

LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD.

Initial Environmental Examination

Manufacturing and Export of Rubber Wood Sewn Timber

Prepared by:



01-Feb-22

MYANWEI ENVIRONMENTAL
SOLUTIONS COMPANY LIMITED



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Date: 1, 2, 2022

Attention: Dear Director

Environmental Conservation Department

Subject: Environmental Management Plan (EMP) Report in respect of the manufacturing and export of rubber wood sewn timber by LP (Myanmar) Industrial Manufacturing Company Limited.

EMP report describes the environmental condition of a project, including significant impact, formulation of mitigation measures and preparation of institutional requirements and environmental monitoring.

Myanwei Environmental Solutions Company Limited has prepared this report with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking into account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above. This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

We strongly commit that this report was prepared in compliance with Myanmar Environmental Laws and Regulations.



LP (MYANMAR) INDUSTRIAL MANUFACTURING CO.,LTD

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Date 1, 2, 2022

Dear: Director

Environmental Conservation Department

Nay Pyi Taw

Subject: Environmental Management Plan (EMP) Report in respect of the Manufacturing and export of rubber wood sewn timber

We refer to the captioned EMP report, which has been prepared by Myanwei Environmental Solutions Co., Ltd. (Third Party Consultant) in compliance with EIA procedure (2015) and other related laws/rules.

We believe, to the best of our knowledge at the time of writing, that;

- The EMP report is accurate and complete
- The EMP report has been prepared in strict compliance with all applicable laws, rules, regulations and procedures in force.

LP (Myanmar) Industrail Manufacturing Company Limited will at all times comply fully with all commitment and obligations in the EMP report.

We acknowledge and understand that



Mr. Peng Hao

Promoter

LP (Myanmar) Industrial Manufacturing Co.,Ltd

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APPENDIX B Consultant Registration Certificate

APPENDIX C Environmental Monitoring Quality Result

APPENDIX D Certificate of Incorporation

APPENDIX E Generator Licence

APPENDIX F Industrial Licence

Lists of Abbreviation

1. CEMP	= Construction Environmental Management Plan
2. CSR	= Corporate Social Responsibility
3. EMP	= Environmental Management Plan
4. EIA	= Environmental Impact Assessment
5. ECD	= Environmental Conservation Department
6. ECC	= Environmental Compliance Certificate
7. EMoP	= Environmental Monitoring Plan
8. GIIP	= Good International Industry Practices
9. HSE	= Health, Safety and Environment
10. IEE	= Initial Environmental Examination
11. IFC	= International Finance Corporation
12. NEQG	= National Environmental Quality (Emission) Guidelines
13. MIC	= Myanmar Investment Commission
14. MOECF	= Ministry of Environmental Conservation and Forestry
15. MONREC	= Ministry of Natural Resources and Environmental Conservation
16. OEMP	= Operation Environmental Management Plan
17. OSHA	= Occupational Safety and Health Administration
18. PPE	= Personal Protective Equipment
19. WHO	= World Health Organization
20. YCDC	= Yangon City Development Committee
21. YESB	= Yangon City Electricity Supply Board
22. YCDC	= Yangon City Development Committee
23. ENV Team	= Environmental Team
24. IND Team	= Industrial Solution Team
25. Sq meter	= Square meter
26. %	= Percentage
27. °C	= Degree Celsius
28. BOD	= Biochemical Oxygen Demand
29. COD	= Chemical Oxygen Demand
30. CO	= Carbon Monoxide
31. CO ₂	= Carbon Dioxide
32. NO ₂	= Nitrogen Dioxide
33. VOC	= Volatile Organic Compound
34. O ₃	= Ozone
35. dB (A)	= Decibel Unit
36. MT	= Metric Ton
37. Kt	= Kilo Ton
38. kWh	= Kilo Watt Hour
39. km	= Kilo Meter
40. PM	= Particulate Matter
41. ppm	= Part Per Million

အစီရင်ခံစာအကျဉ်းချုပ်

စီမံကိန်းအကြောင်းဖော်ပြချက်

ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းဆိုင်ရာ အစီရင်ခံစာသည် LP (Myanmar) Industrial Manufacturing Company Limited (LP Myanmar) ပြည်တွင်းမှ ရာဘာသစ်ကုန်ကြမ်းကို ရယူပြီး ရာဘာသားထုတ်လုပ်၍ ပြည်ပသို့ တင်ပို့ခြင်း လုပ်ငန်းမှ ပတ်ဝန်းကျင်အပေါ်အဓိက ထိခိုက်မှု များကို လေ့လာဆန်းစစ်ပြီး လျော့ချရေး အစီအစဉ်များ၊ ကာကွယ်ထိန်းသိမ်းရေး အစီအစဉ်များကို အဓိပ္ပါယ်သတ်မှတ်ထားခြင်း ဖြစ်သည်။

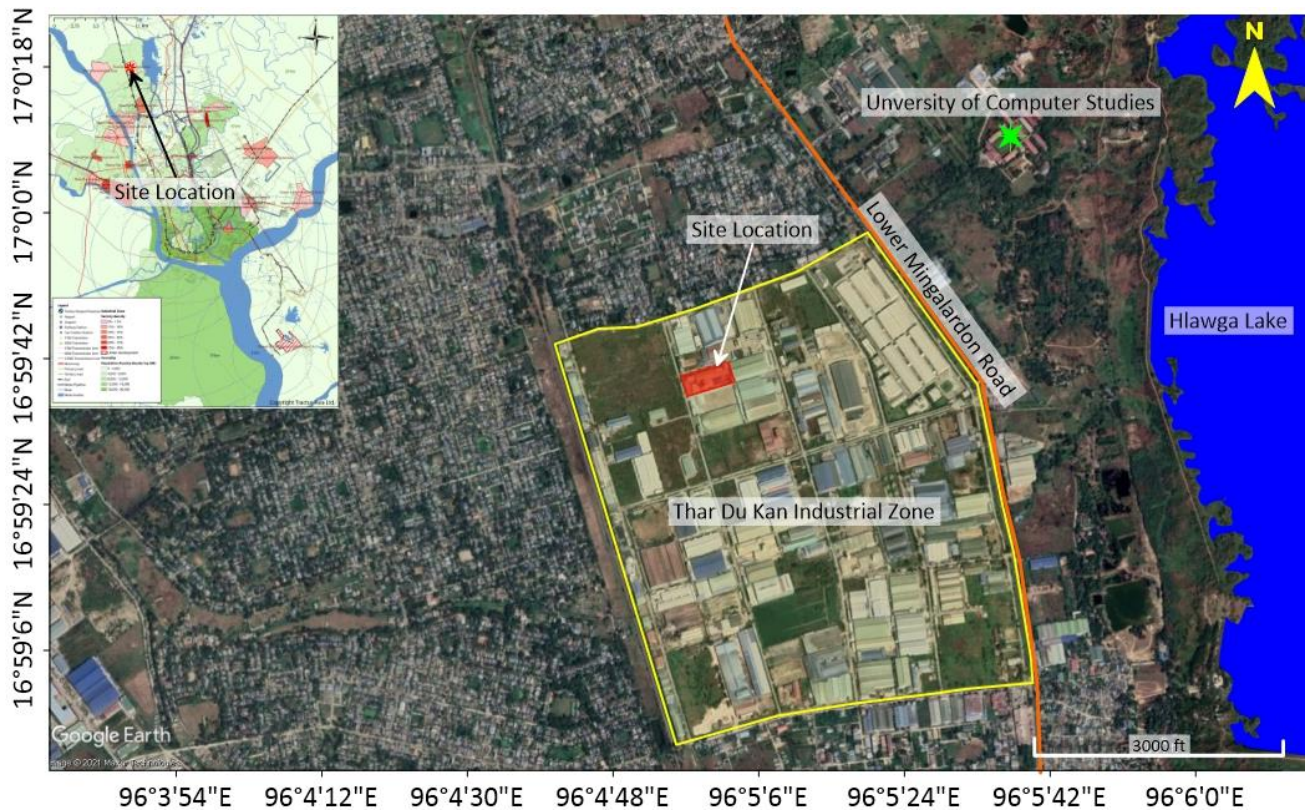
LP Myanmar သည် မြေကွက်အမှတ် (၄၁)၊ မြေတိုင်းရပ်ကွက်အမှတ် (၅၀)၊ သာဓုကန်စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်ရှိ စုစုပေါင်း မြေဧရိယာ ၃.၁၉၁ ဧက (၁၂၉၁၃.၅၁၉၀ စတုရန်းမီတာ) ပေါ်တွင် ပြည်တွင်းမှရာဘာသစ် ကုန်ကြမ်းကို ရယူပြီး ရာဘာသား ထုတ်လုပ်၍ ပြည်ပသို့ ရာနုန်းပြည့် တင်ပို့ခြင်းလုပ်ငန်းအား ရန်ကုန်တိုင်း ဒေသကြီးရင်းနှီးမြှုပ်နှံမှု ကော်မတီ မှ ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ ၁၀ ရက်နေ့တွင် (ခွင့်ပြုမိန့်အမှတ် ရကတ- ၀၇၉/၂၀၁၈) ဖြင့် ရရှိပြီးဖြစ်ပါသည်။ လုပ်ငန်းလည်ပတ်ရန်အတွက် မြန်မာနိုင်ငံ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာန (MONREC) ၏ အတည်ပြုချက် ရယူရန်လိုအပ်ကြောင်း ကော်မရှင်မှ မှာကြားခဲ့ပါသည်။ ထို့ကြောင့် မြန်မာနိုင်ငံပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)အရ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း Initial Environmental Examination (IEE) ပြုလုပ်ရန် လိုအပ်ကြောင်း ၂၀၁၈ ခုနှစ်၊ ဇွန်လ ၄ ရက် ရက်စွဲပါ စာအမှတ်၊ ရက-၁/၃/၄ (အီးအိုင်အေ) (၆၂၂/၂၀၁၈) ဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန ရန်ကုန်တိုင်းဒေသကြီးမှ သဘောထားမှတ်ချက် ရရှိပြီးဖြစ်ပါသည်။ ထို့ကြောင့် သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန (MONREC) ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန (ECD)၏ ထုတ်ပြန်ထားသော ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း (EIA Procedure) ၂၀၁၅ အတိုင်း LP Myanmar. သည် စက်ရုံအတွက် IEE အစီအရင်ခံစာ ရေးဆွဲခဲ့ပါသည်။ IEE အစီအရင်ခံစာရေးဆွဲရန် တတိယအဖွဲ့အစည်းဖြစ်သော MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED (Myanwei) မှ တာဝန်ယူရေးဆွဲခဲ့ပါသည်။ စက်ရုံတွင် ကျန်းမာရေး၊ ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အဖွဲ့အစည်းတစ်ခုထားရှိပြီး လျော့ချရေး၊ စီမံခန့်ခွဲရေးနှင့် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်များကို အကောင်အထည်ဖော်သွားမည်ဖြစ်သည်။

LP Myanmar စက်ရုံသည် ခန့်မှန်းခြေ အမေရိကန် ဒေါ်လာသန်း ၀.၉၂၂ သန်းခန့် ခွင့်ပြုမတည်ရင်းငွေဖြင့် ပြည်တွင်းမှ ရာဘာသစ်ကုန်ကြမ်းကို ရယူပြီး ရာဘာသားထုတ်လုပ်၍ ပြည်ပသို့ရာနုန်းပြည့် တင်ပို့ခြင်း လုပ်ငန်းဖြစ်ပါသည်။ စက်ရုံသည် ၁၀၀% နိုင်ငံခြားသား ရင်းနှီးမြှုပ်နှံမှုဖြင့် အကောင်အထည်ဖော် ဆောင်ရွက်လျက် ရှိပါသည်။ စက်ရုံအကျယ်အဝန်းမှာ ၃.၁၉၁ ဧက(၁၂၉၁၃.၅၁၉ စတုရန်းမီတာ) မြေပေါ်တွင် စက်ရုံတည်ဆောက်ပြီး ပြည်တွင်းမှ ရာဘာသစ်ကုန်ကြမ်းကို ရယူပြီး ရာဘာသားထုတ်လုပ်၍ ပြည်ပသို့ တင်ပို့ခြင်း လုပ်ငန်း လုပ်ဆောင်ခြင်းဖြစ်ပါသည်။ တည်ဆောက်ပြုပြင်မွန်းမံချိန် (Construction phase)ကို ဩဂုတ်လ၊ ၂၀၁၈ ခုနှစ် တွင် စတင်ခဲ့ပြီး ၂နှစ်ခွဲအချိန်ယူကာ စီးပွားဖြစ်စတင်ချိန် (Commercial Running Stage) မှာ ၂၀၂၀ ခုနှစ်၊

