion and paying remuneration; employer, manager and administrator and submit to the relevant township social security office. If there is changes in number of workers and address of establishment; change of employer, business, and suspension of work and close-down of work; employment injury, decease and contracting diseases, the employers shall inform the relevant township social security office.

The Labour Dispute Settlement Law (2019)

This law was enacted for safeguarding the right of workers or having good relationship between employer and workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. It stipulates that employer in which more than 30 workers are employed shall form the workplace coordinating committee consisting of the representatives of workers and the representatives of employer. There is described about prohibitions from article (38) to (40) as follows;

- No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
- No employer shall alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Tribunal, to affect the interest of such workers immediately.
- No party shall proceed to lock-out or strike without accepting negotiation, conciliation and arbitration by Arbitration Body in accord with this law in respect of a dispute.

According to article (51), if any employer, in the course of settlement of dispute, commits any act or omission, without sufficient cause, which by causing a reduction in production resulting so as to reduce the workers' benefits shall be liable to pay full compensation in the amount determined by the Arbitration Body or Tribunal. Such money shall be recovered as the arrear of land revenue.

The Minimum Wage Law (2013)

The minimum wage law, passed in March 2013, was replaced the 1949 Minimum Wage Act. The law provides a framework for minimum wage determination: the presidential office establishing a tripartite minimum wage committee shall decide minimum wage with industrial variation based on a survey on living costs of workers possibly every two years. This also stipulates equal payment.

According to article (12), the employer;

- Not to pay wage to the worker less than the minimum wage stipulated under this Law;
- To pay more than the minimum wage stipulated under this Law;
- Not to have the right to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law;
- To pay the minimum wage to the workers working in the commercial, production and service business in cash. Moreover, if the specific benefits, interests or opportunities are to be paid, it may be paid in cash or partly in cash and partly in property, with prevailing regional price, jointly according to the desire of the worker;
- In paying minimum wage to the workers working in the agricultural and livestock business, some cash and some property at prevailing regional price may be paid jointly according to local custom or desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit of the worker and his family and the value shall also be considerable and fair.

According to article (13), the employer;

- To inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the workplace to enable to be seen by the relevant workers;
- To prepare and maintain the lists, schedules, documents and wages of the workers correctly;
- To report the lists, schedules and documents prepared and maintained to the relevant department in accord with the stipulations;
- To accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;
- To allow the entry and inspection of the inspection officer to the commercial, production and service businesses, agricultural and livestock breeding workplaces and give necessary assistances;
- If the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;
- If the funeral matter of the member of the family of worker or his parent occurs, shall give holiday without deducting from the minimum wage, in accord with the stipulations.

According to article (18), the inspection officer:

- Right to enter and inspect the relevant commercial, production and service workplaces, agricultural and livestock breeding workplaces and inspect whether or not they comply with and carry out in accord with the rules, notifications, orders, directives and procedures under this Law, whether or not the lists, schedules and documents, wages relating to the workers are prepared correctly, and whether or not such lists, schedules and documents are reported to the Department in accord with the stipulations;
- Inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents.
- If there are outside workers at employer, has the right to inspect information relating to such outside workers, their names and addresses and the right to ask for and copy their lists and documents and lists relating to minimum wage;

- Carrying out under sub-section (a), (b) and (c) relating to inspection, if required by the employer to produce the document, shall show the civil service identify card issued by the relevant department;
- Report to the Department in accord with the stipulations relating to the finding and documents and papers called for.

Employment and Skill Development Law (2013)

There is prescribed about signing employment agreement and compensation to the employee for termination of employment in article (5) as follows;

- If the employer has appointed the employee to work for an employment, the employment agreement shall be made within 30 days. But it shall not be related with government department and organization for a permanent employment.
- The employment agreement shall be related with daily wage workers, piece rate workers who are appointed temporarily in the government department and organization.
- According to the employment agreement, the Ministry shall issue the notification for paying the stipulated compensation to the employee by the employer, if the work is completed earlier than the stipulated period or the whole work or any part of it have to be terminated due to unexpected condition or the work has to be terminated due to various conditions.

Article (14) stipulated about the implementing training programs and skills development of workers. Employer shall conduct occupational training to enhance the skills of workers who are to be employed as well as workers who are presently employed in accordance with the requirements of the enterprise and the policy of the Skills Development Agency.

Article (30) prescribed about establishing and utilizing workers' skills development fund as follows;

- The employers of Industrial and Service Enterprises shall pay contribution to the fund every month without fail amounting to not less than below 0.5% of the payroll of his workers up to the level of supervisors of the workers.
- The employer shall not deduct the contribution paid to the fund from the wages of the workers.

The Payment of Wages Law (2016)

The Payment of Wage Law defines the payment obligation to the workers employed in the factories or railway administration. It stipulates the method of payment stating that the payment should be made in cash on a regular payday, and allows legal action against delayed payment or un-agreeable deduction.

The Occupational Health and Safety Law (2019)

The Occupational Health and Safety Law which was developed by the Ministry of Labor, Immigration and Population with the participation of representatives of the various regulatory agencies pertaining to Occupational Health and Safety as well as the participation of the private sector was signed into law in March 2019. Under new and comprehensive OHS Law, a Central Body would be formed to co-ordinate various activities of the present regulating agencies charged with the administration of various aspects of OHS. Supporting the Law would be the Rules and Regulations pertaining to safety which will update existing provision of the Law and Rules covering the entire field of OHS.

According to the Chapter (8) section 26, some of the important facts that should be complied by the employer are as follows.

The employer shall:

- Arrange certified doctor to check the workers suffers from occupational disease or not;

- Provide adequate and relevant personal protective equipment to Workers free of charge and make them wear it during work so as not to expose Workers to any serious Occupational Diseases or hazards;
- Develop a preventive plan and also a plan of action for any emergency situation;
- Set up a clinic and appoint a certified doctor and nursing staff and provide necessary medicines and facilities in Workplaces where the number of workers is greater than the number prescribed by the Ministry;
- Arrange the health and safety of people in workplace not to be affected by the disposal waste and equipment and machines used in the workplace or process;
- Arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards;
- Ensure that Workers who are engaged in any hazardous industries prescribed by the Ministry, work only the hours per day as specified.
- Pay for any expenditure regarding occupational safety and health measures;

According to the Chapter (8) section 30, some of the important facts that should be complied by the worker are as follows.

The worker shall:

- Wear or use at all times any protective clothes, equipment and tools provided by the Employer for the purpose of safety and health;
- Observe the instructions, rules, signs, posters, notices and warnings on occupational safety and health;
- Properly and systematically use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the Workplace;

Immediately report any situations, causes and incidents which could pose safety and health hazards that he or /she finds to the Employer or the Workplace Safety and Health Officer, either directly or via their immediate supervisor;

Industrial Sector

The Explosive Act (1884)

The Explosive Act stipulates the prohibitions on production, possession and use of explosives without permission.

The Explosive Substances Act (1908)

The Explosive Substance Act stipulates the prohibitions on production, possession and use of explosives without permission.

The Foreign Investment Law (2012)

The Foreign Investment Law is set up to delineate the statutory characteristics of investment into Myanmar. There are specific requirements in the law that stipulate the protection of the environment. Furthermore, the following types of investments are restricted or prohibited under the law:

- Business which can affect the traditional culture and customs of the national races within the Union;
- Businesses which can affect public health;
- Businesses which can cause damage to the natural environment and ecosystem;

- Businesses which can bring hazardous or poisonous wastes into the Union;
- Factories which produce or businesses which use hazardous chemicals under international agreements;

The Export and Import Law (2012)

In 2012, the Export and Import Law was enacted and the Control of Imports and Exports Act (1947) was abolished. It aims to implement the economic principles of the State successfully, to lay down the policies to export and import that support the development of the State; and that are to be in conformity with the international trade standards.

The Myanmar Investment Law (2016)

The new Myanmar Investment Law was signed into law in October 2016 and effected in practice from 1 April 2017. It now governs new investment proposals and replaces the Foreign Investment Law 2012 and Citizens Investment Law 2013 which in turn repealed the Myanmar Citizens Investment Law of 1994. This new law applies to existing or new investments in Myanmar except for matters coming under the old Foreign Investment Law 2012. In this new law, the Government will now treat foreign and local investment projects equally in terms of expansion, management, operation and sale of direct investments.

The Electricity Law (2014)

In 2014, the Electricity Law of 1984 was replaced by the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions. The Electricity Law divides projects into “small” (up to 10 MW), “medium” (between 10 MW to 30 MW) and large (upwards of 30 MW); the states and regions can issue permits for small and medium power plants. In case these plants are not connected to the national grid, the Union Government Ministry is not the primary authority involved. The authorities have a legal right to use land for the purpose of power plants under the Electricity Law, and have the right to expand and maintain their facilities. The law also provides that the authorities can build transmission lines in accordance with existing laws.

Law Protecting Ethnic Right (2015)

In 2015, the ethnic rights protection law is developed to obtain equal citizen’s rights for all ethnic groups. Article (5) prescribe that the matters of projects shall completely be informed, coordinated and performed with the relevant local ethnic groups in the case of development works, major projects, businesses and extraction of natural resources will be implemented within the area of ethnic groups.

Emergency

The Natural Disaster Management Law (2013)

The Natural Disaster Management Law was enacted to implement natural disaster management programs systematically and expeditiously in order to reduce disaster risks; to form the National Committee and Local Bodies in order to implement natural disaster management programs systematically and expeditiously; to coordinate with national and international government departments and organizations, social organizations, other non-government organizations or international organizations and regional organizations in carrying out natural disaster management activities; to conserve and restore the environment affected by natural disasters; to provide health, education, social and livelihood programs in order to bring about better living conditions for victims.

The Myanmar Fire-Brigade Law (2015)

The Myanmar Fire-Brigade Law was purposed to take precautionary and preventive measures against destruction and lose of State-owned property, private property, cultural heritage and the lives and property of the public; to organize systematically and to train the fire brigades, auxiliary fire brigades and reserve

fire brigades; to enable cooperation among the fire brigades, auxiliary fire brigades and reserve fire brigades for prevention, fire extinguishing and relief work when fire disaster, natural disaster, epidemic disease or any kind of sudden danger occurs; to educate, organize and incite extensively so as to achieve public cooperation when any catastrophes occurs.

Maritime

Myanmar Port Authority Law (2015)

Myanmar port authority law is enacted in 2015 by Pyidaungsu Hluttaw in propose to develop the ports and economy of the state; to be free from danger and safe the port industries; to enable to reform port related business as of an autonomous institution of Myanmar port authority; to enable to allow the local and foreign investors to operate by prescribing the conditions systematically in accord with the market economy system of the State and to enable to corporate with foreign countries, regional organizations or international organizations for the development of the port industries.

According to article (8) a, the Ministry, with the approval of the Union Government:

- a) may permit the local and foreign investors to operate the works of exploration of new places for port and building, upgrade, extension and maintenance by any means for the development of ports by concluding the contract with the Myanma Port Authority and by stipulating the terms and conditions;

According to article (19)a, The Myanma Port Authority:

- a) may claim damages from the relevant organization and person if the water pollutions, destructions and losses to environmental resources occur within a port limit, because of leakage of petroleum, oil or chemical from the tanker of petroleum, oil or chemical navigated within a port limit or from oil test wells ,oil wells and oil pipelines; or from collision or grounding of vessels, or for any other causes; because of discharge and disposal of pollutants and wastes from vessels and natural resource exploration rigs and structures from above and under water.