ဖေဖော်ဝါရီလတွင်စတင်မည်ဖြစ်သည်။ ကနဦးရင်းနှီးမြှုပ်နှံမှု ကာလမှာ နှစ်(၃၅) သက်တမ်းဖြစ်ပြီး ကနဦး ရင်းနှီးမြှုပ်နှံမှုကာလမှာ (၅)နှစ်နှင့်သက်တမ်းတိုး (၁၀)နှစ် နှစ်ကြိမ်သက်တမ်းတိုးခွင့် သတ်မှတ်ထားပါသည်။ ကနဦးပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း အစီရင်ခံစာအတွက် ၃ ဒီဇင်ဘာလ ၂၀၂၁ခုနှစ်တွင် ကွင်းဆင်းလေ့လာခဲ့ပြီး စက်ရုံကွင်းဆင်း လေ့လာချိန်တွင် ကုန်ထုတ်လုပ်မှု စတင်ချိန် (Operation phase) စတင်နေပြီ ဖြစ်ပါသည်။ စက်ရုံမြေနေရာအား ဦးရဲအောင်ထံမှငှားရမ်းပြီး ကနဦးနှစ် ၃၅နှစ် စာချုပ်ဖြင့် ၁၀ နှစ် နှစ်ကြိမ်သက်တမ်း တိုးငှားရမ်းအသုံးပြုနိုင်မည်ဖြစ်သည်။ အဓိကထုတ်ကုန်မှာ ပြည်တွင်းမှ ရာဘာသစ်ကုန်ကြမ်းကို ရယူပြီး ရာဘာသားထုတ်လုပ်ခြင်း ဖြစ်ပါသည်။ ထုတ်လုပ်မှု လုပ်ငန်းအတွက် automatic စက်ပစ္စည်းများကို အသုံးပြုပြီး လူစွမ်းအားကို စက်လည်ပတ်ခြင်းကို ထိန်းညှိပေးခြင်း၊ အရည်အသွေးစစ်ဆေးခြင်းများတွင် အသုံးပြုပြီးလုပ်သော လုပ်ငန်းမျိုးဖြစ်ပါသည်။ အဓိကကုန်ပစ္စည်းများအား တရုတ်နိုင်ငံမှ တင်သွင်းသည်။ အဓိကစက်ရုံအတွက်အသုံးပြုမှုများမှာ လျှပ်စစ်စွမ်းအင်၊ အရေးပေါ်ဓာတ်အား ပြတ်တောက်မှု အတွက် ဒီဇယ်ဆီသုံးဂျင်နရေတာနှင့် ဝန်ထမ်းများအတွက် သောက်သုံးရေ အသုံးပြုမှု တို့ဖြစ်သည်။ လျှပ်စစ်စွမ်းအင်အားသုံးစွဲမှုသည် စက်ကိရိယာများ လည်ပတ်နိုင်ရန်၊ အလင်းရောင်ရရှိရန်ဖြစ်သည်။

တည်ဆောက်ပြုပြင်ဆင်ကာလဆိုသည်မှာ ကုန်ထုတ်လုပ်မှုအတွက် လိုအပ်သော စက်နှင့်စက်ပစ္စည်းအမျိုးမျိုးအားတပ်ဆင်ခြင်းကာလကိုဆိုလိုသည်။ စက်ရုံလည်ပတ်ရန်အတွက် မြေငှားရမ်းခြင်းတွင် ဂိုဒေါင်အဆောက်အဦးတခု ပါရှိပါသည်။ စက်နှင့် စက်ပစ္စည်း တပ်ဆင်ခြင်းအား ၂၀၁၈ ခုနှစ် ဩဂုတ်လ တွင် စတင်ခဲ့သည်။ ၂၀၂၀ ခုနှစ် ဖေဖော်ဝါရီလ ပထမပတ်တွင် တည်ဆောက်ပြုပြင်ဆင်ကာလ ပြီးဆုံးစေခဲ့သည်။ LP Myanmar ပြည်တွင်းမှ ရာဘာသစ်ကုန်ကြမ်းကို ရယူပြီး ရာဘာသားထုတ်လုပ်ခြင်းစက်ရုံအတွက် လုပ်သားဦးရေ ၁၁၀ ယောက်ဖြင့် လည်ပတ်လျက်ရှိပါသည်။ အဓိကကုန်ထုတ်လုပ်မှုအတွက် စက်ရုံအဆောက်အဦး ဧရိယာအကျယ်အဝန်းမှာ စတုရန်းပေ (၁၂၀'x၁၆၀')၊ ရုံးအဆောက်အအုံအတွက် နှစ်ထပ်အဆောက်အအုံ(၄၀'x၆၀') ရှိပါသည်။လုပ်သားများအတွက် ကန်တင်းအား သီးသန့်နေရာထားရှိပြီး သက်ဆိုင်ရာ မီးစက်ခန်း၊ သောက်သုံးရေ သန့်စင်မှုအခန်းနှင့် အမှိုက်စွန့်ပစ်ရာ အခန်း အစရှိသည်တို့အား သီးသန့်တည်ဆောက်ပေးထားပါသည်။ ရေအသုံးချမှုအနေဖြင့် အစိစိတွင်းရေမှ ထုတ်ယူသုံးစွဲပြီး အထွေထွေအသုံးချမှုအတွက် ဂါလန်၁၀၀၀ဆန့် ပီပါ၂လုံး၊ ထုတ်လုပ်မှုနှင့် မီးသတ်အစီအစဉ်အတွက် ဂါလန်၆၀၀၀ဆန့် ရေကန်တစ်ကန်တို့ပါဝင်သည်။ လျှပ်စစ်အသုံးပြုမှုမှာ စက်ရုံလည်ပတ်ရန်နှင့် အလင်းရောင်ရရှိရေးအတွက်ဖြစ်ပြီး အထွေထွေအသုံးပြုမှုအတွက် ရေသုံးစွဲမှုရှိပါသည်။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုအဆိုပြုချက်အရ ၃၅နှစ်ရင်းနှီးမြှုပ်နှံမှုကာလအပြီးတွင် လုပ်ငန်းပိတ်သိမ်းခြင်း ကာလ ကိုဆိုလိုသည်။

အဆိုပြုရာဘာသစ်ခွဲသားထုတ်လုပ်ခြင်းစက်ရုံသည် မြေကွက်အမှတ် (၄၁)၊ မြေတိုင်းအကွက်အမှတ်(၅၀)၊ သာဓကန်စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်တွင်တည်ရှိပြီး မြောက်လတ္တီကျု ၁၆°၅၉'၄၂.၃၈"နှင့် အရှေ့လောင်ဂျီကျု ၉၆° ၄'၅၆.၄၉"တွင်တည်ရှိပါသည်။



ထုတ်လုပ်မှုလုပ်ငန်းစဉ်အဆင့်ဆင့်

- ၁။ ချောပိုင်းဖြတ်ခြင်း - ရာဘာသစ်ခွဲသားအကြမ်းများအား ဖြတ်စက်ဖြင့် ရာဘာအချပ်ပြားများအဖြစ်သို့ ပိုင်းဖြတ်ခြင်း
- ၂။ အစွန်းပိုင်းဖြတ်ခြင်း - ပုံသဏ္ဌာန်မမှန်သောအစွန်းစများနှင့် အနာအဆာများအား ဖယ်ထုတ်ပိုင်းဖြတ်ခြင်း
- ၃။ ပုံစံပိုင်းပိုင်းဖြတ်ခြင်း - အနာအဆာဖြတ်ပြီးခွဲသားများအား ပုံစံတူအတုံးအပိုင်းအစများအဖြစ်သို့ တဆင့်ဖြတ်တောက်ခြင်း
- ၄။ သစ်အရည်အသွေးမြှင့်တင်ခြင်း- ဤအဆင့်တွင် ပိုင်းဖြတ်ပြီးသစ်ခွဲသားများအား မိုသတ်ဆေး၊ ပေါင်းသတ်ဆေး၊ ပိုးမွှားသတ်ဆေး အစရှိသည့် ဓာတုပစ္စည်းများဖြင့် ပေါင်းအိုးတွင် ပေါင်းခံပြီး သစ်အရည်အသွေးထိန်းသိမ်းခြင်းဖြစ်သည်
- ၅။ ပေါင်းစပ်ခြင်း - ၎င်းအဆင့်တွင် အဆင့်ဆင့်ပြုပြင်ပြီးသား ခံနိုင်ရည်ရှိစေရန် သတ်မှတ်အရွယ်အစား သစ်အပိုင်းအစများလေးများအား ဓာတုကော်များဖြင့် ပေါင်းစပ်စေခြင်းဖြစ်သည်။
- ၆။ အခြောက်ခံခြင်း - အခြောက်ခံခြင်းသည် အစိုဓာတ်များကို အပူဖြင့်ခြောက်သွေ့စေခြင်း တစ်နည်း မှီနင့်အခြားရေငွေ့ကြောင်းသစ်အရည်အသွေးကျဆင်းခြင်းကို ကာကွယ်စေရန်ဖြစ်သည်

- ၇။ အချောသတ်ခြင်း (ရွှေဘော်ထိုးခြင်း) - ဤအဆင့်တွင် အဆင့်ဆင့်ပြုပြင်ပြီး ပူးဆက်ပြီးအပိုင်းအစများအား အဆုံးသတ်အချောကိုင်ခြင်းဖြစ်သည်။
- ၈။ အဆင့်အလိုက်ထုပ်ပိုးခြင်း - တင်ပို့ရန်အသင့်ဖြစ်ပြီးသော သစ်ခွံသားများအား မှာယူသောအရွယ်အစားအလိုက် ထုပ်ပိုးခြင်းဖြစ်သည်။

အဆိုပြုလုပ်ငန်း အဆိုပြုသူ၏အချက်အလက်

LP Myanmar ၏ ရင်းနှီးမြှုပ်နှံမှု အစီအစဉ်များ၊ ဒါရိုက်တာအကြောင်းအရာနှင့် စက်ရုံ၏ဖွဲ့စည်းမှုပုံစံများအားဖော်ပြထားပါသည်။

လုပ်ငန်းအဆိုပြုစက်ရုံ၏အချက်အလက်များ

Investor Name:	Mr. Peng Hao
Citizenship:	Chinese (Taiwan)
Company ID No./ Passport No	E43396673
Address of Registration office:	No 11,2nd Floor,Unit 1,buiding 28,No.330 North Section1, Ring Road,Jinniu District Chengdu City,Sichuan Province,China.

ဒါရိုက်တာစာရင်း

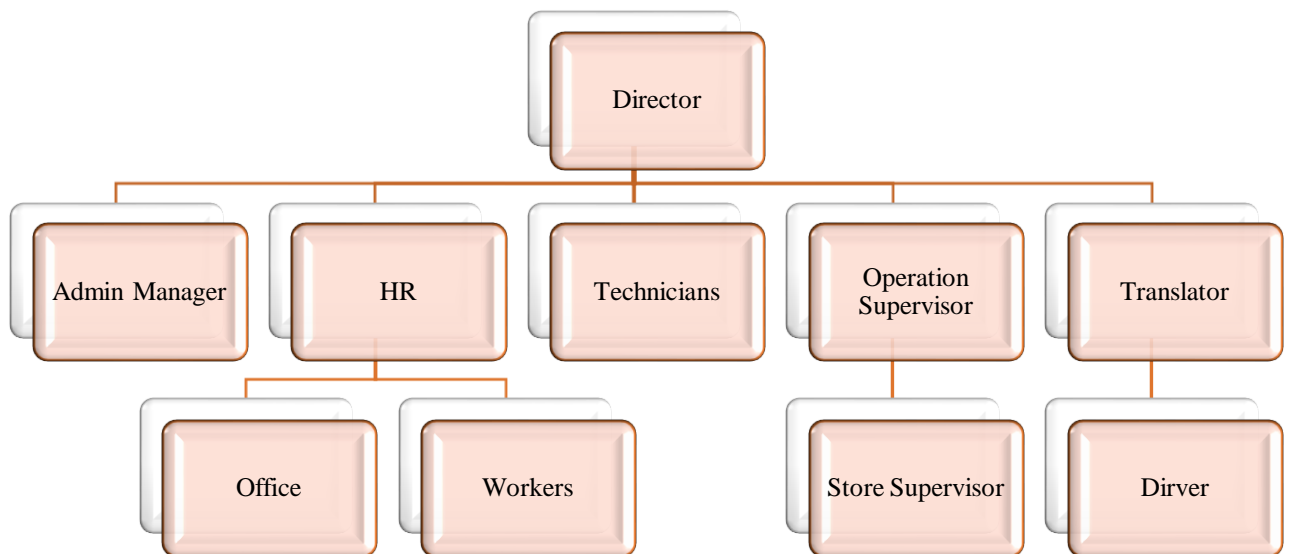
No	Name of Shareholder	Citizenship	Percentage
1.	MR. PENG HAO	Chinese	51%
2.	MR. HUANG ZHIPING	Chinese	49%

အဆိုပြုစီမံကိန်းဆိုင်ရာအကြောင်းအရာများ

Type of Proposed Business:	Manufacturing and Export of Rubber Wood Sewn Timber by using local Rubber Wood
Type of investment:	100% Foreign Investment
Type of Share:	Ordinary Share
Type of land:	Industrial Land
Total land area:	3.191 acres (12913.519 sq. meter)
Total building area:	One Storey Factory Building (120'-160') , 2 storey office (40'-60')
Land lease year:	25 years
Construction period:	One year
Address:	Land Plot No.(41), Myay Taing Block No.50, TarDuKan Industarial Zone, Shwe Pyi Tar Township, Yangon Region
Contact person:	Daw Htet Htet (HR)

Mobile:

09-786796433



LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD.၏စက်ရုံ၏အစုအဖွဲ့ပုံစံ:

အစီရင်ခံစာရေးသားသူများနှင့် တာဝန်ယူဆောင်ရွက်မှုများ

အဆိုပြုစီမံကိန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း လေ့လာခဲ့သည့် Myanwei မှ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်းတွင် ပါဝင်ခဲ့သောအဖွဲ့တာဝန်နှင့် လုပ်ငန်းအတွေ့အကြုံများကို ဖော်ပြထားပါသည်။

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Dr. Win Aung	M.B, B.S (Yangon), M.P.H (Mahidol University, Thailand)	Public Health and Health Management Expert
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public Health Consultant, Project Management
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment Certificate in Environmental Stainability TCR No. 0048	Project Director, Environmental Consultant, Project Management

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Ms. Wah Wah Zaw	B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management	Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental Planning and Management
Ms. Khin Thu Zar Myint	B.E(Materials and Metallurgy) Dip in Environmental Planning and Management	Senior Environmental Consultant, Social Research, Public consultation, Social Economic Investigation
Ms. Su Myat Hlaing	B.E Civil Engineering B.Tech Civil Engineering	Environmental Engineer
Mr. Kyaw Win Han	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Team Leader of Baseline Survey, Monitoring Measure
Mr. Aung Kyaw Moe	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring measure, Document Administration
Mr. Saw Yan Naung	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration

ဥပဒေနှင့် မူဝါဒဆိုင်ရာ အချက်အလက်များ

အခန်း (၄) တွင် စက်ရုံနှင့်ဆက်စပ်သက်ဆိုင်နေပြီး လိုက်နာရမည့် ဥပဒေနှင့် နည်းဥပဒေများ၊ MONREC မှ ထုတ်ပြန်ထားသည့် ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများ၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ၊ စက်ရုံနှင့် သက်ဆိုင်သည့် ဒေသတွင်း သို့မဟုတ် အပြည်ပြည်ဆိုင်ရာ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ မူဝါဒများ၊ ဆက်စပ်နေသည့် နိုင်ငံတကာသဘောတူချက်များကို အကျဉ်းချုပ်ရေးသားဖော်ပြထားပါသည်။

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015
5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012
17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012

24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012
26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923
28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ၊ (2018)
35. The Motor Vehicles Law, 2015
36. The Conservation of Water Resources and River Law, 2006
37. The Commercial Tax Law (1990 Amended 2014)

အဆိုပြုလုပ်ငန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်များ

လက်ရှိပတ်ဝန်းကျင်၏ ပတ်ဝန်းကျင်ဆိုင်ရာအချက်အလက်နှင့် အခြေခံလေ့လာမှုများဖြစ်သည့် ပတ်ဝန်းကျင်အရည်အသွေးတိုင်းတာခြင်းများကို ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ၊ ၃ ရက်နေ့ တွင် စက်ရုံအတွင်း ကွင်းဆင်းလေ့လာခြင်း၊ လက်ရှိပတ်ဝန်းကျင်အခြေနေ (လေ၊ ရေ၊ အလင်း နှင့် ဆူညံသံ) တိုင်းတာခြင်းများပြုလုပ်ခဲ့ပါသည်။ ရလဒ်များကို အခန်း (၅)တွင် အသေးစိတ် ဖော်ပြထားပါသည်။ ထို့အပြင် စက်ရုံတည်နေရာနှင့် သက်ဆိုင်သည့် အချက်အလက်များဖြစ်သော လူမှုစီးပွားအခြေအနေ၊ ရူပပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ဇီဝပတ်ဝန်းကျင်ဆိုင်ရာ အချက်အလက်များ၊ ရာသီဥတုဆိုင်ရာ အချက်အလက်များ အစရှိသည့်များကို ရန်ကုန်တိုင်းဒေသကြီး၊ ရွှေပြည်သာမြို့နယ်ရှိ တရားဝင် ပြဌာန်းထားသော မြို့နယ်ဆိုင်ရာအချက်အလက်များမှ ကိုးကားဖော်ပြထားပါသည်။

ပတ်ဝန်းကျင်ထိခိုက်မှုနှင့်လျော့ချရေး အစီအစဉ်

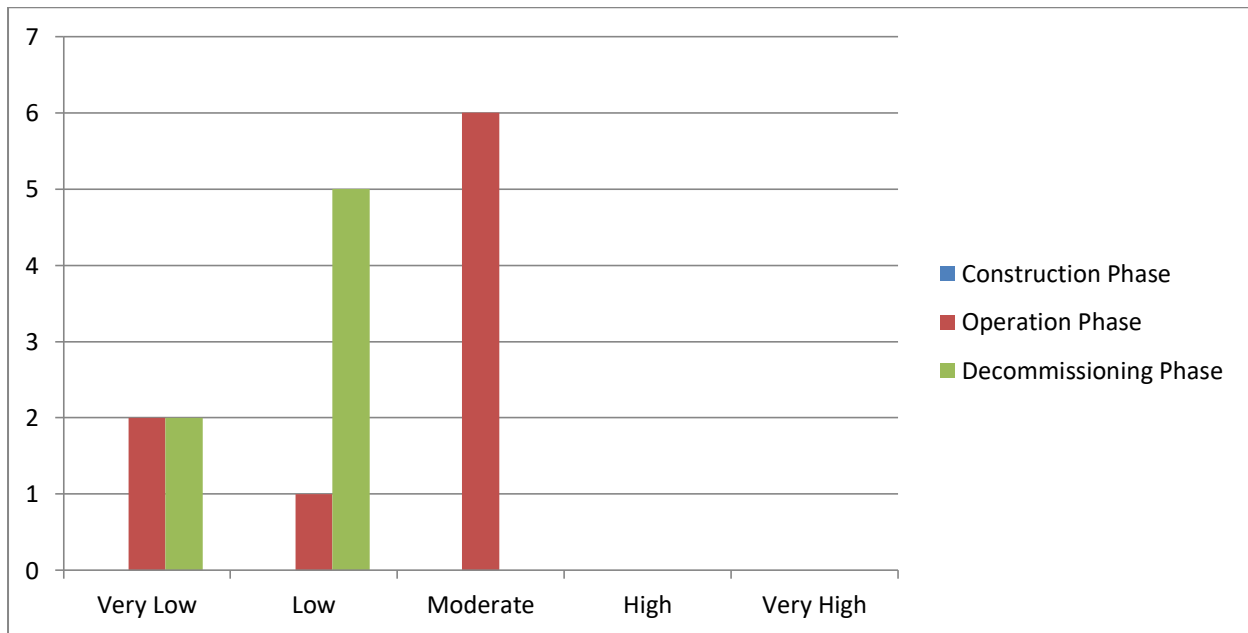
စက်ရုံအကောင်အထည်ဖော်မှုကြောင့် ပတ်ဝန်းကျင်နှင့်လူမှုဘဝအပေါ် ပြောင်းလဲစေနိုင်သော ကောင်းကျိုးနှင့် ဆိုးကျိုးများကိုသိရှိစေရန် စက်ရုံအတွင်းကွင်းဆင်းလေ့လာခြင်း၊ သက်ဆိုင်ရာစက်ရုံ တာဝန်ခံများနှင့် ဆွေးနွေးတိုင်ပင်ခြင်းများအပြင် ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်ခြင်း အတွက်လေ့လာရေးအဖွဲ့မှ ပတ်ဝန်းကျင်အခြေအနေများကို စစ်တမ်းကောက်ယူခြင်းများ ပြုလုပ်ပြီး ပတ်ဝန်းကျင်အခြေအနေများအပေါ် ဆိုးကျိုးထိခိုက်မှုများကို လျှော့ချနိုင်ရန် လေ့လာခဲ့ပါသည်။

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျှော့ချရေးနှင့် ထိန်းချုပ်မှု
တည်ဆောက်ရေးကာလ။ ။ပတ်ဝန်းကျင်ထိခိုက်မှုလေ့လာချိန်တွင် စက်ရုံတည်ဆောက်ပြီး လုပ်ငန်းလည်ပတ်နေချိန်ဖြစ်သော်ကြောင့် ဤကာလကိုထည့်သွင်း မစဉ်းစားတော့ပါ။			
လုပ်ငန်းလည်ပတ်ခြင်းကာလ			
လေထုညစ်ညမ်းမှု	<ul style="list-style-type: none"> ထင်းလောင်စာသုံးဘွိုင်လာနှင့် စက်ရုံမှသစ်ဖြတ်လုပ်ငန်းစဉ်များကြောင်း မီးခိုးငွေ့များနှင့် အညစ်အကြေးများထွက်ရှိခြင်း သယ်ယူပို့ဆောင်ရေးသုံး မော်တော်ယာဉ်တို့ကြောင့် ဖုန်မှုန့်နှင့် ဖန်လုံအိမ်ဓါတ်ငွေ့ထွက်ခြင်း၊ မီးဖိုတို့မှ မီးခိုးထွက်ခြင်း၊ အရေးပေါ်သုံးမီးစက်မှာ စွန့်ထုတ်အခိုးအငွေ့ ထွက်ခြင်း 	အသင့်တင့်	<ul style="list-style-type: none"> စက်ရုံတွင်း လေထုညစ်ညမ်းစေသည့်အမှန်အမှားများ ကိုထိန်းကွပ်ရန် ညစ်ညမ်းမှုကို တားဆီးရန်အတွက် ဘွိုင်လာနှင့် မီးစက်များကို ပုံမှန်စစ်ဆေးခြင်းနှင့် ထိန်းသိမ်းခြင်းကို ဆောင်ရွက်ရန်။ စက်ရုံအတွင်း၌ သစ်မှန်သစ်မွှများပျံ့လွင့်နေပြီး စက်ရုံတွင်းညစ်ညမ်းမှုဖြစ်စေနိုင်ပြီး စက်ရုံရှိအလုပ်သမားများ၏ အသက်ရှူလမ်းကြောင်းဆိုင်ရာထိခိုက်မှုဖြစ်စေနိုင်သောကြောင့် တစ်ကိုယ်ရည်သုံးအကာအကွယ်များ ထောက်ပံ့ရန်၊ ထင်းလောင်စာသုံးဘွိုင်လာမှ မီးခိုးအလုံးလိုက်ထွက်ရှိနေသောကြောင့် မြေပြင်ရှိသက်ရှိများ တိုက်ရိုက်ထိခိုက်မှုမရှိနိုင်စေရန် မီးခိုးခေါင်းတိုင်ကို သက်မှတ်အမြင့်ထားရှိပြီး သန့်စင်မှုကို ပုံမှန်ထားပေးရန်။
ရေ	<ul style="list-style-type: none"> အသုံးပြုပြီးကော်ဗူးများမှ ဆေးကြောစွန့်ပစ်သောအရည်များ 	အနည်းငယ်	<ul style="list-style-type: none"> ကော်ပါဝင်သော စွန့်ပစ်အရည်များကို စနစ်တကျစွန့်ပစ်ခြင်းကို ဆောင်ရွက်ရန်လိုအပ်သည်

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
	<ul style="list-style-type: none"> ဘွိုင်လာသန့်စင်ရေးများ 		<ul style="list-style-type: none"> မိလ္လာကန်နှင့် မိလ္လာ စနစ်ကို လူဦးရေနှင့် သင့်တင့်သည့် ပမာဏ ရှိရန် စီစဉ်ထားခြင်း။ ဘွိုင်လာစွန့်ပစ်ရည်များအား အပူချိန်တိုင်းတာပြီး စနစ်တကျဆေးကြောသန့်စင်ခြင်း
မြေဆီလွှာညစ်ညမ်းမှု	<ul style="list-style-type: none"> မတော်တဆ စက်ပစ္စည်း၊ မော်တော်ယာဉ်များမှ ဆီယိုဖိတ်ခြင်း 	အလွန်နည်း	<ul style="list-style-type: none"> စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင် ထိန်းသိမ်းပေးခြင်း။ မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
ဆူညံသံ	<ul style="list-style-type: none"> သစ်ဖြတ်လွှစက်များ၊ သစ်ပါးလွှားများသယ်ယူပို့ဆောင်ခြင်း၊ မီးစက်မှ ဆူညံသံနှင့် တုန်ခါမှုများဖြစ်ပေါ်စေခြင်း 	အသင့်တင့်	<ul style="list-style-type: none"> ဆူညံသံနှင့် တုန်ခါမှုများကြောင့် လုပ်ငန်းခွင်အနှောင့်အယှက်ဖြစ်စေခြင်း၊ စက်ရုံအလုပ်သမားများ နားစည်ထိခိုက်ခြင်းမှကာကွယ်ရန် နားအကာကွယ်များတပ်ဆင်ခြင်း။ စက်ရုံအား အသံလုံစေရန် ဘေးပတ်ဝန်းကျင်ပြန့်ကျဲမှုနည်းစေရန် ဆောင်ရွက်ခြင်း
မီးဘေးအန္တရာယ်	<ul style="list-style-type: none"> ကုန်ကြမ်းသိုလှောင်မှု နှင့် လျှပ်စစ်သုံးစွဲ ပေါ့လျော့မှု 	အသင့်တင့်	<ul style="list-style-type: none"> စက်ရုံတွင် မီးသတ်ဆေးဗူး၊ မီးသတ်ပိုက်၊ မီးသတ်ရေအိတ်၊ မီးသတ်သံအိတ်များကို စက်ရုံနံရံတွင်ချိတ်ဆွဲထားစေခြင်း။ အရေးပေါ်မီးလောင်မှုများအတွက် မီးလှန့်စနစ်များတပ်ဆင်ထားစေခြင်း မီးငြိမ်းသတ်ရာတွင် အသုံးပြုမည့် ကိရိယာများကို ပုံမှန်ထိန်းသိမ်းပေးခြင်း အရေးပေါ်ထွက်ပေါက်နှင့် လမ်းကြောင်းများအား အမြဲရှင်းလင်းနေစေခြင်း။
စွန့်ပစ်အမှိုက်	<ul style="list-style-type: none"> သစ်ဖြတ်စက်မှလွင့်စင်လာသော သစ်စသစ်န အပိုင်းအစများ၊ သစ်မှန်များနှင့် ဘွိုင်လာသုံးစွဲခြင်းမှထွက်ရှိလာမည့် အကြွင်းအကျန်များ၊ အိပ်ဆောင်များမှထွက်ပေါ်လာ 	အသင့်တင့်	<ul style="list-style-type: none"> အဆောက်အအုံများတွင် အမှိုက်ပုံးများ ထားရှိပေးခြင်း ပိုလျှံသော မလိုအပ်သော သစ်စသစ်နများအား ရပ်ရွာအကျိုးပြုအစီအစဉ်အနေဖြင့် ရွာများသို့ ဖြန့်ဝေပေးခြင်း