Article (23) describe the functions and duties of the Myanma Port Authority related to the environmental conservation,

- To carry out, after adopting the plans, the protection and prevention for non-existence of wastes flowed from foreshore and land, seabed wastes and wastes disposed by any means, of air pollution and water pollution, of discharge and disposal of dangerous materials, toxic materials, garbage, dirty things and wastes into water from vessels, wharf and above-water and sub-water natural resource exploration rigs and structures within a port limit, distribution of information and technology;
- To carry out the distribution of information and technology, taking precautionary measures not to cause oil spills from vessels which carry petroleum, oil and chemical navigating within a port limit, or from oil test wells, oil wells and oil pipelines, or from collision and grounding of vessels;
- If oil and chemical spill occurs, shall arrange in coordination with the experts, not for causing water pollution, clearing and sanitation. In doing so, the cost may be claimed from the responsible person in accord with the stipulations.

According to article (59), the Myanma Port Authority shall carry out

- taking measures for prevention, inspection, treatment and emergency response;
- determining place for the anchorage, examining the health of persons on board, determining the duties; taking treatment;
- examining the infectious disease;

- informing MOH and arranging for the dead persons due to infectious disease etc., to prevent the infectious disease and health of the sick within a port limit where sea-going vessels berth by itself or by delegating to the health officer appointed and assigned duty.

According to article (60), the master of a vessel entering from abroad:

- shall inform in advance to the Myanmar Port Authority that it is free from infectious disease on board the vessel before berthing at any port in the state.
- shall provide the declaration of free from infectious disease in the prescribed form to the health officer, by himself or through the health officer of the vessel when it berths at any port of the State.

It is mentioned in article (61) that the health officer shall obtain the following powers, within the port limit assigned duty to him, under the supervision of the Myanmar Port Authority;

- The right to inspect on board the vessel whether or not the water supply, medicines and medical equipment, food and accommodations for the seamen are in conformity with the stipulations;
- The right to examine the health of all or some seamen or apprentices on board the vessel by boarding on any vessel;
- The right to claim to produce the logbook and other books, papers and documents that are necessary to inspect the situation of health and medical treatment of the persons on board the vessel and if they refused, the right to enforce;
- The right to claim to write and sign on the admission by the person is asked that he has answered correctly.

It is described in article (62) that the health officer shall issue the certificate to the relevant master of the vessel and responsible persons that infectious disease has been prevented and it is free from infectious disease on such vessel after boarding and inspecting, sea-going vessels entering into and berthing at the port limit for which he is assigned duty.

In article (80), any person, so as to cause water pollution or destruction to the environmental resources;

- Not to cause oil spill or discharge of sludge from the petroleum tanker, oil tanker and chemical tanker navigated within a port limit, or from oil test wells, oil wells and oil pipelines or from collision or grounding of vessels;
- Not to discharge, dispose or cause to fall dangerous materials, toxic materials, garbage, sludge and waste from the vessels, above and underwater natural resource exploration rigs and structures within a port limit;
- Not to discharge, dispose or cause to fall other materials which cause obstacle to the navigation, from the vessels, into a port;
- Not dispose or drop the materials that may slide into the port because of tide, storm or flood on land.

Myanmar Port Authority Rules (2016)

This rule is stipulated in 2016 by the Ministry of Transport and Communications to develop the port industries, to protect the port area and for the better waterways.

In article (6), when the vessel is berthed at the jetty, the pilot and the owner of vessel have to provide equipment for loading and unloading when the cargo does not match with international standards. At any emergency case, there should have safe plan for the vessel to unberth from the port.

Article (8) stipulated that the port operator and port user should to carry out loading, unloading and ship to ship operation of hazardous cargo according to the law and rules of Myanmar port authority when. If there

is any spillage of pollutants and hazardous substances, it should be informed to MPA to control the dangerous situation with the help of experts and the cost fall to the operator or user of port.

According to article (9), Myanmar port authority should occasionally announce the list of dangerous cargo which is divided into three groups according to International Maritime Dangerous goods-IMDG code.

According to article (10), the vessel which carried hazardous cargo of group (1) cannot berth at port or port area between 6:00pm to 6:00 am without the approval letter. Hazardous cargo of group (2) should be loaded or unloaded directly from ship to ship/truck or from truck to ship. Approval letter of MPA is needed for the temporary storage or stacks of cargo at the port. For the cargo operation or temporary storage of group (3) hazardous cargo at the port, it is needed to remove within three days from the port.

In article (12), the vessel owner or pilot should have informed to MPA about the chemical name, amount, class and UN Number according to IMDG code ahead of 72 hours. According to the regulations of IMO, the hazardous cargo should be packed and name printed for the cargo operation. Any failure of hazardous cargo box or package should have informed to MPA and others related departments to prevent the dangerous situation. Flag B at the fore masthead at the daytime or red light for the nighttime should give sign while operating the loading and unloading of petroleum, gasoline, jack oil.

According to article (13), the hazardous cargo carried vessel should not store or operate the flammable substances. It is essential to get the approval from MPA to conduct the repairing works using fire or electricity which can be caused fire risk such as welding, using electricity, using electric gun etc.

In order to work permit, working license, MPA can (1) Issues the requirements, guidance and standards; (2) take action according to management procedure for breaking the prohibition or discipline included in issued orders and laws.

Myanmar Territorial Sea and Maritime Zones Law (2017)

In 2017, this law is stipulated to have security, rule of law and tranquility for the interests of the state in the territorial sea, sea, contiguous zone, exclusive economic zone and continental shelf; to protect and conserve, and excavate natural resources systematically for long term in the territorial sea and maritime zones of the state and to do marine scientific researches; to protect and conserve from the pollutions on the sea, airspace and impact on marine environment through the territorial sea and maritime zones of the state.

In article (8h & i), If a foreign ship engages in any of the following activities while innocent passage through the territorial sea, it shall be considered to be prejudicial to the peace, rule of law and stability or security of the State:

- act to pollute and affect the sea, airspace and impact on marine environment;
- catching aquatic animals including fishes, by any way, fishing, supporting and preparing for these businesses, and making to damage the natural resources;

Article (9) described that the foreign ship shall observe the relevant existing laws and international rules for protection of collision at the sea in the innocent passage through the territorial sea.

According to article (20d), the State has the following rights and rights and jurisdiction to protect and conserve the marine environment sustainability and to prevent and control marine pollution.

According to article (25d), the State has the right to conserve and protect of marine environment, and reduction, prevention and control of marine pollution due to submarine cables, pipelines and its related facilities.

2.2 International Conventions, Treaties and Agreements

In addition to local legislations in the country, there are international conventions, treaties and agreements of which the Government of Myanmar adhere to or has ratified related to environmental and social considerations in maritime industry. These are provided in Table 2.2-1.

Table 2.2-1 International Conventions, Treaties and Agreements Related to Environmental and Social Considerations that Myanmar Government has ratified

No.	International Agreements and Treaties	Date Ratified
1	Plant Protection Agreement for the Southeast Asia and Pacific Region, Rome	1959 (Ratified)
2	MARPOL: International Convention for the Prevention of Pollution from Ships 1973 and MARPOL Protocol of 1978.	1988 (Accession)
3	ICAO: ANNEX 16 to the Convention on International Civil Aviation Environmental Protection Vol. I and II, Aircraft Noise and Aircraft Engine Emission	Accession
4	Agreement on the Networks of Aquaculture Centers in Asia and the Pacific, Bangkok 1988	1990 (Accession)
5	Vienna Convention for the Protection of the Ozone Layer, Vienna 1985	1993 (Ratification)
6	Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal 1987	1993 (Ratification)
7	London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London 1990	1993 (Ratification)
8	United Nations Framework Convention on Climate Change (UNFCCC), New York 1992	1994 (Ratification)
9	Convention on Biological Diversity, Rio de Janeiro 1992	1994 (Ratification)
10	The Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris 1972	1994 (Acceptance)
11	International Tropical Timber Agreement (ITTA), Geneva 1994	1996 (Ratification)
12	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought, Paris 1994	1997 (Accession)
13	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC 1973; and as amended in Bonn, Germany 1979	1997 (Accession)
14	ASEAN Agreement on Conservation of Nature and Nature Resources, Kuala Lumpur, 1985	1997 (Signatory)
15	Kyoto Protocol to the Convention on Climate Change, Kyoto 1997	2003 (Accession)
16	ASEAN Agreement on Trans-boundary Haze Pollution	2003 (Ratification)
17	Stockholm Convention on Persistent Organic Pollutants (POPs)	2004 (Accession)
18	Ramsar Convention on Wetlands of International Importance	2005 (Accession)
19	Establishment of ASEAN Regional Centre for Biodiversity	2005 (Signatory)
20	Declaration on ASEAN Heritage Parks	2003 (Signatory)
21	International Treaty on Plant Genetic Resources for Food and Agriculture, 2001	2004 (Ratification)
22	Cartagena Protocol on Biosafety, Cartagena, 2000	2001 (Signatory)
23	Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Rome, 1973	1994 (Acceptance)
24	United Nations Convention on the Law of the Sea, Montego Bay, 1982	1996 (Ratified)
25	Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, New York, 1994	1996 (Accession)
26	Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction, Paris, 1993	1993 (Signatory)

No.	International Agreements and Treaties	Date Ratified
27	Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea Bed and Ocean Floor and in the Subsoil there of, London, Moscow, Washington, 1971	1971 (Signatory)
28	Universal Declaration of Human Rights (UNDHR)	signed
29	Convention on the Rights of the Child	1991 (acceded)
30	Convention on Elimination of All Forms of Discrimination against Women (CEDAW)	1997 (acceded)
31	Relevant ILO Conventions in force in Myanmar C1 Hours of Work (Industry) C14 Weekly Rest (Industry) C17 Workmen's Compensation (Accidents) C19 Equality of Treatment (Accident Compensation) C26 Minimum Wage Fixing Machinery C29 Forced Labour Convention C42 Workmen's Compensation (Occupational Diseases) Revised 1934 C52 Holidays with Pay C87 Freedom of Association and Protection of the Right to Organize	Ratified: 1921 1923 1956 1927 1954 1955 1957 1954 1955

Source: The Republic of the Union of Myanmar, National Biodiversity Strategy and Action Plan (2011), Website of the Basel Convention (<http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx>) (As of August 2018)

In addition, the followings conventions and other mandatory instruments (as may be amended from time to time) referred to above include, but are not limited to:

- i) SOLAS Convention (chapters XI-2 and other relevant parts, as appropriate), 1974;
- ii) Part A of International Code for the Security of Ships and of Port Facilities (ISPS);
- iii) MARPOL (Annexes I, III, IV and VI, as appropriate);
- iv) International Convention for Safe Containers (CSC), 1972;
- v) International Maritime Dangerous Goods (IMDG) Code and related supplements;
- vi) International Maritime Solid Bulk Cargoes (IMSBC) Code and related supplements;
- vii) International Code for the Construction and Equipment of Ships carrying Liquefied Gases in Bulk (IGC Code);
- viii) International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships (INF Code);
- ix) International Code for the Safe Carriage of Grain in Bulk; and
- x) Code of Safe Practice for Cargo Stowage and Securing (CSS Code).

2.3 Environmental and Social Policies and Institutional Framework of MITT

2.3.1 Environmental Policy of MITT

As a world leading port network of Hutchison Ports' operation in Myanmar, MITT is committed to be an industry leader in minimizing the impact of its activities on the environment through continual improvement in the areas of environmental performance.

By the unrivalled range of effort, MITT strives to reduce carbon footprint, prevent pollution as far as is reasonably practicable and continually improve its performance against targets associated with the significant environmental aspects and comply with all applicable environmental legislations in Myanmar contributing towards reduction of business impact to climate change.

To achieve this, the Management of MITT set up the Environmental Policy comprising with the following statements.