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
	မည့် အမှိုက်များ။		<ul style="list-style-type: none"> ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း လုံးဝအသုံးမလိုသော အမှိုက်များအား ရန်ကုန်မြို့တော်စည်ပင်သာယာရေး ကော်မတီနှင့် ချိတ်ဆက်စွန့်ပစ်ခြင်း။
စွန့်ပစ်အရည်	<ul style="list-style-type: none"> မိလ္လာရေများ၊ အိပ်ဆောင်နှင့် ထမင်းစားဆောင်မှ ထွက်ရှိသော စွန့်ပစ်အရည်များ 	အသင့်တင့်	<ul style="list-style-type: none"> စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ၊ သစ်ပိုင်းများကော်ကပ်ရာ၌ ထွက်ရှိသော ဓါတုရောစပ်ကော်ရည်များ 	အလွန်နည်း	<ul style="list-style-type: none"> အန္တရာယ်ရှိနိုင်သည်ဟု သက်မှတ်ထားသော စွန့်ပစ်ပစ္စည်းများအပေါ် စနစ်တကျကိုင်တွယ်ခြင်း စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
အရေးပေါ်အခြေအနေများအတွက် တုံ့ပြန်ပြင်ဆင်မှု	<ul style="list-style-type: none"> ပေါ့ဆမှုကြောင့်မတော်တဆမီးလောင်ခြင်း၊ နိုင်ငံရေးအဓိကရုဏ်းကာလအတွင်း တိုက်ခိုက်လာနိုင်မှု၊ တိုက်ရိုက်သော်လည်းကောင်း သွယ်ဝယ်သော်လည်းကောင်း ထိခိုက်လာနိုင်မှုများတုံ့ပြန်သည်။ 	အသင့်အတင့်	<ul style="list-style-type: none"> ရုတ်တရက်ဖြစ်ပေါ်လာနိုင်သော အရေးပေါ်ပြဿနာများ အထူးသဖြင့် မီးဘေးနှင့် ရည်ရွယ်ချက်ရှိရှိဖျက်ဆီးလာနိုင်မှုများ အတွက် ကြိုတင်ကာကွယ်ခြင်းနှင့် သတိပေးခြင်းလုပ်ငန်းစဉ်များကို သေချာစနစ်တကျ ဆောင်ရွက်ထားရှိခြင်း။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအတွက် စက်ရုံမှတာဝန်ယူရမည့် ဝတ္တရားများကို တိကျစွာဆောင်ရွက်ခြင်း၊ အရေးပေါ်ထိခိုက်မှုများအတွက် အဖွဲ့များထားရှိဆောင်ရွက်ခြင်း။
လုပ်ငန်းပိတ်သိမ်းခြင်းကာလ			
လေထုညစ်ညမ်းမှု	<ul style="list-style-type: none"> အဆောက်အဦများ ဖြိုချမှုများ ဖြိုချပစ္စည်းများ သယ်ယူမှုများ 	အနည်းငယ်	<ul style="list-style-type: none"> NOx ထွက်ရှိမှုနည်းသော နည်းပညာဖြင့် စက်ပစ္စည်းများသုံးခြင်း၊ စက်ပစ္စည်းများကို

ပတ်ဝန်းကျင် လက္ခဏာ	လုပ်ငန်းလုပ်ဆောင်မှု	ထိခိုက်မှုအဆင့်	လျော့ချရေးနှင့် ထိန်းချုပ်မှု
			ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
ရေ	<ul style="list-style-type: none"> မြေရေပစ္စည်းများနှင့် မိလ္လာဖျက်ဆီးမှုများ 	အနည်းငယ်	<ul style="list-style-type: none"> ပုံမှန်သန့်ရှင်းရေးပြုလုပ်ပေးခြင်း။ စက်ပစ္စည်းများကို ပုံမှန်ပြုပြင်ထိန်းသိမ်းပေးခြင်း။
မြေဆီလွှာညစ်ညမ်းမှု	<ul style="list-style-type: none"> အဆောက်အဦးနှင့် ဆက်စပ်ပစ္စည်းများ မြေရေပစ္စည်းများ သယ်ယူမှုများ 	အနည်းငယ်	<ul style="list-style-type: none"> မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
အမှိုက်စွန့်ပစ်မှု	<ul style="list-style-type: none"> အဆောက်အဦးများ မြေရေပစ္စည်းများ သယ်ယူမှုများ 	အလွန်နည်း	<ul style="list-style-type: none"> စွန့်ပစ်အမှိုက်များအား ပြန်လည်သုံးစွဲရန် နှင့် စွန့်ပစ်ရန် အဖြစ်သတ်မှတ်ပြီး သီးခြားစွန့်ပစ်စေခြင်း
အန္တရာယ်ရှိအမှိုက်	<ul style="list-style-type: none"> စက်များမှ ဆီယိုစိမ့်မှုများ၊ မော်တော်ယာဉ်များပြုပြင်ထိန်းသိမ်းမှုက ထွက်ရှိသည့်အမှိုက်များ မြေရေပစ္စည်းများ သယ်ယူမှုများ 	အလွန်နည်း	<ul style="list-style-type: none"> စက်သုံးဆီများအားစနစ်တကျ အသုံးပြုစေခြင်း၊ စနစ်တကျသိုလှောင်ခြင်း နှင့် အန္တရာယ်ရှိပစ္စည်းများအား စနစ်တကျထားရှိစေခြင်း
မတော်တဆ ထိခိုက်မှုများ	<ul style="list-style-type: none"> အဆောက်အဦးများ မြေရေမှုများ မြေရေပစ္စည်းများ သယ်ယူမှုများ 	အနည်းငယ်	<ul style="list-style-type: none"> မတော်တဆမှု မဖြစ်စေရန် ထိန်းသိမ်းခြင်း။
ရာသီဥတုဖောက်ပြန် ပြောင်းလဲမှုနှင့်ထိခိုက်မှုများ	<ul style="list-style-type: none"> ရာသီဥတုဖောက်ပြန်ခြင်းကြောင့် ပတ်ဝန်းကျင်နှင့်လူနေအခြေပြု အဆောက်အအုံများ ပျက်ဆီးခြင်း၊ ဂေဟစနစ်များယိုယွင်းလာခြင်း 	အသင့်တင့်	<ul style="list-style-type: none"> ဖြစ်ပေါ်လာနိုင်သည့် ထိခိုက်မှုများအတွက် ပတ်ဝန်းကျင်ထိန်းသိမ်းမှုလုပ်ငန်းများတွင် တက်နိုင်သမျှ ပါဝင်ဆောင်ရွက်ခြင်း



ပတ်ဝန်းကျင်ထိခိုက်မှုကို လေ့လာဆန်းစစ်ရာတွင် စီမံကိန်းကာလအတွင်း ထိခိုက်မှုတစ်ခုချင်းစီ၏ ပမာဏ၊ ကြာမြင့်ချိန်၊ ကျယ်ပြန့်မှုနှင့် ဖြစ်နိုင်ခြေတို့အား ဖော်ပြထားပါသည်။ စီမံကိန်းကာလအတွင်း ထိခိုက်မှုပမာဏ အသင့်အတင့်ရှိ (၆)ခု၊ အနည်းငယ် (၁)ခု နှင့် အလွန်နည်းသောပမာဏ (၂)ခုတို့ဖြင့် လေ့လာတွေ့ရှိခဲ့ပါသည်။ ပတ်ဝန်းကျင်နှင့်လူထုအပေါ်ထိခိုက်မှုနှင့် လျော့ချရမည့်အစီအစဉ်ကို အောက်တွင်ဖော်ပြထားပါသည်။ စက်ရုံ၏လုပ်ဆောင်မှုများကြောင့် ဖြစ်ပေါ်လာနိုင်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာထိခိုက်နိုင်မှုများတွင်-

- ၁။ စက်ရုံမှထွက်ရှိသည့် သစ်အမှုန်အမွှားများ၊ ထုတ်လုပ်မှုလုပ်ငန်းအဆင့်ဆင့်ကြောင့် ထွက်ပေါ်လျက်ရှိသည့် အသံဆူညံမှုများနှင့် တုန်ခါမှုများ
- ၂။ ထွက်ရှိအပိုသစ်လွှာစများအား ဘွိုင်လာအသုံးပြုမှုတွင် လောင်စာအဖြစ်အသုံးပြုရာမှ ထွက်ရှိသည့် Pollutants၊ smoke နှင့် particulate mattersများ ၊အရေးပေါ်အသုံးပြုသော ဒီဇယ်သုံးဂျင်နရေတာနှင့် စက်ရုံသုံး မော်တော်ယာဉ်မှထွက်ရှိသော ဓာတ်ငွေ့ထုတ်လွှတ်မှု၊
- ၃။ ရုံးအသုံးပြုမှုမှထွက်သော ညစ်ညမ်းရေထွက်ရှိမှု နှင့် စက်ရုံမှထွက်သောရေဆိုးများ၊ ကော်ပါဝင်သည့် စွန့်ပစ်အရည်များ၊
- ၄။ စွန့်ပစ်အမှိုက်များအဖြစ် ကုန်ကြမ်းထုတ်ပိုးလာသော အိတ်များ၊ ဝန်ထမ်းအသုံးပြုပြီး အမှိုက်များနှင့် တခြားရုံးသုံးအမှိုက်များ

သတ်မှတ်ထားသောအဆင့်သတ်မှတ်ချက်များအလိုက် ဖြေလျော့ရေးနည်းလမ်းများဖြင့် ရှောင်လွှဲရန်နည်းလမ်းများကို ဖော်ပြထားပါသည်။

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း

သက်ဆိုင်သူများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း အစီအစဉ်တွင် စက်ရုံ၏ EMP အစီရင်ခံစာ အကြောင်းကို ရှင်းလင်းတင်ပြခြင်းဖြစ်သည်။ တွေ့ဆုံပွဲကို နိုင်ငံရေးကြောင့်လည်းကောင်း ကျန်းမာရေးဆိုင်ရာ Covid -19 (Omicron) စည်းကမ်းချက်များကြောင့် ၂၇ ရက်၊ ဇန်နဝါရီလ၊ ၂၀၂၂ ခုနှစ်တွင် လူမှုကွန်ယက်မှပင် ကြေညာခြင်းပြုလုပ်ခဲ့ပါသည်။ အဆိုပါထုတ်ပြန်ကြေငြာခြင်းတွင် အဆိုပြုစက်ရုံဆိုင်ရာ အချက်အလက်များ၊ ပတ်သက်သည်များ အကျဉ်းချုံးပြီး တင်ပြထားပါသည်။ အဆိုပြုစီမံကိန်း၏ ကနဦးပတ်ဝန်းကျင်ဆန်းစစ်မှု အစီရင်ခံစာ အကျဉ်းကို ဤ

(<https://drive.google.com/file/d/1Eah0aeY93ZLwRS2AZENLWWlp1KbCfOmS/view?usp=drivesdk>)

တွင် အသေးစိတ်ဝင်ရောက်ဖတ်ရှုနိုင်ပါသည်။

ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်

အဆိုပါစက်ရုံ၏ ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေရှည်ဖွံ့ဖြိုးတိုးတက်ကောင်းမွန်သော ပတ်ဝန်းကျင်အဖြစ် အကောင်အထည်ဖော် ဆောင်ရွက်ရန် ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးသက်ရောက်မှုများကို လျော့နည်းစေရန် စီမံခန့်ခွဲမှု အစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုရမည့် အစီအစဉ်များကို အောက်ပါအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ အကြောင်းအရာတစ်ခုချင်းစီအလိုက် ခွဲခြားပြုလုပ်ထားပါသည်။

၁။ လေထုညစ်ညမ်းမှုနှင့် သစ်အမှုန်အမွှား၊ ဖုန်မှုန့်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၂။ အသံဆူညံမှုနှင့် တုန်ခါမှုထိန်းချုပ်ရေးဆိုင်ရာ အစီအစဉ်

၃။ အမှိုက်စွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၄။ ရေဆိုးစွန့်ပစ်မှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၅။ စွမ်းအင်သုံးစွဲမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၆။ ရေသုံးစွဲမှုဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

၆။ အရေးပေါ်တုံ့ပြန်ရေး အစီအစဉ်

၇။ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်

၈။ လူမှုအကျိုးတူ ပူးပေါင်းပါဝင်မှု အစီအစဉ် CSR Plan (အသေးစိတ်ကို အခန်း ၈ တွင် ဖော်ပြထားပါသည်)

အကျဉ်းချုပ်နှင့် အကြံပြုချက်

အကျဉ်းချုပ်အားဖြင့် ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်၏ လမ်းညွှန်ချက်များ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေ၊ နည်းဥပဒေ၊ စည်းမျဉ်းစည်းကမ်းများနှင့် ချမှတ်ထားသော မူဝါဒ လမ်းညွှန်ချက်များအတိုင်း ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အလေ့အကျင့်များ၊ လုပ်ငန်းစဉ်များနှင့် လိုက်နာဆောင်ရွက်

ကျင့်သုံးရန်တာဝန်များကို ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် ဖော်ပြရှင်းလင်း တင်ပြထားပါသည်။ စီမံကိန်းနှင့် သက်ဆိုင်သူများအား စီမံကိန်းဆိုင်ရာ အကြောင်းအရာများ ရှင်းလင်းတင်ပြခြင်း၊ အကြံပြုချက်များနှင့် ဆွေးနွေးတင်ပြလာသည့် သဘောထား အကြံဉာဏ်များကို ရယူပြီး အစီအရင်ခံစာတွင် ဖော်ပြထားပါသည်။

EXECUTIVE SUMMARY

Project Descriptions

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing and Export of Rubber Wood Sewn Timber by using local Rubber Wood on CMP Basic by LP (Myanmar) Industrial Manufacturing Company Limited (LP Myanmar). The main objective of this report is to identify the major environmental impacts due to implementation of the project along with the effective measures to mitigate the potential adverse impacts.

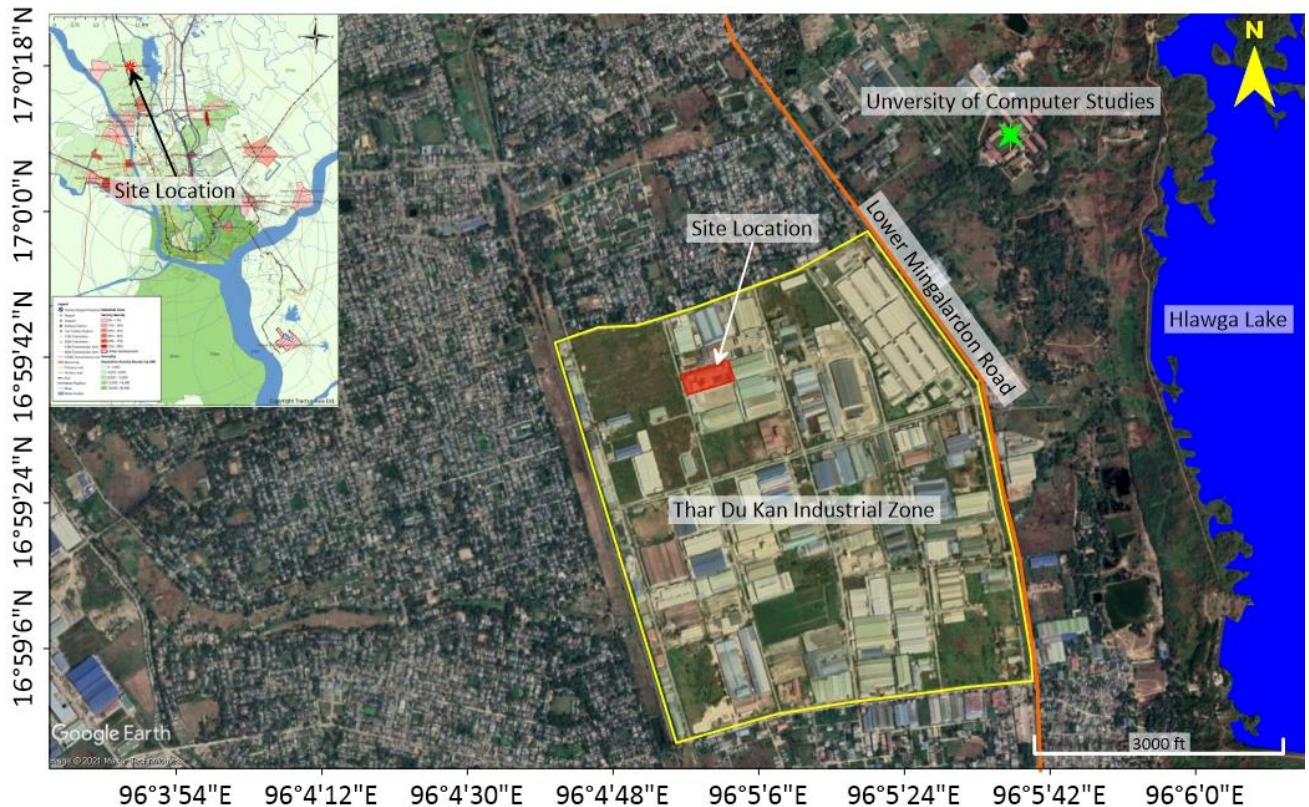
The project approved for the investment endorsement from the Yangon Region Investment Committee (YRIC) Endorsement No. YGN- 079/2018 on 30, August 2018 (**Appendix A**). The Yangon Region Investment Committee announce for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing and export of rubber wood sewn timber under the name of LP Myanmar as a wholly owned foreign investment from the China. According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), the said project requires an Environmental Management Plan (EMP) to meet the environmental assessment according to requirements of Endorsement No. Yaka- 1/3/4 (EIA) (622/2018) on 4 June 2018. Therefore, LP Myanmar. commissioned MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED (Myanwei) for IEE report study.

The proposed factory is the 100% foreign investment by LP Myanmar with an estimated authorized capital of USD (0.922) million. The proposed factory is located at Land Plot No.(41), Myay Taing Block No-50, Thardukan Industrial Zone, Shwe Pyi Tar Township, Yangon Region and the total land area 3.191 acres (12913.5190 sqm). The factory aims to manufacture and export of rubber wood sewn timber by using local rubber wood with production process. The construction phase of the proposed factory initiated in August, 2018 and then commercial running operation stage is February, 2020. The proposed duration of the investment shall be 35 years extendable 10 years periods two times. The term of the Lease shall be initial 2 years commencing from the date of signing of the Lease Agreement between U Ye Aung and LP Myanmar for proposed project site for 3.191 acres of land.

The project identification of construction phase is machinery and equipment installation period. Project proponent was leased the project area from previous owner; this area already constructed the warehouse building. The installation of machinery and equipment started in August 2018. The preparation period is 2 years and 6 months. The Installation project is completed as scheduled on the first week of February 2020. The total area of project site is 3.191 acres. The factory area includes two storey office building (40'x60') and production factory (120'x 160'). Number of people 110 employees working at LP Myanmar. Most are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. In the operation phase, major utilities for proposed factory include electrical power, fuel oil for emergency used generator and water for production and general purpose. Water will be required for general purpose. Moreover, layout plan, overview map of proposed factory also mentioned. Electric power will be used for the

purpose of to run the production machinery and to provide lighting. The proposed project investment duration is 35 years and they will close out the project according to their MIC proposal.

The proposed project factory is located at Land Plot No. (41), Myay Taing Block No.50, Thardu Kan Industrial Zone, Shwe Pyi Tar Township, Yangon Region and the Republic of the Union of Myanmar. The proposed factory falls the coordinates of North Latitude 16°59'42.38"N and East Longitude 96° 4'56.49"E.



1. **Head Rig:** The primary saw cuts the tree into sawn pieces or boards.
2. **Edging:** Removes irregular edges and defects from sawn pieces or boards.
3. **Trimming:** The trimmer squares off the ends of lumber into uniform pieces.
4. **Rough Lumber Sorting:** Pieces are separated based on dimension and final product production, whether the finished piece will be unseasoned (known as "green") or dry.
5. **Stickering:** Lumber destined for kiln drying production is stacked with spacers (known as stickers) that allow air to circulate within the stack (green product skips this stage and the next).
6. **Drying:** Kiln drying wood speeds up the natural evaporation of the wood's MC in a controlled environment.
7. **Planing:** Smooths the wood's surfaces and ensures that each piece has a uniform width and thickness.
8. **Grading:** Assigns a "grade" to each piece of lumber that indicates its quality level, based on a variety of characteristics, including its MC.

Project Proponent Information

This is the information of project proponent from the registration of Myanmar Investment Commission (MIC), which is described in below table.

Company Information

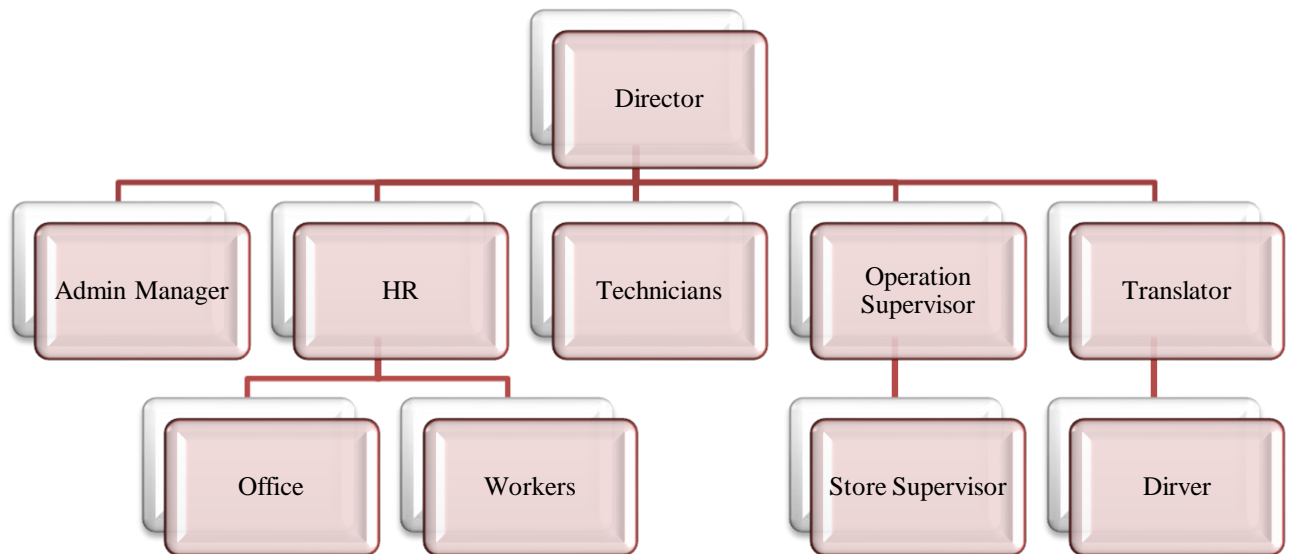
Investor Name:	Mr. Peng Hao
Citizenship:	Chinese (Taiwan)
Company ID No./ Passport No	E43396673
Address of Registration office:	No 11,2nd Floor,Unit 1,building 28,No.330 North Section1, Ring Road,Jinniu District Chengdu City,Sichuan Province,China.

Director List

No	Name of Shareholder	Citizenship	Percentage
1.	MR. PENG HAO	Chinese	51%
2.	MR. HUANG ZHIPING	Chinese	49%

Salient feature of the project

Type of Proposed Business:	Manufacturing and Export of Rubber Wood Sewn Timber by using local Rubber Wood
Type of investment:	100% Foreign Investment
Type of Share:	Ordinary Share
Type of land:	Industrial Land
Total land area:	3.191 acres (12913.519 sq. meter)
Total building area:	One Storey Factory Building (120'-160') , 2 storey office (40'-60')
Land lease year:	25 years
Construction period:	One year
Address:	Land Plot No.(41), Myay Taing Block No.50, TarDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region
Contact person:	Daw Htet Htet (HR)
Mobile:	09-786796433



Organization Chart of LP MYANMAR.

Environmental Consultant Profile

In chapter 3, include the scope of the study of proposed project, IEE study objective and responsibility of IEE expert team of MYANWEI.

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Dr. Win Aung	M.B, B.S (Yangon), M.P.H (Mahidol University, Thailand)	Public Health and Health Management Expert
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public Health Consultant, Project Management
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment Certificate in Environmental Stainability TCR No. 0048	Project Director, Environmental Consultant, Project Management
Ms. Wah Wah Zaw	B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management	Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental Planning and Management

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Ms. Khin Thu Zar Myint	B.E(Materials and Metallurgy) Dip in Environmental Planning and Management	Senior Environmental Consultant, Social Research, Public consultation, Social Economic Investigation
Ms. Su Myat Hlaing	B.E Civil Engineering B.Tech Civil Engineering	Environmental Engineer
Mr. Kyaw Win Han	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Team Leader of Baseline Survey, Monitoring Measure
Mr. Aung Kyaw Moe	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring measure, Document Administration
Mr. Saw Yan Naung	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration

Policy, Legal and Institutional Frame Work

In Chapter 4, provides the brief summary of relevant national environmental legislations such as Environmental Impact Assessment Procedure (2015) and National Environmental Quality (emission) Guidelines, established by the Ministry of Natural Resources and Environmental Conservation (MONREC) and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

1. The Constitution Law, 2008
2. The Environmental Conversation Law, 2012
3. The Environmental Conversation Rule, 2014
4. Environmental Impact Assessment Procedure, 2015

5. National Environmental Quality (Emission) Guideline, 2015
6. National Myanmar Environmental Policy, 2019
7. Foreign Investment Law, 2012
8. Foreign Investment Rule, 2013
9. Myanmar Investment Rule, 2017
10. Myanmar Insurance Law, 1993
11. Payment of Wages Law, 2016
12. The Payment of Wages Act, 1936
13. Yangon City Development Committee Law, 2018
14. The Amended Law for Factories Act, 1951 (2016)
15. The Private Industrial Enterprise Law
16. The Export and Import Law, 2012
17. The Prevention of Hazard from Chemical and Related Substances Law, 2013
18. The Underground Water Act
19. Myanmar Fire Brigade Law, 2015
20. Fire Safety Procedure
21. The Electricity Law, 2014
22. Boiler Law, 2015
23. Labor Dispute Settlement Law, 2012
24. The Law Amending the Settlement of Labor Dispute Law, 2019
25. The Social Security Law, 2012
26. The Employment and Skill Development, 2013
27. The Worker's Compensation Act, 1923

28. The Leave and Holidays Act (1951, partially reused in 2014)
29. The Minimum Wage Law, 2013
30. Public Health Law, 1972
31. Prevention and Control of Communicable Disease Law (1995 Amendment in 2011)
32. Occupational Safety and Health Law, 2019
33. The Law on Standardization
34. လုပ်ငန်းခွင်သုံးပေါက်ကွဲစေတက်သော ဝတ္ထုပစ္စည်းများဆိုင်ရာ ဥပဒေ (2018)
35. The Motor Vehicles Law, 2015
36. The Conservation of Water Resources and River Law, 2006

The Commercial Tax Law (1990 Amended 2014)

Surrounding Environment

The development of infrastructure for the proposed project likely to happen changes in the local environment in terms of physical, biological and socio-economic aspects along with the perspective on both positive and negative impacts. The potential environmental impacts brought by various activities of proposed factory project will be identified and judged by site surveying with checklist, meeting with client team, including plant manager and supervisor, representatives from the factory operators and assessing the environmental baseline information for operation and decommissioning phases along with its mitigation measure.