The policy owner, in support of the MITT Management, shall:

- Develop an Environmental Management System (EMS) with objectives, procedures and standards that shall be communicated to all employees.
- Provide appropriate training programs to employees for the enhancement of environmental awareness and encourage employees' engagement in company's environmental performance.
- Ensure the compliance of local environmental legislations and obligations of such requirements are met at all times.
- Promote a sustainable environmental performance, in partnership with customers, suppliers and other stakeholders by conserving energy and natural resources.
- Place control measures on wasteful use of energy and resources in terms of minimal consumption of power, water, paper and pollution materials such as diesel, petrol and other industrial lubricants.
- Ensure that a proper disposal procedure is in place for both hazardous and non-hazardous wastes produced by day-to-day company's activities.
- Ensure that a proper procedure is in place for handling vessels' waste, discharged to both landside and waterside.
- Ensure to integrate an environmental obligation in every business decision.
- Commit to continual improvement in company's environmental performance, through the establishment of measurable objectives and targets which are to be monitored, documented and auditable at any time.
- This policy shall be reviewed annually by the BU Head and Management Team.

2.3.2 Security Policy of MITT

MITT is committed to ensure the physical security of all cargoes stored in the premises and every property of the company existing at the Berth No.5-9, Thilawa, Kyauktan Township, Yangon, Myanmar. It is achieved through assessing the security threats and taking preventive measures against potential security incidents that can affect the company's business operations.

To this end, MITT Security Policy is set up with the following statements.

The PFSO, in support of MITT Management Team, shall-

- Form a Security Control Team comprising with the Port Facility Security Officer (PFSO), Deputy PFSOs and Security Supervisor whereby PFSO is reporting directly to the Operations Manager and the General Manager.
- Develop a Port Facility Security Plan (PFSP), taking into account of business nature of MITT to ensure the compliance with the relevant statutory and regulatory requirements including those stipulated in the International Ship and Port Facility Security (ISPS) Code.
- Develop and maintain specific security guidelines not only over the cargo handling areas but also the whole premises, monitor the security performance of the team, and promote sharing of best security practices among the team members.
- Conduct Security Assessment in line with updated cargo handling practice/ procedures (and/or) changing business nature of MITT ensuring necessary preventive measures are documented in the PFSP.
- Monitor the security performance of team members, set priorities and procedures in order to ensure that each security initiative is put into practice complying with the implementation of ISPS Code.
- Conduct drills and exercises at a regular interval in cooperation with the external security authorities as and when needed.
- Communicate closely with Designated Authority (DA) with regard to the key security incidents and threats ensuring that the response procedures are in line with the guidance of DA.
- Provide security staff with regular internal/ external training programs to upgrade their skills keeping abreast with the security performance of other regional ports.

2.3.3 Occupational Health and Safety (OHS) Policy of MITT

MITT is committed to providing a safe working environment at all its sites, preventing accidents in the workplace, and adopting all preventive measures for elimination of hazards and risks.

As a cargo handling business operator, MITT shall always be in compliance with all occupational health and safety rules and regulations legislated by the Myanmar Government and shall continuously seek ways to develop and to improve its safety standards and practices, equal in value to the other business objectives.

To this end, MITT OHS Policy is set up with the following statements.

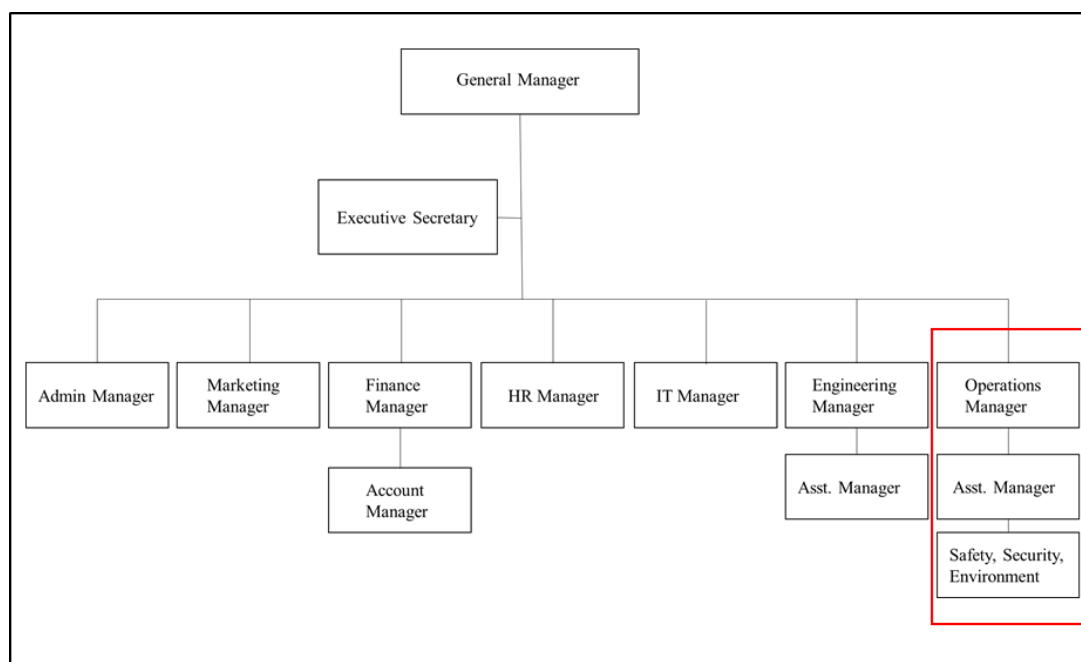
The MITT Safety Committee, in support of the MITT Management Team, shall-

- Take into account of safety and well-being of everyone on terminal is paramount.
- Take priority of creating and maintaining a safe and healthy working environment with a sustainable development of safety standards.
- Preventing hazards and risks actively and strive for “Zero Accident”.
- Ensure key components of MITT facilities and equipment are always in safety in terms of their designs, specifications, operation systems, repair and maintenance standards.
- Encourage every staff’s participation in health and safety programs with the aim of safety is a key responsibility for all levels of staff.
- Provide staff with training and knowledge sharing programs for health and safety in use of internal and external resources.
- Promote and value staff’s commitment to health and safety with an encouragement in sharing of best safety practices.

- Take preventive measures to protect not only employees but also contractors/ third parties who are not familiar with MITT cargo handling environment.
- Develop safety standards and guidelines across the internal departments.
- Ensure conducting comprehensive Safety Assessments across BU's operations.
- Monitor the progress of day-to-day safety standards and report monthly safety performance to the Head of BU.
- Develop Safety Management System (SMS) to meet the mandatory requirement of Hutchison Ports' GMSS (Global Minimum Safety Standards).

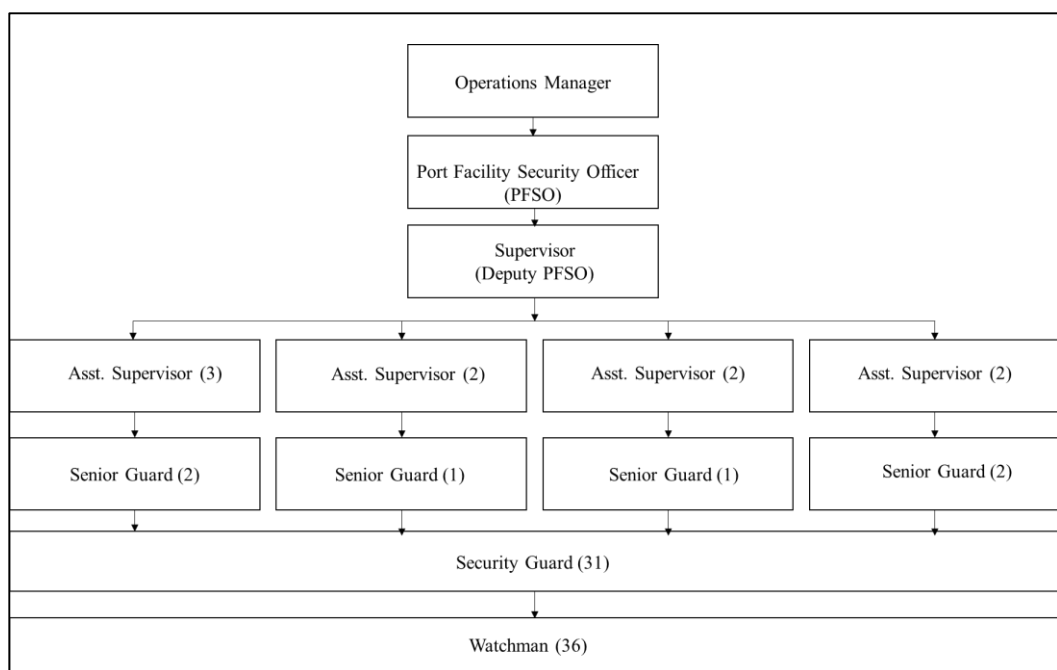
2.3.4 Institutional Framework of MITT

The institutional framework of MITT consists of administration department, marketing department, finance department, human resource department, IT department, engineering department, and operations department under the control of general manager as shown in Figure 2.3-1 . The environmental, health, and safety management is carried out under the operations department at MITT and the organization chart of operations department is described in Figure 2.3-2.



Source: MITT

Figure 2.3-1 Organization Chart of MITT (as of January 2020)



Source: MITT

Figure 2.3-2 Organization Chart of Operations Department in MITT (as of January 2020)

2.4 Quantative Target Levels for Surrounding Environment of the Project

According to Article 10 of the Environmental Conservation Law (2012), MOECAP (now MONREC) set up the following environmental quality standards, with the approval of the Union Government and the Committee:

- (a) Suitable surface water quality standards for the public usage of rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs, and other inland water sources of the public;
- (b) Water quality standards for coastal and estuarine areas;
- (c) Underground water quality standards;
- (d) Atmospheric quality standards;
- (e) Noise and vibration standards;
- (f) Emissions standards;
- (g) Effluent standards;
- (h) Solid waste standards; and
- (i) Other environmental quality standards stipulated by the Union Government.

As of 29 December 2015, emission guideline and target values of ambient air quality, air emission, wastewater, and noise levels were set in NEQG, while other standards have not been set yet by MONREC.

The target values of following parameters which might likely anticipate some negative impacts to the surrounding environment are set:

- i) Ambient air quality
- ii) Emitted air quality
- iii) Effluent water quality

iv) Noise and Vibration

In this Project, the Project Proponent, MITT basically apply the NEQG and in case of no quantitative target values in NEQG, the quantitative target values of other country and international organizations will be referred. Each quantitative target value to be applied is described below sections.

2.4.1 Air Quality

(1) Target values of Ambient Air Quality for Operation and Closure Stages

Since there is no ambient air quality standard in Myanmar and only air emission guideline values in National Environmental Quality Emission Guidelines (NEQG) (2015), these guideline values shown in below table will be set as target values for both ambient and emission air quality for operation and closing stages.

Table 2.4-1 Target values for Ambient Air Quality for Operation and Closure Stages

Parameters	Average Period	NEQG Guideline Value	Unit
SO ₂	24 hours	0.02	mg/m ³
	10 mins	0.5	mg/m ³
NO ₂	1 year	0.04	mg/m ³
	1 hour	0.2	mg/m ³
Ozone	8 hours daily maximum	0.1	mg/m ³
PM ₁₀	1 year	0.02	mg/m ³
	24 hours	0.05	mg/m ³
PM _{2.5}	1 year	0.01	
	24 hours	0.025	

Source: National Environmental Quality (Emission) Guidelines (NEQG) (29 Dec 2015)

Since there is no any combustion facilities designed to deliver electrical or mechanical power, steam, heat or any combination of these, it is not necessary to set the target value for air emission level from combustion facilities in this project.

2.4.2 Water Quality

(1) Target values of Effluent Water Quality during Operation Stage

The guideline values for effluent water quality for Ports, Harbors and Terminals set in NEQG (2015) will be applied during the operation stage of the project (see in below Table 2.4-2).