Impact Assessment and Mitigation Measure

The assessment of each impact is based on consideration of the magnitude, duration, extent and probability of activities, which are going to be carried out during operation phases. In operation phase, there are 5 moderate significance impact on environment and human such as impact of electricity consumption. 2 low significant impacts on environment and human such as impact of wastewater effluents and occupational health and safety of employees, workers and 1 very low significant impact on environment and human such as impact on aquatic lives, air pollution and noise. Significance impacts on environmental and human and detail impact assessment for operation phases can be seen in Table. All of the impacts during operation phases can be minimized by using mitigation measures and implementing Environmental Management Plan.

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	<ul style="list-style-type: none">Emission of smoke and pollutants from firewood boiler and sewn timber production processesEmission of gases from emergency diesel generator and vehicles movement	3	4	1	4	31	Moderate	<ul style="list-style-type: none">Air pollution and contamination due to the operations of dimension sorting, planning and transporations.Inhaling pollutants, indoor air pollution can risk on human health especially respiratory ststem and eyes.People with heart or lung disease, older adults and children are at greater risk from air pollution.	<ul style="list-style-type: none">To control pollutants withing the factory, prepare the large door and entrance and boiler and generators have to check and maintain regularly.To prevent respiratory diseases the factory should PPE masks provide to workers cause the sawdusts and particulate matters are spreading in the factory not to trap the indoor pollutants.The factory uses chimney for generator and firewood steam boiler through which the flue gases are emitted for reducing the impact of stack emission on environment.

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Water	<ul style="list-style-type: none"> Stickering process 	2	4	2	2	16	Low	<ul style="list-style-type: none"> The factory not generated wastewater from production process on CMP basic 	<ul style="list-style-type: none"> To implement systemically the chemical liquid waste disposing system To plan the sewage and sewage storing system in accord to the employees
	<ul style="list-style-type: none"> Boiler blow down water and cleaning the apparatus 	2	4	2	2	16	Low	<ul style="list-style-type: none"> The factory uses about 0.5 m³ per hour Very little mount of blow down water (214 gal / day) 	<ul style="list-style-type: none"> After cooling the blow down water to discharge the industrial drainage and measure the temperature of it.
Soil	<ul style="list-style-type: none"> Engine oil leaks, spills at diesel storage and during fuel refueling. 	1	4	1	1	6	Insignificant	<ul style="list-style-type: none"> The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. 	<ul style="list-style-type: none"> No Mitigation Measure for soil conservation
Noise and Vibration	<ul style="list-style-type: none"> Generating noise from the production of band sawing machines 	5	4	2	5	55	High	<ul style="list-style-type: none"> The factory operates heavy machineries and vehicles Basically, the major noise source of CMP basic operation activities such as Sawing, Preservation, 	<ul style="list-style-type: none"> To control noise from vertical and horizontal sawing machines and trucks and forklifts movement, earmuffs and earpieces should be provided

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								Seasoning and packaging by respective machines. <ul style="list-style-type: none"> The boiler room and generator are separated to their compartment. There is high significant impact on surrounding environment and within the factory. 	for every employee. <ul style="list-style-type: none"> The industry should be installed with soundproof cavity walls.
Impact on Ecological Resources									
Flora and fauna on terrestrial and aquatic life	Operation of the rubber wood factory	1	4	1	1	6	Insignificant	<ul style="list-style-type: none"> Not Significant Impact on Ecological Resources 	<ul style="list-style-type: none"> No Mitigation Measure
Impact on Human									
Fire	<ul style="list-style-type: none"> Poor electrical installations Waste disposed area raw materials and chemical storage 	3	5	2	4	40	Moderate	<ul style="list-style-type: none"> Serious damage to property and even injury and death because the factory utilize materials are very flammable rubber timber and that is a type of fuel. Impact range may extent not only within factory but also near rubber plantations and near villages. 	<ul style="list-style-type: none"> The factory provides fire extinguishers, fire hose reels, fire hydrants and sand tanks on the walls of the factory for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire.

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									<ul style="list-style-type: none"> To do regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	<ul style="list-style-type: none"> Accidental cases cause by band sawing machines. Unloading, transporting, cutting, sawing And scraping activities. Accidental cases of thermic fluid heater 	3	4	1	4	32	Moderate	<ul style="list-style-type: none"> Accident in workplace (physical injuries or even death) can occur during operation. 	<ul style="list-style-type: none"> First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. According to the observed light intensity values, the proponent provides sufficient lighting for workers for safe

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									<p>working and reducing optical problems of the workers.</p> <ul style="list-style-type: none"> To provide personal protective equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for every person. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	<ul style="list-style-type: none"> Influx of people Noise from the generating of the emergency generators and sawing machines 	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> Overcrowded of population may be a fuel in infection of corona virus disease. Change in demographic structure, new diseases form immigrant workers To cause a range of health problems 	<ul style="list-style-type: none"> Provide the hand-wash basin, hand sanitizer and face masks and then specify the social distancing. Manage the drainage systems of the factory to

Initial Environmental Examination

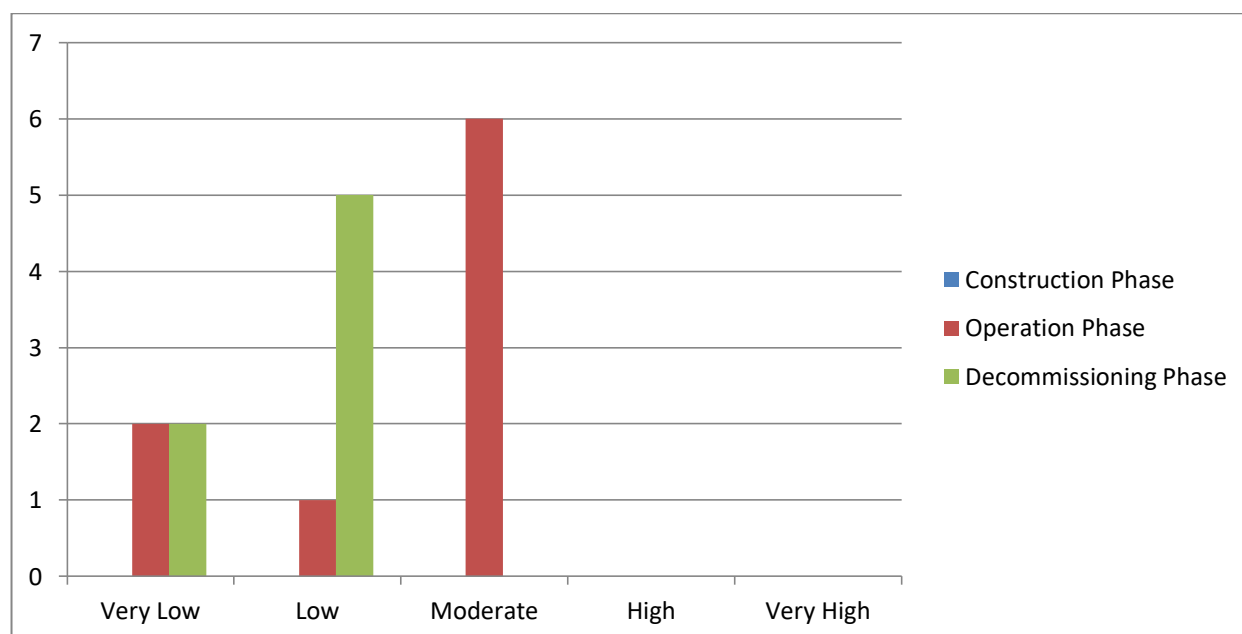
Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								ranging from stress, poor concentration, productivity losses in the workplace, and communication difficulties and fatigue from lack of sleep, to more serious issues	prevent health risk of the workers. <ul style="list-style-type: none"> The maximum allowable noise level for workers is 90dBA for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Waste Generation Impact									
Solid Waste	<ul style="list-style-type: none"> Residual pieces of wood scraps from the production lines Sawdust and residues from sawing machines and boiler burning Waste from kitchen, dormitory and office. 	3	4	1	4	32	Moderate	<ul style="list-style-type: none"> Within factory pollution and soil contamination 	<ul style="list-style-type: none"> Provides separate garbage bins at each building. Some of timber fragments and residues distribute to villages as a CSR activity in filling of road. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									separated waste storage area. <ul style="list-style-type: none"> Final wastes should be disposed by connecting with YCDC.
Liquid Waste	<ul style="list-style-type: none"> Septic system and sewage. Domestic liquid waste disposal from office, kitchen and dormitory. 	2	4	2	2	16	Low	<ul style="list-style-type: none"> Contamination of soil, surface water, ground water 	<ul style="list-style-type: none"> Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	<ul style="list-style-type: none"> Used oil and lubricant discharged from the maintenance of vehicles and machines. 	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> Reduce the risk of contamination from fuels, oils and hazardous wastes Response effectively to incident and accident 	<ul style="list-style-type: none"> Proper inspection and maintenance in storage of hazardous waste. Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. The empty chemical containers will hand

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
									<p>over to suppliers for recycle or appropriate disposal</p> <ul style="list-style-type: none"> The hazardous wastes are disposed by connecting with Mudon Township municipal)
Emergency Response Plan	<ul style="list-style-type: none"> Unexpected emergency cases like as accidental burning, crisis situation and revolutionary attempts. 	4	4	4	3	36	Moderate	<ul style="list-style-type: none"> Loss of investment, injuries, retard the factory processes and increases the unemployment rate. 	<ul style="list-style-type: none"> Prepare for the blinded cases, carefully take the precautions and response plan especially fire We, human kind should conserve the health of world and environmental conservation so as a pollutants emitting factory need to participate in the preservation and conservation of environment and group the Environmental management team.



According to the result of analysis, Environmental impact assessments can be concluded that most of the project activities have moderate significance on environment in all phases. We found that project activities have 6 moderate, 1 low level and 2 very low situations. Moreover, project activities that emit tiny wood scraps, dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project -

1. The sewn timber factory is emitting a lot of particulate matters, dust, noise and vibration due to the operation processes
2. Firewood boiler also generate the pollutants, smoke and methane by the burning of wood fragments and other emergency vehicles drivings
3. Wastewater discharge from domestic wastewater discharged from office facilities
4. Produced of Solid waste such as cloth scraps, packaging materials from production area and paper, plastic waste and other general office waste etc.

Potential negative impacts and mitigation measures of the proposed factory were taken into consideration during the study.

Public Consultation

Public consultation meeting for LP Myanmar celebrated on social media. During the preparation of this report, the third wave of COVID-19 (Omicrons) becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people by closely contacting and to prevent spreading of disease. Thus, the present condition, the project's environmental condition and the management plans are through the social media of Myanmar Environmental Solution Company Limited Facebook page

(<https://drive.google.com/file/d/1Eah0aeY93ZLwRS2AZENLWWlp1KbCfOmS/view?usp=drivesdkde>)

clared on 27st January 2022. The suggestions, complains and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning and messengers.

Environmental Management Action

The EMP for LP Myanmar has been prepared to address potential issues based upon discussion with factory management, workers, local community's view, stakeholder consultation and from the site visit of experts. The EMP is additional to and compliments the factory's safety management system. The following environmental issues that require environmental management plans based upon the potential impacts of activities by for proposed factory are as follows:

1. Air pollution/Dust Management plan
2. Noise Management
3. Solid Waste Management plan
4. Wastewater Management Plan
5. Energy Consumption Management Plan
6. Water Consumption Management Plan
7. Emergency Response plan
8. Environmental Monitoring and Reporting
9. Corporate Social Responsible (CSR) Plan (***See details in Chapter8***)

Conclusion and Recommendation

In Conclusion, the environmental management practices, procedures and responsibilities are defined here in to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. All the feed backs, desired and needs of local public recorded in public consultation meetings are well addressed and incorporated in formulation of EMP. It has been figured out that, the proposed Sewn timber factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The health of workers comparted in this factory have to suffered the consequences of production, noise, vibration and air pollution. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes, liquid wastes, air pollutions and noise problems need to implement managements systematically according to EIA Guidelines, YCDC rules and regulation.

- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.
- Daily, monthly and annual action plan shall be formulated based on this EMP and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third-party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this EMP report. Once concerned authorities approve EMP, effective implementation of EMP by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

CHAPTER 1 PROJECT DESCRIPTION

1.1. BACKGROUND INFORMATION

This report describes the findings of the Initial Environmental Examination (IEE) for the Manufacturing and Export of Rubber Wood Sawn Timber By Using Local Rubber Wood by LP (Myanmar) Industrial Manufacturing Company Limited (LP Myanmar). The main objective of this report is to identify the major environmental impacts due to implementation of the project along with the effective measures to mitigate the potential adverse impacts.

1.1.1. Background of the Project

The project approved for the investment endorsement from the Yangon Regional Investment Committee (YRIC) Endorsement No. YGN-079/2018 on 30, August 2018 (**Appendix A**). The investment committee notified for the environmental approval and comments of the Ministry of the Natural Resources and Environmental Conservation (MONREC) on the proposed project and had approved the proposal for investment in manufacturing and export of rubber wood sawn timber by using local rubber wood under the name of LP Myanmar.