Table 2.4-2 Target values for Effluent Water Quality for the Project

Parameter	Unit	Maximum Concentration
Biochemical oxygen demand	mg/l	30
Chemical oxygen demand	mg/l	125
Oil and grease	mg/l	10
pH	S.U. ^a	6-9
Total coliform bacteria ¹	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50

a Standard Unit

Source: NEQG (December 2015)

(2) Target Values for General Effluent Water Quality during Operation Stage

The following NEQG general guideline values will be applied for general effluent runoff emitted from utility operations, sewage treatment plant, wastewater treatment plant, and storm water runoff during the operation stage of the project.

Table 2.4-3 Target values for General Effluent Runoff for the Project

Parameter	Unit	Guideline Value
5-day Biochemical oxygen demand	mg/l	50
Ammonia	mg/l	10
Arsenic	mg/l	0.1
Cadmium	mg/l	0.1
Chemical oxygen demand	mg/l	250
Chlorine (total residual)	mg/l	0.2
Chromium (hexavalent)	mg/l	0.1
Chromium (total)	mg/l	0.5
Copper	mg/l	0.5
Cyanide (free)	mg/l	0.1
Cyanide (total)	mg/l	1
Fluoride	mg/l	20
Heavy metals (total)	mg/l	10
Iron	mg/l	3.5
Lead	mg/l	0.1
Mercury	mg/l	0.01
Nickel	mg/l	0.5
Oil and grease	mg/l	10
pH	S.U. ^a	6-9
Phenols	mg/l	0.5
Selenium	mg/l	0.1
Silver	mg/l	0.5
Sulfide	mg/l	1

¹ Coliforms refer to a group of bacteria which are found in the intestines of warm-blooded animals and therefore are present in sewage, and on / in soils, surface waters and vegetation. Total coliforms are used as an indicator organism which, although by itself is not considered to cause diseases in man or animals, usually indicates the presence of pathogenic or disease-causing organisms. By measuring the number of total coliforms present in a sample a judgment can be made as to the water's usability for a given purpose.

Parameter	Unit	Guideline Value
Temperature increase	°C	<3 ^b
Total coliform bacteria	100 ml	400
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50
Zinc	mg/l	2

^a Standard unit

^b At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge

Source: NEQG (2015)

(3) Target Values for General Effluent Water Quality during Closure Stage

The following NEQG general guideline values for site runoff and wastewater discharges will be applied during the closure stage of the project (see in Table 2.4-4).

Table 2.4-4 Target values for Site Runoff and Wastewater Discharges during Closure Stage

Parameter	Unit	Maximum Concentration
Biochemical oxygen demand	mg/l	30
Chemical oxygen demand	mg/l	125
Oil and grease	mg/l	10
pH	S.U. ^a	6-9
Total coliform bacteria ²	100 ml	400
Total nitrogen	mg/l	10
Total phosphorus	mg/l	2
Total suspended solids	mg/l	50

^a Standard Unit

Source: NEQG (December 2015)

2.4.3 Noise

(1) Noise Level during Operation Stage

In NEQG, the noise level is set as shown in Table 2.4-5 and noise prevention and mitigation measures should be taken by all projects where the predicted or measured noise impacts from a project facility or operation exceed the applicable noise level guideline at the most sensitive point of reception. Noise impact should not exceed the levels shown below, or result in a maximum increase in background levels of three decibels at the nearest offsite receptor location.

Since the project is located Thilawa Port area and surrounding receptors are industrial and commercial areas, the target noise level targeted to industrial and commercial receptors will be applied during operation stage of the project.

² Coliforms refer to a group of bacteria which are found in the intestines of warm-blooded animals and therefore are present in sewage, and on / in soils, surface waters and vegetation. Total coliforms are used as an indicator organism which, although by itself is not considered to cause diseases in man or animals, usually indicates the presence of pathogenic or disease-causing organisms. By measuring the number of total coliforms present in a sample a judgment can be made as to the water's usability for a given purpose.

Table 2.4-5 Target Noise Level during the Operation Stage

Receptor	One Hour LAeq (dBA) ^a	
	Daytime (7:00-22:00) (10:00-22:00 for public holidays)	Nighttime (22:00-7:00) (22:00-10:00 for public holidays)
Residential, institutional, educational	55	45
Industrial, commercial	70	70

a: Equivalent continuous sound level in decibels

Source: NEQG (December 2015)

(2) Noise Level during Closure Stage

Currently, there is no noise standard of construction or closure activities to receptors in Myanmar. Therefore, the target noise level during closure stage is adopted from the international regulations of Myanmar Japan Thilawa Development (MJTD) within Thilawa SEZ which is opposite site of the project.

Table 2.4-6 Target Noise Level during Closure Stage of the Project

Receptor	One Hour LAeq (dBA)		
	Daytime (7:00-19:00)	Evening time (19:00-22:00)	Nighttime (22:00-7:00)
A side next to residential house and monastery located less than 150m	75 dB	60 dB	55 dB
Other than 1	75 dB	65 dB	65 dB

Note: Evaluation point is at boundary of locator's property

Source: EIA Report for Industrial Area of Thilawa SEZ Zone B (2016)

2.4.4 Vibration

(1) Target Vibration Level for both Operation and Closure Stages

There is no vibration standard to receptor in Myanmar as well as south-east Asia and International Organizations such as WHO and IFC. Therefore, the target noise level during operation and closure stages is adopted from the international regulations of Myanmar Japan Thilawa Development (MJTD) within Thilawa SEZ which is opposite site of the project and the target vibration level is shown in Table 2.4-7.

Table 2.4-7 Target Vibration Level for both Operation and Closure Stages

Category	Day time (La) (7am-7pm)	Evening Time (La) (7pm-10pm)	Night time (La) (10pm-7am)
A side next to residential house and Monastery	65 dB	60 dB	60 dB
A side next to office, commercial facilities, and factories including inside of T-SEZ Zone B	70 dB	65 dB	60 dB

Source: EIA Report for Industrial Area of Thilawa SEZ Zone B (2016)

Note: Evaluation point is at boundary of buildings

2.5 Social and Health Standards for the Project

IFC EHS Guidelines

The EHS Guidelines³ by IFC are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP), as defined in IFC's Performance Standard 3: Resource Efficiency and Pollution Prevention. The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC, and that are generally considered to be achievable in new facilities at reasonable costs by existing technology.

There are two kinds of guidelines, General EHS Guidelines and Industry Sector Guidelines. The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors in the following section: (1) Environmental, (2) Occupational Health and Safety, (3) Community Health and Safety, and (4) Construction and Decommissioning.

The Project Proponent will follow the following IFC general EHS guidelines for OHS and CHS accordingly.

2.5.1 IFC General EHS Guidelines for Occupational Health and Safety

Table 2.5-1 shows the contents of the section of Occupational Health and Safety and IFC EHS guidelines regarding occupational health and safety are shown in Table 2.5-2, Table 2.5-3, Table 2.5-4, Table 2.5-5 and Table 2.5-6.

Table 2.5-1 Occupational Health and Safety in IFC EHS Guidelines

Contents	Description
General Facility Design and Operation	Integrity of Workplace Structures <ul style="list-style-type: none"> • Permanent and recurrent places of work should be designed and equipped to protect OHS; • Surfaces, structures and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds; • Buildings should be structurally safe, provide appropriate protection against the climate, and have acceptable light and noise conditions; • Fire resistant, • Noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls; • Floors should be level, even and non-skid; • Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.
	Severe Weather and Facility Shutdown <ul style="list-style-type: none"> • Work place structures should be designed and constructed to withstand the expected elements for the region and have an area designated for safe refuge, if appropriate; • Standard Operating Procedures (SOPs) should be developed for project or process shut-down, including an evacuation plan, drills to practice the procedure and plan should also be undertaken annually.
	Workplace and Exit <ul style="list-style-type: none"> • The space provided for each worker, and in total, should be adequate for safe evacuation of all activities, including transport and interim storage of materials and products; • Passages to emergency drills should be unobstructed at all times; • Exits should be clearly marked to be visible in total darkness; • The number and capacity of emergency exits should be sufficient for safe and orderly evacuation of the greatest number of people present at any time and there should be a minimum of two exits from any work area; • Facilities also should be designed and built taking into account the needs of disabled persons.
	Fire Precautions <p>The workplace should be designed to prevent the start of fires through the implementation of fire codes</p>

³ The EHS Guidelines are available at the following website of IFC. (As of August 2018)
http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/our+approach/risk+management/ehsguideline

Contents	Description
	<p>applicable to industrial settings. Other measures include:</p> <ul style="list-style-type: none"> • Equipping facilities with fire detectors, alarm systems and fire-fighting equipment; the equipment should be maintained in good working order and be readily accessible and should be adequate for the dimensions and use of the premises, equipment installed, physical and chemical properties of substances present and the number of people present; • Provision of manual fire-fighting equipment that is easily accessible and simple to use; • Fire and emergency alarm systems that are both audible and visible. <p>Lavatories and Showers</p> <ul style="list-style-type: none"> • Adequate lavatory facilities, toilets and washing areas should be provided for the number of people expected to work in the facility and allowances made for segregated facilities, and should be provided with adequate supplies of hot and cold running water, soap and hand drying devices; • Where workers may be exposed to substances poisonous by ingestion and skin contamination may occur, facilities for showering and changing into and out of street and work clothes should be provided. <p>Potable Water Supply</p> <ul style="list-style-type: none"> • Adequate supplies of potable drinking water should be provided from a fountain with an upward jet or with sanitary means of collecting the water for the purposes of drinking; • Water supplied to areas of food preparation or for the purpose of personal hygiene should meet drinking water standards. <p>Clean Eating Area</p> <ul style="list-style-type: none"> • Where there is potential for exposure to substances poisonous by ingestion, suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances. <p>Lighting</p> <ul style="list-style-type: none"> • Workplaces should, to the degree feasible, receive natural light and be supplemented with sufficient artificial illumination to promote workers' safety and health, and enable safe equipment operation, supplemental 'task lighting' may be required where specific visual acuity requirements should be met; • Emergency lighting of adequate intensity should be installed and automatically activated upon failure of the principal artificial light source. <p>Safe Access</p> <ul style="list-style-type: none"> • Passageways for pedestrians and vehicles within and outside buildings should be segregated and provide for easy, safe and appropriate access; • Equipment and installations requiring servicing, inspection and/or cleaning should have unobstructed, unrestricted and ready access; • Hand, knee and foot railings should be installed on stairs, fixed ladders, platform, permanent and interim floor openings, loading bays, ramps, etc.; • Openings should be sealed by gates or removable chains; • Covers should, if feasible, be installed to protect against falling items; • Measures to prevent unauthorized access to dangerous areas should be in place. <p>First Aid</p> <ul style="list-style-type: none"> • The employer should ensure that qualified first-aid can be provided at all times, appropriately equipped first-aid stations should be easily accessible throughout the place of work; • Eye-wash stations and/or emergency showers should be provided close to all workstations where immediate flushing with water is the recommended first-aid response; • Where the scale of work or the type or activity being carried out so requires, dedicated and appropriately equipped first-aid room(s) should be provided; and should be equipped with gloves, gowns and masks for protection against direct contact with blood and other body fluids; • Remote sites should have emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility. <p>Air Supply</p> <ul style="list-style-type: none"> • Sufficient fresh air should be supplied for indoor and confined work spaces; factors to be considered in ventilation design include physical activity, substances in use and process-related emissions; air distribution systems should be designed so as not to expose workers to draughts; • Mechanical ventilation systems should be maintained in good working order; point-source exhaust systems required for maintaining a safe ambient environment should have local indicators of correct functioning; • Re-circulation of contaminated air is not acceptable; air inlet filters should be kept clean and free of dust and microorganisms; heating, ventilation and air conditioning (HVAC) and industrial evaporate cooling systems should be equipped, maintained and operated so as to prevent growth and spreading