According to the Myanmar Environmental Conservation Law (2012), it requires that the proponents of every development project in the country submit either an Initial Environmental Examination (IEE) or an Environmental Impact Assessment (EIA) to Ministry of Natural Resources and Environmental Conservation (MONREC). As per the comments of Environmental Conservation Department (ECD), the said project requires an Initial Environmental Examination (IEE) to meet the environmental assessment requirements of Notification No. YaKa-1/3/4 (EIA) (622/2018) on 14, June, 2018. Therefore, LP Myanmar commissioned MYANWEI ENVIRONMENTAL SOLUTIONS COMPANY LIMITED (Myanwei) for IEE report study.

1.2. PROJECT IMPLEMENTATION PROGRAM

The proposed factory is the 100% foreign investment by LP Myanmar with an estimated authorized capital of USD (0.922) million. The proposed factory is located at Land Plot No. (41), Myay Taing Block No-50, Thardukan Industrial Zone, Shwe Pyi Tar Township, Yangon Region and the total land area are 3.191 acres (12913.519sqm). The factory aims to manufacture and export of rubber wood sawn timber by using local rubber wood. The construction phase of the proposed factory initiated in August 2018 and then commercial running operation stage is February 2020. The proposed duration of the investment shall be 25 years and extendable 10 years periods two times. The term of the Lease shall be initial 15 years commencing from the date of signing of the Lease Agreement between U Ye Aung and LP Myanmar for proposed project site for 3.191 acres of land and extendable for 10 years in 2 times recommended by the Yangon Regional Government.

1.3. OPERATION PHASE

The total area of project site is 3.191 acres. There are factory building and two storey office building. Transformer, generator and canteen are constructed with the main factory building. Number of people 110 employees working at LP Myanmar. Most are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. The estimated

production rate is 108,00 ton (45360 cubic meter) to 137,838 ton (57819.96 cubic meter) per first year to 10 years of production rate.

1.3.1. Location of Proposed Project

The proposed project factory is located at Land Plot No. (41), Myay Taing Block No.50, Thardu Kan Industrial Zone, Shwe Pyi Tar Township, Yangon Region and the Republic of the Union of Myanmar. The proposed factory falls the coordinates of North Latitude 16°59'42.38"N and East Longitude 96° 4'56.49"E. Location of the proposed project area were shown in Figure 1-1.

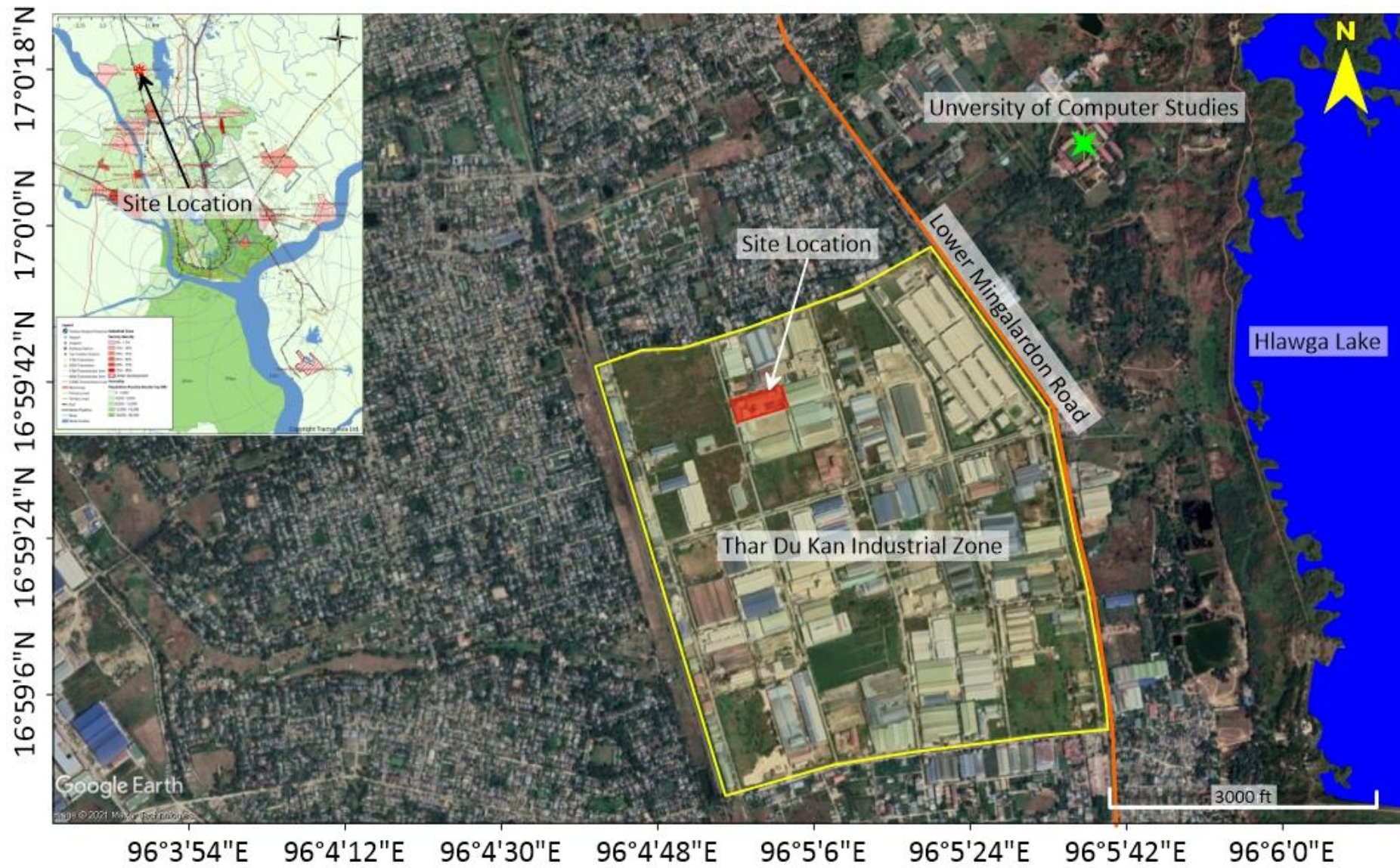


Figure 1-1 Location map of the Project Area



Figure 1-2 Factory Layout Map of LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD.

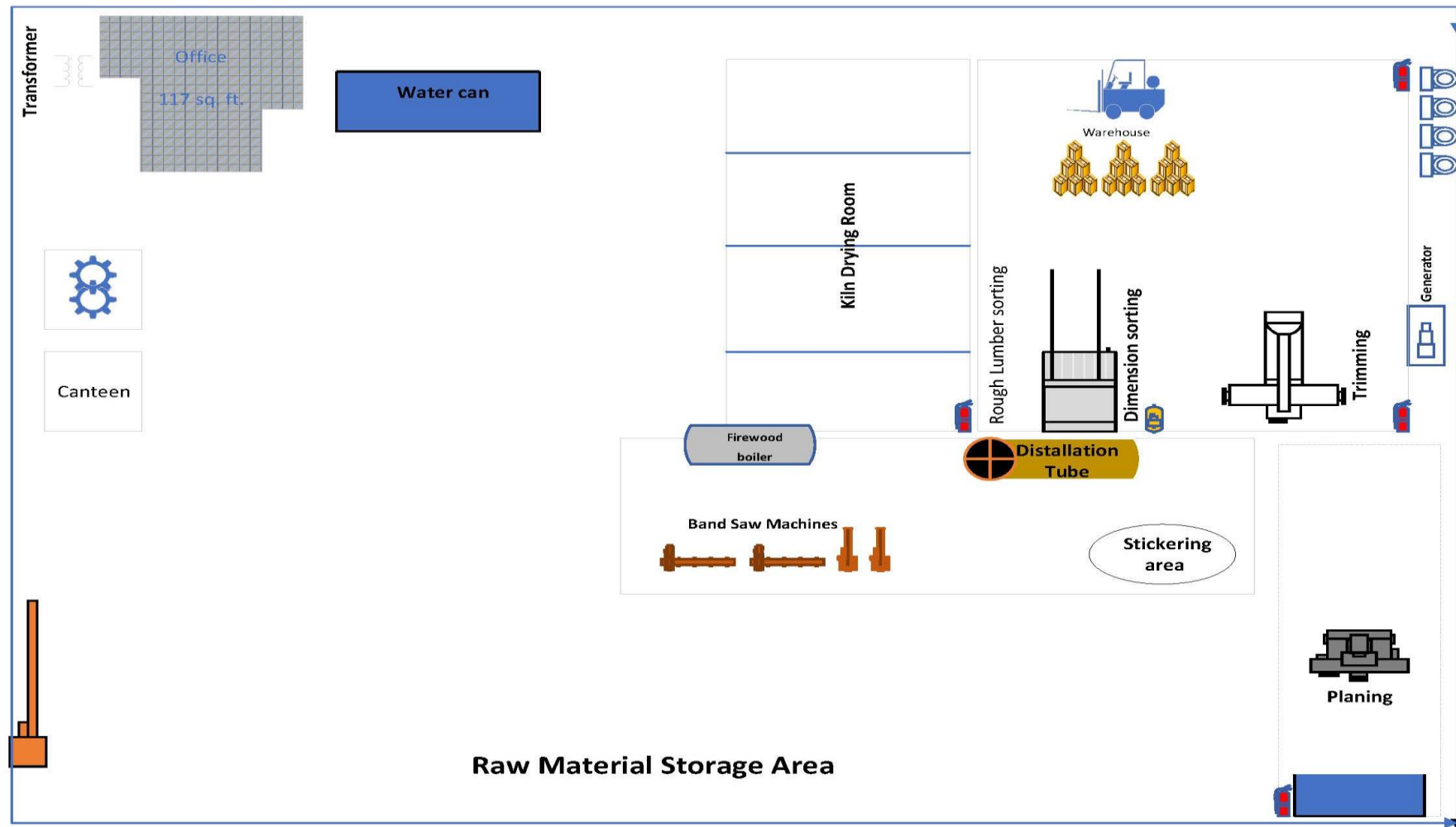


Figure 1-3 Factory Layout drawing

1.4. PRODUCTION PROCESS

1. **Head Rig:** The primary saw cuts the tree into sawn pieces or boards.
2. **Edging:** Removes irregular edges and defects from sawn pieces or boards.
3. **Trimming:** The trimmer squares off the ends of lumber into uniform pieces.
4. **Rough Lumber Sorting:** Pieces are separated based on dimension and final product production, whether the finished piece will be unseasoned (known as “green”) or dry.
5. **Sticker:** Lumber destined for kiln drying production is stacked with spacers (known as stickers) that allow air to circulate within the stack (green product skips this stage and the next).
6. **Drying:** Kiln drying wood speeds up the natural evaporation of the wood’s MC in a controlled environment.
7. **Planing:** Smooths the wood’s surfaces and ensures that each piece has a uniform width and thickness.
8. **Grading:** Assigns a “grade” to each piece of lumber that indicates its quality level, based on a variety of characteristics. Process flow diagram of LP Myanmar is presented in Figure 1-4.

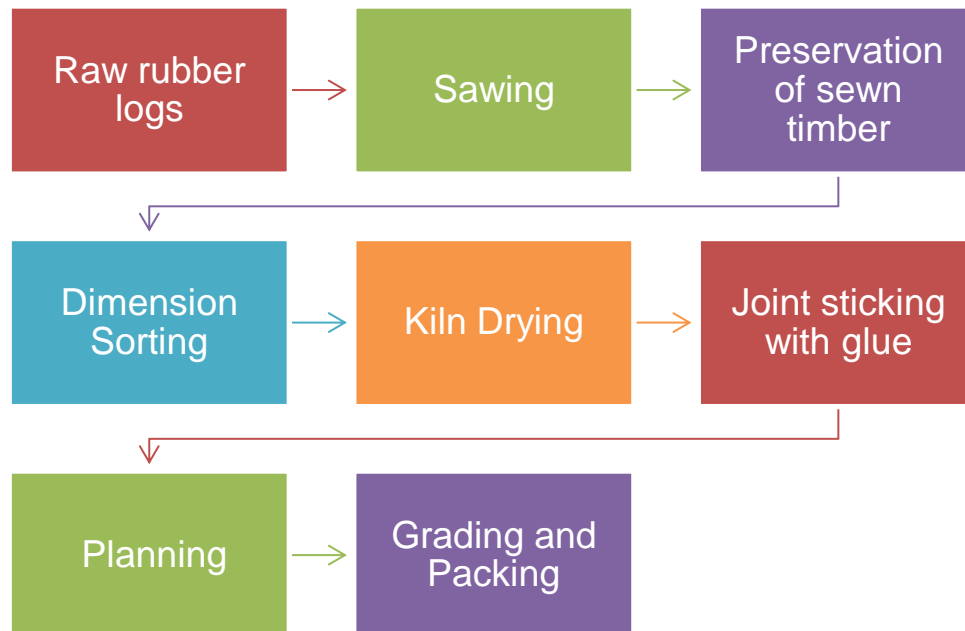


Figure 1-4 Production flow diagram



Raw materials



Sawing



Preservation of sawn timber



Kiln Drying



Dimension sorting



Stickering



Planing



Grading and Packaging

Figure 1-5

Production Process Photo

1.5. UTILITIES

1.5.1. Machinery and equipment

Automation systems for fully automatic and semiautomatic systems control of each process machine or complete processing line have been implemented. Lists of machinery and equipment required for the proposed factory are listed in Table 1-1.