Contents	Description
	<p>of disease agents or breeding of vectors (e.g. mosquitoes and flies) of public health concern.</p> <p>Work Environment Temperature</p> <ul style="list-style-type: none"> The temperature in work, rest room and other welfare facilities should, during service hours, be maintained at a level appropriate for the purpose of the facility.
Communication and Training	<p>OHS Training</p> <ul style="list-style-type: none"> Provisions should be made to provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at/on the site and of personal protection and preventing injury to fellow employees; Training should consist of basic hazard awareness, site-specific hazards, safe work practices and emergency procedures for fire, evacuation, natural disaster as appropriate; any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training. <p>Visitor Orientation</p> <ul style="list-style-type: none"> If visitors to the site can gain access to areas where hazardous conditions or substances may be present, a visitor orientation and control program should be established to ensure visitors do not enter hazard areas unescorted. <p>New Task Employee and Contractor Training</p> <ul style="list-style-type: none"> The employer should ensure that workers and contractors prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present and the training should adequately cover 1) knowledge of materials, equipment and tools; 2) know hazards in the operations and how they are controlled; 3) potential risks to health; 4) precautions to prevent exposure; 5) hygiene requirements; 6) wearing and use of protective equipment and clothing; 7) appropriate response to operation extremes, incidents and accidents. <p>Basic OHS Training</p> <ul style="list-style-type: none"> A basic occupational training program and specialty courses should be provided, as needed, to ensure that workers are oriented to the specific hazards of individual work assignments; training should be generally provided to management, supervisors, workers and occasional visitors to areas of risks and hazards; Workers with rescue and first-aid duties should receive dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co-workers; training would include the risks of becoming infected with blood-borne pathogens through contact with bodily fluid and tissue; Through appropriate contract specifications and monitoring, the employer should ensure that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin. <p>Area Signage</p> <ul style="list-style-type: none"> Hazardous areas (electrical rooms, compressor rooms, etc.), installations, materials, safety measures and emergency exits, etc. should be marked appropriately; Signage should be in accordance with international standards and be well known to, and easily understood by workers, visitors and the general public as appropriate. <p>Labelling of Equipment</p> <ul style="list-style-type: none"> All vessels that may contain substances that are hazardous as a result of chemical or toxicological properties, or temperature or pressure, should be labelled as to the contents and hazard, or appropriately color coded; Similarly, piping systems that contain hazardous substances should be labelled with the direction of flow and contents of the pipe, or color coded whenever the pipe passing through a wall or floor is interrupted by a valve or junction device. <p>Communicate Hazard Codes</p> <ul style="list-style-type: none"> Copies of the hazard coding system should be posted outside the facility at emergency entrance doors and fire emergency connection systems where they are likely to come to the attention of emergency services personnel; Information regarding the types of hazardous materials stored, handled or used at the facility, including typical maximum inventories and storage locations, should be shared proactively with emergency services and security personnel to expedite emergency response when needed; Representatives of local emergency and security services should be invited to participate in periodic (annual) orientation tours and site inspections to ensure familiarity with potential hazards present.
Physical Hazards	<p>Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity. Single exposure to physical hazards may result in a wide range of injuries, from minor and medical aid only, to disabling, catastrophic, and/or fatal. Multiple exposures over prolonged periods can result in disabling injuries of comparable significance and consequence.</p>

Contents	Description
	<p>Rotating and Moving Equipment</p> <p>Injury or death can occur from being trapped, entangled or struck by machinery parts due to unexpected starting of equipment or unobvious movement during operations. Recommended protective measures include:</p> <ul style="list-style-type: none"> • Designing machined to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions; examples of proper design considerations include two-handed operated machines to prevent amputations or the availability of emergency stops dedicated to the machine and placed in strategic location; where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with and protected by a guard or other device that prevents access to the moving part or pinch point; guards should be designed and installed in conformance with appropriate machine safety standards. • Turning off, disconnecting, isolating and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts, or in which energy can be stored (e.g. compressed air, electrical components) during servicing or maintenance, in conformance with a standard such a CSA Z460 Lockout or equivalent ISO or ANSI standard. • Designing and installing equipment, where feasible, to enable routine service, such as lubrication, without removal of the guarding devices or mechanisms. <p>Noise</p> <p>Noise limits for different working environment are provided in Table 2.5-2.</p> <ul style="list-style-type: none"> • No employee should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C). • The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A). Hearing protective devices provided should be capable of reducing sound levels at the ear to at least 85 dB(A). • Although hearing protection is preferred for any period of noise exposure in excess of 85 dB(A), an equivalent level of protection can be obtained, but less easily managed, by limiting the duration noise exposure. For every 3 dB(A) increase in sound levels, the allowed exposure period or duration should be reduced by 50 percent. • Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible. • Periodic medical hearing checks should be performed on workers exposed to high noise levels. <p>Vibration</p> <p>Exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits, should be controlled through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure. Limits for vibration and action values (i.e. the level of exposure at which remediation should be initiated) are provided by the ACGIH. Exposure levels should be checked on the basis of daily exposure time and data provided by equipment manufacturers.</p> <p>Electrical</p> <p>Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders and by vehicles with metal booms. Vehicles or grounded metal objects brought into close proximity with overhead wires can result in arcing between the wires and the object, without actual contact. Recommended actions include:</p> <ul style="list-style-type: none"> • Marking all energized electrical devices and lines with warning signs • Locking out (de-charging and leaving open with a controlled locking device) and tagging out (warning sign placed on the lock) devices during service or maintenance • Checking all electrical cords, cables and hand power tools for frayed or exposed cords and following manufacturer recommendations of maximum permitted operating voltage of the portable hand tools • Double insulating / grounding of all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits • Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic area • Appropriate labelling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited.

Contents	Description
	<ul style="list-style-type: none"> Establishing 'No Approach' zones around or under high voltage power lines (see Table 2.5-3. Rubber tired construction or vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work <p>Eye Hazards Solid particles from a wide variety of industrial operations, and/or a liquid chemical spray may strike a worker in the eye causing an eye injury or permanent blindness. Recommended measures include:</p> <ul style="list-style-type: none"> Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full-face shield. Specific Safe Operating Procedures (SOPs) may be required for use of sanding and grinding tools and/or when working around chemical liquids. Frequent checks of these types of equipment prior to use to ensure mechanical integrity is also good practice. Machine and equipment guarding should also conform to standards published by organizations such as CSA, ANSI and ISO. Moving areas where the discharge of solid fragments, liquid or gaseous emissions can reasonably be predicted (e.g. discharge of sparks from a metal cutting station, pressure relief valve discharge) away from places expected to be occupied or transited by workers or visitors. Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented or PPE required for transients and visitors. Provisions should be made for persons who have to wear prescription glasses either through the use of over-glasses or prescription hardened glasses. <p>Welding / Hot Work Welding creates an extremely bright and intense light that may seriously injure a worker's eyesight. In extreme cases, blindness may result. Additionally, welding may produce noxious fumes to which prolonged exposure can cause chronic diseases. Recommended measures include:</p> <ul style="list-style-type: none"> Provision of proper eye protection such as welder goggles and/or full-face shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station (a solid piece of light metal, canvas, or plywood designed to block welding light from others). Devices to extract and remove noxious fumes at the source may also be required. Special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) should be implemented if welding or hot cutting is undertaken outside welding work stations, including 'Hot Work Permits' stand-by fire extinguishers, stand-by fire watch and maintaining the fire watch for up to one hour after welding or hot cutting has terminated. Special procedures are required for hot-work on tanks or vessels that have contained flammable materials. <p>Industrial Vehicle Driving and Site Traffic Poorly trained or inexperienced industrial vehicle drivers have increased risk of accident with other vehicles, pedestrians and equipment. Industrial vehicles and delivery vehicles, as well as private vehicles on site, also represent potential collision scenarios. Industrial vehicle driving and site traffic safety practices include;</p> <ul style="list-style-type: none"> Training and licensing industrial vehicles operators in the safe operation of specialized vehicles such as forklifts, including safe loading/unloading, load limits Ensuring drivers undergo medical surveillance Ensuring moving equipment with restricted rear visibility is outfitted with audible back-up alarms Establishing rights-of-way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks in down position), and control of traffic patterns or direction Restricting the circulation of delivery and private vehicles to defined routes and areas, giving preference to 'one-way' circulation, where appropriate <p>Working Environment Temperature Exposure to hot or cold working conditions in indoor or outdoor environments can result temperature stress-related injury or death. Use of PPE to protect against occupational hazards can accentuate and aggravate heat-related illnesses. Extreme temperatures in permanent work environments should be avoided through implementation of engineering control and ventilation. Where this is not possible, such as during short-term outdoor work, temperature-related stress management procedures should be implemented which include:</p> <ul style="list-style-type: none"> Monitoring weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly Adjustment of work and rest periods according to temperature stress management procedures

Contents	Description
	<p>provided by ACGIH depending on the temperature and workloads</p> <ul style="list-style-type: none"> • Providing temporary shelters to protect against the elements during working activities or for use as rest areas • Use of protective clothing • Providing easy access to adequate hydration such a drinking water or electrolyte drinks, and avoiding consumption of alcoholic beverages <p>Ergonomics, Repetitive Motion, Manual Handling</p> <p>Injuries due to ergonomic factors, such as repetitive motion, over-exertion, and manual handling, take prolonged and repeated exposures to develop, and typically require periods of weeks to months for recovery. These OHS problems should be minimized or eliminated to maintain a productive workplace. Controls may include:</p> <ul style="list-style-type: none"> • Facility and workstation design with 5th to 95th percentile operational and maintenance workers in mind • Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceeds thresholds • Selecting and designing tools that reduce force requirement and holding times, and improve postures • Providing user adjustable work stations • Incorporating rest and stretch breaks into work processes, and conducting job rotation • Implementing quality control and maintenance programs that reduce unnecessary forces and exertions • Taking into consideration additional special conditions such as left-handed persons <p>Working at Heights</p> <p>Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters; into operating machinery; into water or other liquid; into hazardous substances; or through an opening in a work surface. Fall prevention / protection measures may also be warranted on a case-specific basis when there are risks of falling from lesser heights. Fall prevention may include:</p> <ul style="list-style-type: none"> • Installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area • Proper use of ladders and scaffolds by trained employees • Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines • Appropriate training in use, serviceability, and integrity of the necessary PPE • Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall <p>Illumination</p> <p>Work area light intensity should be adequate for the general purpose of the location and type of activity, and should be supplemented with dedicated work station illumination, as needed. The minimum limits for illumination intensity for a range of locations/activities appear in Table 2.5-4. Controls should include:</p> <ul style="list-style-type: none"> • Use of energy efficient light sources with minimum heat emission • Undertaking measures to eliminate glare/reflections and flickering of lights • Taking precautions to minimize and control optical radiation including direct sunlight. Exposure to high intensity UV and IR radiation and high intensity visible light should also be controlled • Controlling laser hazards in accordance with equipment specification, certifications, and recognized safety standards. The lowest feasible class Laser should be applied to minimize risks.
Chemical Hazards	<p>Chemical hazards represent potential for illness or injury due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances. They also represent a risk of uncontrolled reaction, including the risk of fire and explosion, if incompatible chemicals are inadvertently mixed. Chemical hazards can most effectively be prevented through a hierarchical approach that includes:</p> <ul style="list-style-type: none"> • Replacement of the hazardous substance with a less hazardous substitute • Implementation of engineering and administrative control measures to avoid or minimize the release of hazardous substances into the work environment keeping the level of exposure below internationally established or recognized limits • Keeping the number of employees exposed, or likely to become exposed, to a minimum • Communicating chemical hazards to workers through labelling and marking according to national and internationally requirement and standards, including the International Chemical Safety Cards (ICSC), Material Safety Data Sheet (MSDS), or equivalent. Any means of written communication

Contents	Description
	<p>should be in an easily understood language and be readily available to exposed workers and first-aid personnel.</p> <ul style="list-style-type: none"> • Training workers in the use of the available information (such as MSDS), safe work practice, and appropriate use of PPE. <p>Air Quality Poor air quality due to the release of contaminants into the work place can result in possible respiratory irritation, discomfort, or illness to workers. Employers should take appropriate measures to maintain air quality in the work area. These include:</p> <ul style="list-style-type: none"> • Maintaining levels of contaminant dusts, vapors and gases in the work environment at concentrations below those recommended by the ACGIH as TWA-TLV's (threshold limit value) concentrations to which most workers can be exposed repeatedly (8 hours/day, 40 hrs/week, week-after-week), without sustaining adverse health effects. • Developing and implementing work practices to minimize release of contaminants into the work environment including: <ul style="list-style-type: none"> ➢ Direct piping of liquid and gaseous materials ➢ Minimized handling of dry powdered materials ➢ Enclosed operations ➢ Local exhaust ventilation at emission/release points ➢ Vacuum transfer of dry material rather than mechanical or pneumatic conveyance ➢ Indoor secure storage and sealed containers rather than loose storage • Where ambient air contains several materials that have similar effects on the same body organs (additive effects), taking into account combined exposures using calculations recommended by the ACGIH. • Where work shifts extend beyond eight (8) hours, calculating adjusted workplace exposure recommended by the ACGIH. <p>Fire and Explosions Fire and explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as possible injury or fatalities to project worker. Prevention and control strategies include:</p> <ul style="list-style-type: none"> • Storing flammable away from ignition sources and oxidizing materials. Further, flammables storage area should be: <ul style="list-style-type: none"> ➢ Remote from entry and exit points into buildings ➢ Away from facility ventilation intakes or vents ➢ Have natural or passive floor and ceiling level ventilation and explosion venting ➢ Use spark proof fixtures ➢ Be equipped with fire extinguishing devices and self-closing doors, and constructed of materials made to withstand flame impingement for a moderate period of time • Providing bonding and grounding of, and between, containers and additional mechanical floor level ventilation if materials are being, or could be, dispensed in the storage area • Where the flammable material is mainly comprised of dust, providing electrical grounding, spark detection, and, if needed, quenching systems • Defining and labelling fire hazards areas to warn of special rules (e.g. prohibition in use of smoking materials, cellular phones, or other potential spark generating equipment) • Providing specific worker training in handling of flammable materials, and in fire prevention or suppression <p>Corrosive, Oxidizing and Reactive Chemicals Corrosive, oxidizing and reactive chemicals present similar hazards and require similar control measures as flammable materials. However, the added hazard of these chemicals is that inadvertent mixing or intermixing may cause serious adverse reactions. This can lead to the release of flammable or toxic materials and gases, and may lead directly to fires and explosions. These types of substances have the additional hazard of causing significant personal injury upon direct contact, regardless of any intermixing issues. The following controls should be observed in the work environment when handling such chemicals:</p> <ul style="list-style-type: none"> ➢ Corrosive, oxidizing and reactive chemicals should be segregated from flammable materials and from other chemicals of incompatible class (acids vs. bases, oxidizers vs. reducers, water sensitive vs. water bases, etc.), stored in ventilated areas and in containers with appropriate secondary containment to minimize intermixing during spills ➢ Workers who are required to handle corrosive, oxidizing or reactive chemicals should be provided with specialized training and provided with, and wear, appropriate PPE (gloves, aprons, splash suits, face shield or goggles, etc.) ➢ Where corrosive, oxidizing or reactive chemicals are used, handled or stored, qualified first-aid

Contents	Description
	<p>should be ensured at all times. Appropriately equipped first-aid stations should be easily accessible throughout the place of work, and eye-wash stations and/or emergency showers should be provided close to all workstations where the recommended first-aid response is immediate flushing with water</p> <p>Asbestos Containing Materials (ACM)</p> <p>The use of asbestos containing materials (ACM) should be avoided in new buildings or as a new material in remodeling or renovation activities. Existing facilities with ACM should develop an asbestos management plan which clearly identifies the location where the ACM is present, its conditions (e.g. whether it is in friable form with the potential to release fibers), procedures for monitoring its conditions, procedures to access the locations where ACM is present to avoid damage, and training of staff who can potentially come into contact with the material to avoid damage and prevent exposure. The plan should be made available to all persons involved in operations and maintenance activities. Repair or removal and disposal of existing ACM in building should only be performed by specially trained personnel (following host country requirements, or in their absence, internationally recognized procedures).</p>
Personal Protective Equipment (PPE)	<p>Personal protective equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems.</p> <p>PPE is considered to be a last resort that is above and beyond the other facility controls and provides the worker with an extra level of personal protection. Table 2.5-5 presents general examples of occupational hazards and types of PPE available for different purposes. Recommended measures for use of PPE in the workplace included:</p> <ul style="list-style-type: none"> • Active use of PPE if alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce, a hazard or exposure • Identification and provision of appropriate PPE that offers adequate protection to the worker, co-workers, and occasional visitors, without incurring unnecessary inconvenience to the individual • Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees • Selection of PPE should be based on the hazard and risk ranking and selected according to criteria on performance and testing established by recognized organizations
Special Hazards Environments	<p>Special hazard environments are work situations where all of the previously described hazards may exist under unique or especially hazardous circumstances. Accordingly, extra precautions or rigor in application of precautions is required.</p> <p>Confined Space</p> <p>A confined space is defined as a wholly or partially enclosed space not designed or intended for human occupancy and which a hazardous atmosphere could develop as a result of the contents, location or construction of the confined space or due to work done in and around the confined space. A 'permit-required' confined space is one that also contains physical or atmospheric hazards that could trap or engulf the person.</p> <p>Confined spaces can occur in enclosed or open structures or locations. Serious injury or fatality can result from inadequate preparation to enter a confined space or in attempting a rescue from a confined space. Recommended management approaches include:</p> <ul style="list-style-type: none"> • Engineering measures should be implemented to eliminate, to the degree feasible, the existence and adverse character of confined spaces; • Permit-required confined spaces should be provided with permanent safety measures for venting, monitoring and rescue operations, to the extent possible. The area adjoining an access to a confined space should provide ample room for emergency and rescue operations; • Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing. The most current ISO and EN Standards should be consulted for design specifications; • Prior to entry into a permit-required confined space: <ul style="list-style-type: none"> ➢ Process or feed lines into the space should be disconnected or drained, and blanked and locked-out ➢ Mechanical equipment in the space should be disconnected, de-energized, locked-out, and braced, as appropriate ➢ The atmosphere within the confined space should be tested to assure the oxygen content is between 19.5 percent and 23 percent, and that the presence of any flammable gas or vapor does not exceed 25 percent of its respective Lower Explosive Limit (LEL) ➢ If the atmospheric conditions are not met, the confined space should be ventilated until the target safe atmosphere is achieved, or entry is only to be undertaken with appropriate and additional PPE • Safety precautions should include Self Contained Breathing Apparatus (SCBA), life lines, and safety

Contents	Description
	<p>watch workers stationed outside the confined space, with rescue and first aid equipment readily available;</p> <ul style="list-style-type: none"> • Before workers are required to enter a permit-required confined space, adequate and appropriate training in confined space hazard control, atmospheric testing, use of the necessary PPE, as well as the serviceability and integrity of the PPE should be verified. Further, adequate and appropriate rescue and/or recovery plans and equipment should be in place before the worker enters the confined space. <p>Lone and Isolated Workers A lone and isolated worker is a worker out of verbal and line of sight communication with a supervisor, other workers, or other persons capable of providing aid and assistance, for continuous periods exceeding one hour. The worker is therefore at increased risk should an accident or injury occur.</p> <ul style="list-style-type: none"> • Where workers may be required to perform work under lone or isolated circumstances, Standard Operating Procedures (SOPs) should be developed and implemented to ensure all PPE and safety measures are in place before the worker starts work. SOPs should establish, at a minimum, verbal contact with the worker at least once every hour, and ensure the worker has a capability for summoning emergency aid • If the worker is potentially exposed to highly toxic or corrosive chemicals, emergency eye-wash and shower facilities should be equipped with audible and visual alarms to summon aid whenever the eye-wash or shower is activated by the worker and without intervention by the worker.
Monitoring	<p>Occupational health and safety monitoring programs should verify the effectiveness of prevention and control strategies. The selected indicators should be representative of the most significant occupational health and safety standards and the implementation of prevention and control strategies. The occupational health and safety monitoring program should include:</p> <ul style="list-style-type: none"> • <i>Safety inspection, testing and calibration:</i> This should include regular inspection and testing of all safety features and hazard control measures focusing on engineering and personal protective features, work procedures, places of work, installations, equipment and tools used. The inspection should verify that issued PPE continues to provide adequate protection and is being worn as required. All instruments installed or used for monitoring and recording of working environment parameters should be regularly tested and calibrated and the respective records maintained. • <i>Surveillance of the working environment:</i> Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards. Monitoring technology, locations, frequencies and parameters should be established individually for each project following a review of the hazards. Generally, monitoring should be performed during commissioning of facilities or equipment and at the end of the defect and liability period, and otherwise repeated according to the monitoring plan. • <i>Surveillance of workers' health:</i> When extraordinary protective measures are required (for example, against biological agents Groups 3 and 4, and/or hazardous compounds), workers should be provided appropriate and relevant health surveillance prior to first exposure, and at regular intervals thereafter. The surveillance should, if deemed necessary, be continued after termination of the employment. • <i>Training:</i> Training activities for employees and visitors should be adequately monitored and documented (curriculum, duration and participants). Emergency exercises, including fire drills, should be documented adequately. Service providers and contractors should be contractually required to submit to the employer adequate training documentation before start of their assignment. <p>Accidents and Diseases Monitoring</p> <ul style="list-style-type: none"> • The employer should establish procedures and systems for reporting and recording: <ul style="list-style-type: none"> ➢ Occupational accidents and diseases ➢ Dangerous occurrences and incidents <p>These systems should enable workers to report immediately to their immediate supervisor any situation they believe presents a serious danger to life or health</p> <ul style="list-style-type: none"> • The systems and the employer should further enable and encourage workers to report to management all: <ul style="list-style-type: none"> ➢ Occupational injuries and near misses ➢ Suspected cases of occupational disease ➢ Dangerous occurrences and incidents • All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of a person knowledgeable/competent in occupational safety. The investigation should: <ul style="list-style-type: none"> ➢ Establish what happened ➢ Determine the cause of what happened

Contents	Description
	<ul style="list-style-type: none"> ➤ Identify measures necessary to prevent a recurrence • Occupational accidents and diseases should, at a minimum, be classified according to Table 2.5-6. Distinction is made between fatal and non-fatal injuries. The two main categories are divided into three sub-categories according to time of death or duration of the incapacity to work. The total work hours during the specified reporting period should be reported to the appropriate regulatory agency.

Source: IFC, Environmental, Health, and Safety (EHS) Guidelines, General EHS Guidelines: Occupational Health and Safety (April 30, 2007)

Table 2.5-2 Noise Limits for Various Working Environments

Location / Activity	Equivalent Level LA _{eq,8h}	Maximum LA _{max, fast}
Heavy industry (no demand for oral communication)	85 dB(A)	110 dB(A)
Light industry (decreasing demand for oral communication)	50-65 dB(A)	110 dB(A)
Open offices, control rooms, service counters or similar	45-50 dB(A)	-
Individual offices (no disturbing noise)	40-45 dB(A)	-
Classrooms, lecture halls	35-40 dB(A)	-
Hospitals	30-35 dB(A)	40 dB(A)

Source: IFC EHS General Guidelines

Table 2.5-3 No Approach Zone for High Voltage Power Lines

Nominal phase-to-phase voltage rating	Minimum Distance
750 or more volts, but no more than 150,000 volts	3 meters
More than 150,000 volts, but no more than 250,000 volts	4.5 meters
More than 250,000 volts	6 meters

Source: IFC EHS General Guidelines

Table 2.5-4 Minimum Limits for Workplace Illumination Intensity

Location/Activity	Light Intensity
Emergency light	10 lux
Outdoor non-working areas	20 lux
Simple orientation and temporary visits (machine storage, garage, warehouse)	50 lux
Workspace with occasional visual tasks only (corridors, stairways, lobby, elevator, auditorium, etc.)	100 lux
Medium precision work (simple assembly, rough machine works, welding, packing, etc.)	200 lux
Precision work (reading, moderately difficult assembly, sorting, checking, medium bench and machine works, etc.), offices	500 lux
High precision work (difficult assembly, sewing, color inspection, fine sorting etc.)	1,000 – 3,000 lux

Source: IFC EHS General Guidelines

Table 2.5-5 Summary of Recommended Personal Protective Equipment according to Hazard

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance and overhead power cords	Plastic Helmets with top and side impact protection
Hearing protection	Noise, ultra-sound	Hearing protectors (ear plugs or ear muffs)

Objective	Workplace Hazards	Suggested PPE
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids	Footwear made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors	Face-masks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available
	Oxygen deficiency	Portable or supplied air (fixed lines). On site rescue equipment.
Body/Leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration	Insulating clothing, body suits, aprons etc. of appropriate materials

Source: IFC EHS General Guidelines

Table 2.5-6 Occupational Accident Reporting

a. Fatalities	b. Non-fatal injuries (number)	c. Total time lost non-fatal injuries (days)
a.1 Immediate	b.1 Less than one day	
a.2 Within a month	b.2 Up to 3 days	c.1 Category b.2
a.3 Within a year	b.3 More than 3 days	c.2 Category b.3

Source: IFC EHS General Guidelines

2.5.2 IFC General EHS Guidelines for Community Health and Safety

Table 2.5-7 shows the contents of the section of Community Health and Safety.

Table 2.5-7 Community Health and Safety in IFC EHS Guidelines

Contents	Brief Description
Water Quality and Availability	<p>Water Quality Drinking water sources should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality. Water quality for more sensitive well-being-related demands such as water used in health care facilities or food production may require more stringent, industry-specific guidelines or standards, as applicable. Delivery of water to the local community should be planned for and managed to ensure the sustainability of the water supply by involving the community.</p> <p>Water Availability Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand. The overall target should be the availability of 100 liters per person per day.</p>
Structural Safety of Project Infrastructure	<p>Reduction of potential hazards is best accomplished during the design phase when the structural design, layout and site modifications can be adapted more easily. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project:</p> <ul style="list-style-type: none"> • Inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure; • Incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire; • Application of locally regulated or internationally recognized building codes; • Engineers and architects should certify the applicability and appropriateness of the structural criteria employed. <p>Depending on the nature of a project, guidance provided in the ICC or comparable codes should be followed, as appropriate, with respect to:</p> <ul style="list-style-type: none"> • Existing structures • Soils and foundations • Site grading • Structural design

Contents	Brief Description
	<ul style="list-style-type: none"> • Specific requirements based on intended use and occupancy • Accessibility and means of egress • Types of construction • Roof design and construction • Fire-resistant construction • Construction materials • Interior environment • Mechanical, plumbing and electrical systems • Fire safety systems • Safeguards during construction • Encroachments into public right of way <p>Illustrative management actions, applicable to hazardous materials storage and use, include:</p> <ul style="list-style-type: none"> • Reducing inventories of hazardous materials • Modifying process of storage conditions • Improving shut-down and secondary containment • Reducing the probability that releases will occur • Reducing off-site impacts of releases through measures intended to contain explosions and fires.
Life and Fire Safety (L&FS)	<p>All new buildings accessible to the public should be designed, constructed, and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements, and in accordance with an internationally accepted life and fire safety (L&FS) standard.</p> <p>With regard to the Life and Fire Safety objectives:</p> <ul style="list-style-type: none"> • Project sponsors' architects and professional consulting engineers should demonstrate that effected buildings meet these life and fire safety objectives; • Life and fire safety systems and equipment should be designed and installed using appropriate standards and sound engineering practices; • Life and fire safety design criteria for all existing buildings should incorporate all local building codes and fire department regulations. <p>Specific Requirements for New Buildings</p> <p>The nature and extent of life and fire safety systems required will depend on the building type, structure, construction, occupancy and exposures. Sponsors should prepare a Life and Fire Safety Master Plan identifying major fire risks, applicable codes, standards and regulations, and mitigation measures. The plan should be prepared by a suitable qualified professional and adequately cover, but not limited to, the issues addressed briefly below:</p> <ul style="list-style-type: none"> • <i>Fire Prevention:</i> Fire prevention addresses the identification of fire risks and ignition sources and measures needed to limit fast fire and smoke development; • <i>Means of Egress:</i> Means of egress includes all design measures that facilitate a safe evacuation by residents/occupants in case of fire and other emergencies; • <i>Detection and Alarm Systems:</i> These systems encompass all measures, including communication and public-address systems; • <i>Compartmentation:</i> Compartmentation involves all measures to prevent or slow the spread of fire and smoke; • <i>Fire Suppression and Control:</i> Fire suppression and control includes all automatic and manual fire protection installations; • <i>Emergency Response Plans:</i> An emergency response plan is a set of scenario-based procedures to assist staff and emergency response teams during real life emergency and training exercises; • <i>Operation and Maintenance:</i> Operations and Maintenance involves preparing schedules for mandatory regular maintenance and testing of life and fire safety features to ensure that mechanical, electrical and civil structures and systems are at all times in conformance with life and fire safety design criteria and required operational readiness. • <i>L&FS Master Plan Review and Approval</i> • <i>Specific Requirements for Existing Buildings</i>
Traffic Safety	<p>Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents. Road safety initiatives proportional to the scope and nature of project activities should include:</p> <ul style="list-style-type: none"> • Adoption of best transport safety practices across all aspects of project operations with the goal of

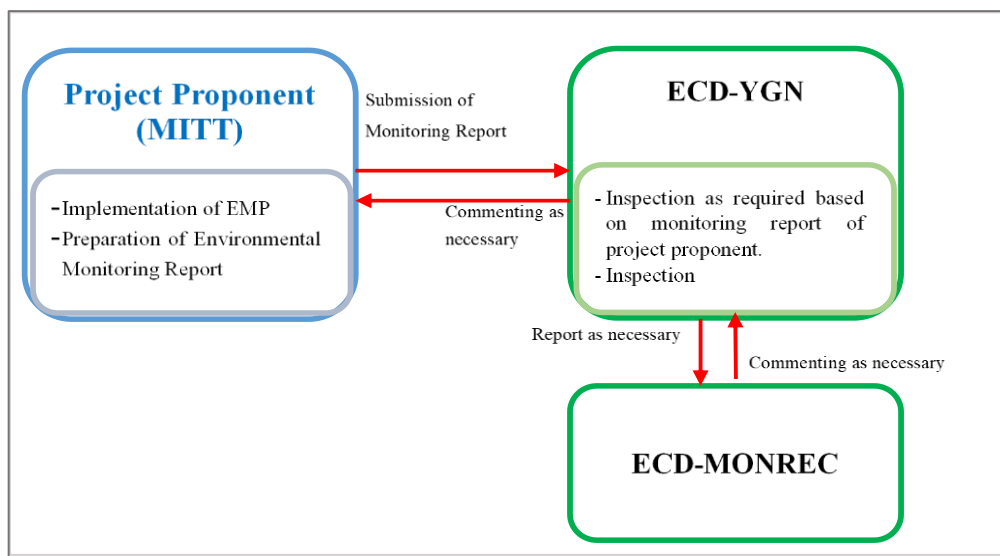
Contents	Brief Description
	<p>preventing traffic accidents and minimizing injuries suffered by project personnel and public;</p> <ul style="list-style-type: none"> • Regular maintenance of vehicles and use of manufacturer approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. <p>When the project may contribute to a significant increase in traffic along existing roads, recommended measures include:</p> <ul style="list-style-type: none"> • Minimizing pedestrian interaction; • Collaborating with local communities and responsible authorities to improve signage, visibility and overall safety of the roads and to educate about traffic and pedestrian safety (e.g. school education campaigns); • Coordination with emergency responders; • Using locally sourced materials to minimize transport distances and locating worker camps close to project sites and arranging transport to minimize external traffic.
Transport of Hazardous Materials	<p>Projects should have procedures in place that ensure compliance with local laws and international requirements applicable to the transport of hazardous materials.</p> <p>The procedures for transportation of hazardous materials (Hazmats) should include:</p> <ul style="list-style-type: none"> • Proper labelling of containers; • Provision of shipping documentation; • Ensuring volume, nature, integrity and protection of packaging and containers; • Ensuring adequate transport vehicle specifications; • Training employees regarding proper shipping and emergency procedures. <p>Major transportation hazards should be implemented to prevent or minimize consequences of catastrophic releases of hazardous material during transportation by preparation of a Hazardous Materials Transportation Plan containing the below presented:</p> <ul style="list-style-type: none"> • The review of hazard assessment which should identify the potential hazard • Management actions should address 1) compliance audit 2) incident investigation 3) employee participation 4) contractors' participation 5) training • Preventive Measures specific to each hazardous material for transportation
Disease Prevention	<p>Recommended interventions against the communicable diseases at the project level include:</p> <ul style="list-style-type: none"> • providing surveillance and active screening and treatment of workers, • preventing illness among workers in local communities by undertaking health awareness and education initiatives, • training health workers in disease treatment and conducting immunization programs for workers, and • providing treatment through standard case management in on-site or community health care facilities.
Emergency Preparedness and Response	<p>The proposed project should have an Emergency Preparedness and Response Plan that is commensurate with the risks of the facility and that includes the following basic elements:</p> <ul style="list-style-type: none"> • Administration (policy, purpose, distribution, definitions, etc.); • Organization of emergency areas (command centers, medical stations, etc.); • Roles and responsibilities; • Communication systems; • Emergency response procedures; • Emergency resources; • Training and updating; • Checklists (role and action list and equipment checklist); • Business Continuity and Contingency.

Source: IFC, Environmental, Health, and Safety (EHS) Guidelines, General EHS Guidelines: Community Health and Safety (April 30, 2007)

2.6 Institutional Arrangement for Environmental Management

2.6.1 Institutional Arrangement during Operation Stage

During operation stage, the project proponent, MITT is fully responsible for implementation of environmental management, mitigation and monitoring activities and submission of environmental monitoring report to Environmental Conservation Department (ECD), Yangon Region under MONREC. Operations Department under MITT is in-charged department for environment, security and safety concerned issues throughout the operation stage (see Figure 2.3-1 and Figure 2.3-2). The proposed institutional arrangement to implement EMP during operation stage is shown in Figure 2.6-1.

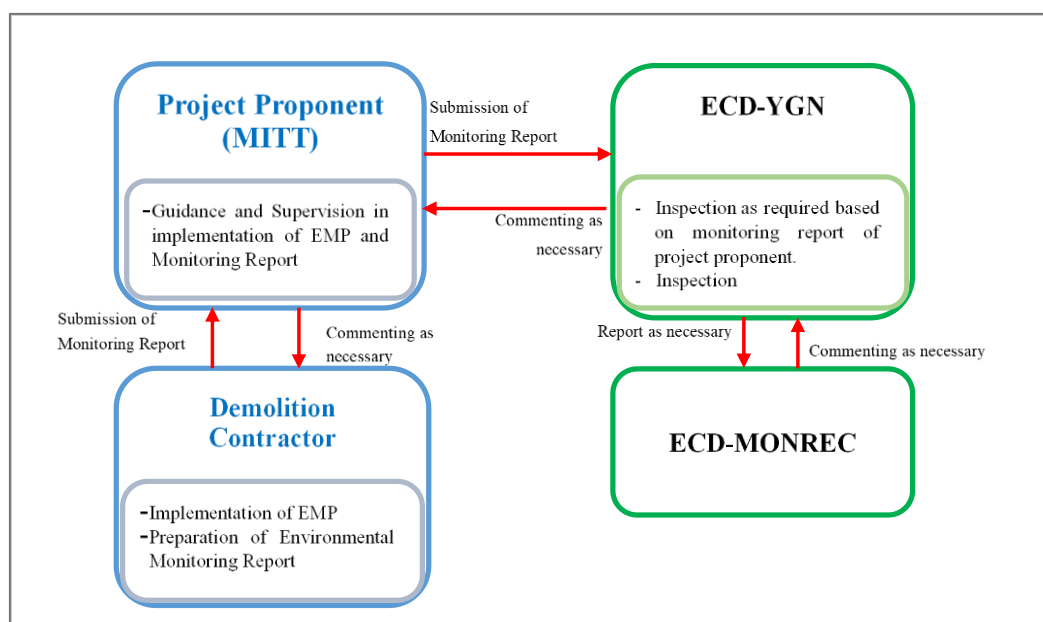


Source: EMP Study Team

Figure 2.6-1 Institutional Arrangement during Operation Stage

2.6.2 Institutional Arrangement during Closure Stage

During the closure stage, the demolition contractor will establish temporary project office to implement demolition works. The contractor is responsible to implement environmental management, mitigation and monitoring activities and submission of environmental monitoring report to the project proponent, MITT. The project proponent is responsible for the supervision of overall environmental management activities done by construction contractor, and for the submission of environmental monitoring report to Environmental Conservation Department (ECD), Yangon Region under MONREC. The proposed institutional arrangement to implement EMP during Closure Stage is shown in Figure 2.6-2.



Source: EMP Study Team

Figure 2.6-2 Institutional Arrangement during Closure Stage

2.7 Key Commitments of Project Proponent for Environmental Management

The Project Proponent shall have several obligations related to environmental, social, health concerns and a consolidated summary list of environmental, social and health commitments that will be implemented in the Project in order to manage and mitigate the potential impacts associated with the project is provided in Table 2.7-1.

Table 2.7-1 Key Commitments of Project Proponent for Environmental Management

Field	No.	Commitment	EMP Reference	Responsible Organization	
				Project Proponent	Contractor
General	1.1	The relevant Myanmar laws, rules and regulations as follows will be complied with: <ul style="list-style-type: none"> National Environmental Policy (2019) Environmental Conservation Law (2012) Environmental Conservation Rules (2014) EIA Procedures (2015) National Environmental Quality (Emission) Guidelines (2015) 	Chapter 2	●	●
	1.2	The Project will comply with all of the target values which is set in the EMP report.	Chapter 2	●	●
	1.3	The Project will adopt IFC and EHS Guidelines (2007)	Chapter 2	●	●
	1.4	The Project Proponent will comply and implement environmental management, mitigation measures and monitoring plans formulated from this EMP Study during operation and closure stages.	Chapter 6	●	●
	1.5	The Project Proponent will implement all the items in the list of commitments.	Chapter 2	●	●

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Field	No.	Commitment	EMP Reference	Responsible Organization	
				Project Proponent	Contractor
Air Quality	2.1	The Project set the target value of ambient air quality in accordance with National Environmental Quality (Emission) Guidelines (NEQG) and will comply with it.	Chapter 2	●	●
	2.2	To prevent air contaminants such as dust, particulate matters and exhaust gases during operation and closure stages, the adequate mitigation measures will be implemented at both operation and closure stages of the project.	Chapter 5/6	●	●
	2.3	Monitoring of air quality will be conducted in accordance with the EMP during both operation and closure stages and respective monitoring reports will be submitted accordingly to ECD, Yangon Region.	Chapter 6	●	●
Water Quality	3.1	During closure stage, wastewater generated from the domestic activities will be discharged into Septic tank and collected by outsourced contractor. The wastewater from demolition activities will be discharged into the drainage only after passing through the settling ponds and inspection pit.	Chapter 5/6		●
	3.2	During operation stage, the domestic wastewater will be discharged into the river through the drainage only after pre-treatment by Sewage Treatment Plant to comply with NEQG target values for effluent.	Chapter 5/6	●	
	3.3	During operation stage, the wastewater generated from port operations, repair and maintenance activities will be collected and treated at TJQ Air Floating Purifier (WWTP) and only effluent from WWTP will be discharged into the river.	Chapter 5/6	●	
	3.4	Direct discharges of all kinds of wastewater into the drainages will be strictly prohibited at both operation and closure stages of the project.	Chapter 5/6	●	●
	3.5	Monitoring of water quality will be conducted in accordance with the EMP during construction/ closing and operation stages to comply with target values set and respective monitoring reports will be submitted accordingly to ECD, Yangon Region.	Chapter 6	●	●
Wastes	4.1	Comprehensive non-hazardous and hazardous waste management systems will be undertaken for waste assortment, segregation, proper storage and disposal/ recycling will be implemented during both operation and closure stages.	Chapter 5/6	●	●
	4.2	The non-hazardous wastes generated from the all stages will be collected, segregated and stored systematically and disposed properly by entrusting Kyauktan Township Development Committee, while non-hazardous wastes will be disposed properly by licensed contractor.	Chapter 5/6	●	●
	4.3	Types and amount of hazardous and non-hazardous wastes generated from port operations and demolition works will be recorded monthly and	Chapter 6	●	●

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Field	No.	Commitment	EMP Reference	Responsible Organization	
				Project Proponent	Contractor
		included in the monitoring report to be submitted to ECD, Yangon Region during both operation and closure stages.			
Hazardous chemicals and materials	5.1	During operation stage, dangerous containers, damaged containers, harmful and toxic materials and chemicals, and other harmful cargoes classified under 9 classes of IMO will be handled in accordance with relevant handling procedures and complied with international standards accordingly.	Chapter 5/6	●	
	5.2	License for storage and usage of huge amount of gallons of petroleum in tanks, issued by Ministry of Industry (MOI), will be renewed annually.	Chapter 5/6	●	
	5.3	Amount of fuel usage, and hazardous wastes to be consigned to waste management organization(s) will be recorded monthly, and will be included in the monitoring report to be submitted to ECD, Yangon Region during both operation and closure stages.	Chapter 5/6	●	●
	5.4	Self-Inspection for the chemical and hazardous materials management, DG cargo handling including the measures to secure occupational health and safety will be carried out during regular operation period.	Chapter 5/6	●	
Offensive Odour	6.1	Checking the operation of temporary septic tanks and temporary waste storage areas will be implemented during closure stage.	Chapter 5/6		●
	6.2	Checking the air conditions of toilets, canteen, checking operation of domestic waste water treatment plant, operation wastewater treatment plant, temporary container washing area, waste storage area and other possible odour sources will be implemented during the operation stage.	Chapter 5/6	●	
Soil Contamination	7.1	Prevention measures such as paving of storage areas with concrete, installation of secondary containments, proper storage of waste, chemicals & fuels management, careful cargo storage and handling, regular inspection of storage facilities will be implemented not to cause soil contamination during operation and closure stages.	Chapter 5/6	●	●
	7.2	In case of spillage or leakage of oils and fuels, harmful and toxic dry bulk cargoes, trenches will be installed as necessary within the port area and oil separation facility is installed at workshop.	Chapter 5/6	●	
	7.3	Visual check on the fuel storage area, warehouse area, container yards and dry bulk cargo handling not to cause leakage, spillage and ground cracking during the operation stage of the project.	Chapter 5/6	●	
Noise and Vibration	8.1	Adequate mitigation measures would be adopted and implemented at both operation and closure stages of the project to comply with target noise and vibration levels set for the project.	Chapter 5/6	●	●

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Field	No.	Commitment	EMP Reference	Responsible Organization	
				Project Proponent	Contractor
	8.2	For noise and vibration control, setting the speed limit for vehicles, proper repair and maintenance of demolition-related vehicles during closure stage.	Chapter 5/6		●
	8.3	Noise and vibration check will be conducted in the port area yearly in accordance with the EMP during operation stage and monitoring results will be included in the monitoring report to be submitted to ECD, Yangon Region accordingly.	Chapter 5/6	●	
Bottom Sediment	9.1	Amount of dredged materials from maintenance dredging and the frequency of maintenance dredging will be recorded.	Chapter 6	●	
	9.2	Sediment quality at the downstream of the jetty will be monitored yearly to ensure acceptable sediment quality.	Chapter 6	●	
Local Economy	9.1	Number of local staff and workers in MITT will be recorded as necessary to know the job employment for local people.	Chapter 5/6	●	●
CSR Activities	10.1	Donations at wards and villages nearby, Social Welfare Programs and Annual Provision of scholarships to MMU students, etc. will be recorded yearly.	Chapter 5/6	●	
Landscape and Greening	10.1	During operation stage, greening area will be developed during the operation stage and as much as possible and trees will be planted not only for green space, but also for reduction of noise levels as barriers.	Chapter 5/6	●	
Health and Safety	11.1	The relevant regulations and rules of labour rights, health and safety in the working place will be complied with the followings: The Worker's Compensation Act (1923) The Factory Act (1951/Amendment in 2016) The Leave and Holiday Act (1951, Partially Amendment in 2014) The Labour Organization Law (2011) The Prevention and Control of Communicable Diseases Law (1995, Amendment in 2011) The Social Security Law (2012) The Labour Organization Rule (2012) The Labour Dispute Settlement Law (2012/Amendment in 2019) The Employment and Skill Development Law (2013) The Minimum Wage Law/Rules (2013) The Prevention of Hazard from Chemicals and Related Substances Law (2013) The Prevention of Hazard from Chemicals and Related Substances Rules (2016) The Payment of Wages Law (2016) The Occupational Health and Safety Law (2019)	Chapter 5/6	●	●

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Field	No.	Commitment	EMP Reference	Responsible Organization	
				Project Proponent	Contractor
		IFC EHS Guidelines for occupational health and safety			
	11.2	The adequate measures and plans for occupational health and safety of staff and port workers will be implemented in accordance with EMP to comply with Myanmar laws and regulations and other international practices for OHS during operation and closure stages of the project.	Chapter 5/6	●	●
	11.3	Accidents and incidents, OHS trainings and drills, Health Check-up and other OHS concerned issues will be recorded and prepared the report yearly. Reports for claims from workers will be prepared monthly during operation stage.	Chapter 5/6	●	●
Emergency Risks	12.1	Occurrences of the risks of flood, fire and earthquake will be recorded at the time of occurrence and included in the monitoring report to be submitted to ECD, Yangon Region.	Chapter 5/6	●	●
	12.2	Emergency Response Plan, Evacuation plan, Flood Preparedness Checklist, Storm Protection Plan, Quay Crane Tie-Down Systems for prevention of high intensity wind speed occurrence, etc. will be prepared and implemented in case of emergencies during operation stage.	Chapter 5/6	●	
	12.3	Firefighting Drills, Emergency Trainings and Preparedness for workers will be conducted during both operation and closure stages.	Chapter 5/6	●	●

Source: EMP Study Team

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