Table 1-1 List of machinery and equipment

No.	Machinery Name	Brand	Unit	Quantity
1	Forklift	JAC	Set	1
2	Diesel generator	Yuchai	Set	6
3	Wood drying control cabinet	Suncor	Set	1,700
4	Multi chip saw timber		Set	1,000
5	Cutting saw	Grandbuy	Set	8
6	Band saw machine	The Rock	Set	2
7	Band saw sports car	The Rock	Set	800
8	Automatic mill	The Rock	Set	120
9	Sawing roller press	The Rock	Set	200
10	Log multiple press		Set	2
11	Multi-specifications edge cleaning machine		Set	2
12	Floor blank numerical contro automation		Set	800
13	Cylinder automatic sports car		Set	1,000
14	Automatic four-side moulder	Qing Cheng	Set	1,000
15	Automatic four-side moulder	Qing Cheng	Set	1

1.5.2. Raw Material

The main materials for manufacturing of Rubber Wood Sewn Timber are rubber wood logs which purchased from local supplier and borax, boric acid, free powder and packing belt, which imported from foreign. Annual raw material requirement for production process providing in Table 1-2.

Table 1-2 Annual Raw Material Requirement for t ton

No.	Particular	Unit	Rubber Wood Sewn Tmer (1 Ton)
1	Rubber Wood Logs	Ton	3
2	Borax	Gram	100
3	Boric Acid	Gram	100
4	Free Powder	Gram	100
5	Packing Belt	Meter	20



Figure 1-6 Raw Materials

1.5.3. Products

LP (Myanmar) is producing rubber wood sewn timber. Final product of Rubber Wood Sewn Timber will be exported to China, Japan, Korea, Mongolia, UK and Europe. Annual production rate is presented in Table 1-3.

Table 1-3 Annual production rate at LP (Myanmar) Industrial Manufacturing Co., Ltd.

No	Product	Unit	Year 1-5	Year 6-10
1	Rubber Wood Sewn Timber	Ton	11,000	11,000-12,000



Figure 1-7 Products Photo

1.5.4. Human Resource

The proposed Factory of LP Myanmar has the employees more than 95% are local people, who manage the company by their dynamic, enthusiastic, experienced, and cooperative skills. Working days are estimated to 261 days and currently, one shift (8 hours + overtime 2 hours) per day of working days are assigned for each employee. Management team and operation workers of the factory are mentioning in Table 1-4.

Table 1-4 Manpower list

No	Particular	Local	Foreign
1	Production Manager	1	1
2	Assistant Production Manager	1	
3	Shipping Manager		1
4	HR Manager	1	
5	Mechanic		2
6	Quality Control	5	
7	Warehouse supervisor	3	
8	Technician		3
9	Storekeeper	7	
10	Boiler Technician		2
11	Dirver	2	
12	Warehouse Staff	5	
13	Secutiy	2	
14	Skilled Worker	50	
15	Unskilled Worker	25	
16	Interpretor	2	
17	Office Staff	5	
Total		100	10

1.5.5. Water Supply System and Water Use

The factory has a tube well that was use as groundwater for laundry use, domestic use and firefighting. The groundwater stores in water can for and two-overhead tanks with capacity of 1,000 gallons for domestic use and another one-overhead tank with capacity of 6,000 gallons for firefighting. (see in Figure 1-8).



Figure 1-8 Water storage and Utility Photos

Currently 110 employees are at day shift workers (8:00 am to 5:00 pm). Based on world average, the average daily domestic demands in commercial/industrial settings range between 20 and 35 gallons per day (gpd) per employee. Since the factory has a maximum of 110 workers, factory water needs ranged from 8,400 to 14,700 gallons per day.

The factory has 2 separated water distribution systems comprising domestic use system and fire water system. Groundwater contains in one storage tank with capacity of 6,000 gallons on tower for fire-fighting and treated water system. Treated water pumps to be stored in the 5 overhead tanks with 1,000 gallons on the ground then water distribute to the factory operation area via pipes by gravity.

1.5.6. Water Drainage and flood protection

Kitchen and dishwashing sink were drainage pipe with 4-inch diameter PVC to drain wastewater from washing area into the concrete channel. Within the factory compound, there was drainage channel with concrete to collect rainwater in the factory area. The factory is located in Hlaing Thar Yar. This area has been suffered from flood problems during raining season. The

factory has already provided internal rainwater drainage system in connection with local drainage system outside the factory to drain into Pan Hlaing River to prevent flood problems.



Figure 1-9 Rainwater and supply water drainage in factory compound

1.5.7. Electricity system

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 KVA of transformer and 350 KVA generator will also be kept as the emergency generator if normal electricity supply could not provide for the working processes. Electricity distribution suppliers are shown in Figure 1-10.



Figure 1-10 Electricity Distribution Room

1.6. ALTERNATIVE PROJECT SITE

No alternative site has been proposed aside from the proposed area since the proposed project area is situated at Land Plot No. (41), Myay Taing Block No.50, Tar du kan Industrial Zone, Shwe Pyi Tar Township, Yangon Region, which has been designated and already finished the construction phase during IEE study. The factory already has endorsement from Myanmar Investment Commission.

1.7. DECOMMISSIONING PHASE

The proposed project investment duration is 25 years and they will close out the project according to their MIC proposal.

CHAPTER 2

PROJECT PROPONENT PROFILE

2.1. PROJECT INFORMATION

This is the information of project proponent from the registration of Myanmar Investment Commission (MIC), which is described in below Table 2-1.

Table 2-1 Company Information

Investor Name:	Mr. Peng Hao
Citizenship:	Chinese (Taiwan)
Company ID No./ Passport No	E43396673
Address of Registration office:	No 11,2nd Floor,Unit 1,building 28,No.330 North Section1, Ring Road,Jinniu District Chengdu City,Sichuan Province,China.

Table 2-2 Director List

No	Name of Shareholder	Citizenship	Percentage
1.	MR. PENG HAO	Chinese	51%
2.	MR. HUANG ZHIPING	Chinese	49%

Table 2-3 Salient feature of the project

Type of Proposed Business:	Manufacturing and Export of Rubber Wood Sewn Timber by using local Rubber Wood
Type of investment:	100% Foreign Investment
Type of Share:	Ordinary Share
Type of land:	Industrial Land
Total land area:	3.191 acres (12913.519 sq. meter)
Total building area:	One Storey Factory Building (120'-160') , 2 storey office (40'-60')
Land lease year:	25 years
Construction period:	One year
Address:	Land Plot No.(41), Myay Taing Block No.50, TarDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region
Contact person:	Daw Htet Htet (HR)
Mobile:	09-786796433

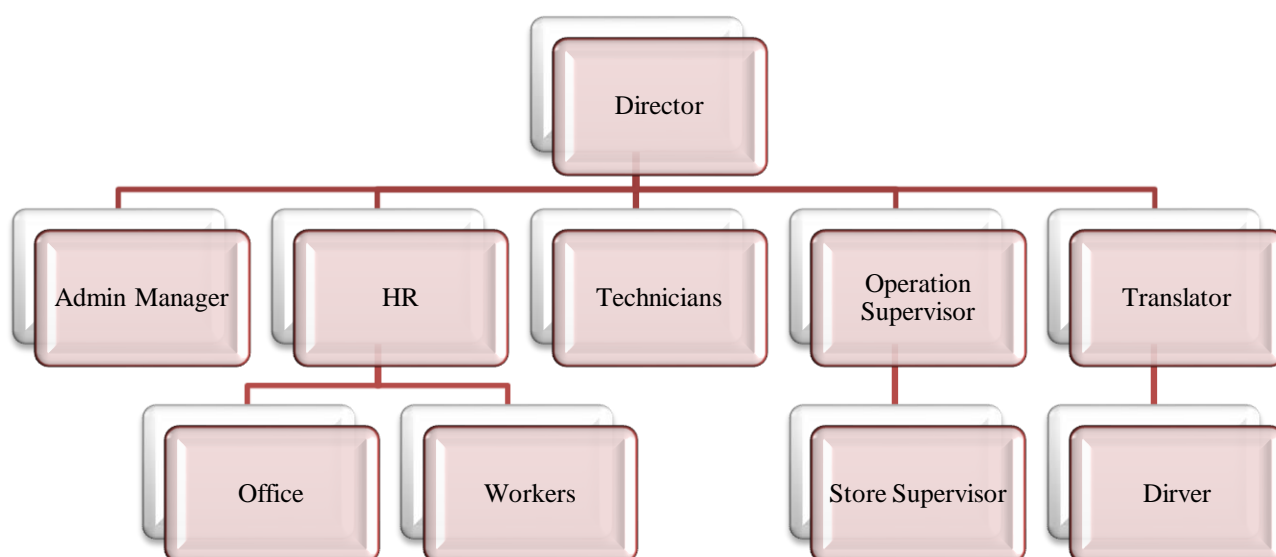


Figure 2-1 Organization Chart of LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD.

CHAPTER 3 ENVIRONMENTAL CONSULTANT PROFILE

3.1. SCOPE OF IEE STUDY

The IEE study firstly established baseline environmental setting within 100 meters of the project area, including existing conditions of air quality, water quality, noise, weather and local climate, waste, landscape and social assessment. The field studies were carried out by Myanwei conducted field survey, assessment activities, and prepared the report.

A reconnaissance study was performed on the proposed project site and baseline environmental data were also collected from possible sources using the appropriate measuring devices. Data interpretation and analysis were made based on those collected data for the present and potential future conditions. Suitable measures were proposed for the impacts to be mitigated to reduce to acceptable ones.

Public consultation for the proposed project was conducted on 8, July 2020 and it included verbal disclosure of the project activities and discussion with stakeholders from Dagon Myo Thit (Seikkan) Township.

3.1.1. The specific objectives of the IEE study are as follows:

- To conduct preliminary examination of the environmental consequences of the project
- To describe the existing environmental condition of the proposed project site
- To collect detailed information about used of process, technology, equipment and machinery for proposed project
- To assess the potential environmental impacts of the proposed project
- To develop environmental management plan (EMP) with site specific environmental mitigation measures and monitoring standards guidelines for the proposed project
- To carry our public consultants to address any issues in concern with implementation of this project

3.2. IDENTIFICATION OF IEE STUDY TEAM

MYANWEI prepares the Initial Environmental Examination (IEE) with the Environmental Management Plan (EMP) for the proposed project. The environmental study was carried out by the study team and the following is a summary of team member 's responsibilities during the study period.

Table 3-1 Member of IEE study team

Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Dr. Win Aung	M.B, B.S (Yangon), M.P.H (Mahidol University, Thailand)	Public Health and Health Management Expert

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Name	Qualification	Responsibility
Myanwei Environmental Solutions Co., Ltd.	Transition Consultant Registration Certificate No. 0069	EIA Organization
Dr. Hein Lynn Aung	M.B, B.S (Yangon), Business Management (International Collage of Management Sydney, Australia)	Project Director, Public Health Consultant, Project Management
Mr. Lin Htet Sein	MSc (Regional Geology) BSc (Hons) Geology Dip in Environmental Science Certificate in Environmental & Social Assessment Certificate in Environmental Stainability TCR No. 0048	Project Director, Environmental Consultant, Project Management
Ms. Wah Wah Zaw	B.E Material and Metallurgy Engineering Diploma in Environmental Planning and Management M.S Environmental Planning and Management	Senior Environmental Consultant, Social and Environmental Research, Quality control, Environmental Planning and Management
Ms. Khin Thu Zar Myint	B.E(Materials and Metallurgy) Dip in Environmental Planning and Management	Senior Environmental Consultant, Social Research, Public consultation, Social Economic Investigation
Ms. Su Myat Hlaing	B.E Civil Engineering B.Tech Civil Engineering	Environmental Engineer
Mr. Kyaw Win Han	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Team Leader of Baseline Survey, Monitoring Measure
Mr. Aung Kyaw Moe	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring measure, Document Administration
Mr. Saw Yan Naung	B.E. Chemical Engineering B. Tech Chemical Engineering	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Myat Ko Ko	B.Sc (Hons) Geology M.Sc. Geology (Economic and Mining) Certificate of Environment Management Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Htoo Nanda Aung	B.Sc (Forestry)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Si Yan Hein	B.Sc (Geology) Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration
Mr. Kaung Sett Lwin	B.Sc (Hons) Geology Certificate of Geotechnical Engineering (Myanmar Geoscience Society)	Junior Environmental Consultant, Monitoring Measure, Document Administration

CHAPTER 4

POLICY, LEGAL AND INSTITUTIONAL FRAME WORK

This section provides a brief summary of relevant national environmental legislations established by the MONREC and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

4.1. MYANMAR REGULATORY FRAMEWORK

Myanmar has 24 ministries under the Office of the President as of May 2016. The leading ministries in-charge of environmental and social considerations are the Environmental Conservation Department (ECD) of the MONREC that was reorganized Ministry of Environmental Conservation and Forestry (MOECF) in April 2016.

4.1.1. Laws and Regulations Related to Environmental and Social Considerations

Requirements related to environmental (and social) impact management for development projects are described in Table 4-1.

Table 4-1 List of Myanmar's Law relating to environmental management

Law and Regulation	Description
National Environmental Policy of Myanmar, (Notification No. 26/94 dated 5 December 1994)	To achieve harmony and balance between socioeconomic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all its citizens.
Constitution 2008	
Section 37, (a)	The Union is the ultimate owner of all lands and all-natural resources above and below the ground, above and beneath the water and in atmosphere in the Union.
Section 37, (b)	The Union shall permit citizens rights of private property, right of inheritance, right of private initiative and patent in accord with the laws.
Section 372	The Union guarantees the right to ownership, the use of property and the right to private invention and patent in the conducting of business if it is not contrary to the provisions of this Constitution and the existing laws.
Section 45	The Union shall protect and conserve natural environment.
Section 390, (a), (b), (c), (d)	Every citizen has the duty to assist the Union in preserving and safeguarding the cultural heritage, conserving the environment, striving for the development of human resources, and protecting and preserving the public property.
Environmental Conservation Law, 30 March 2012	
Objectives	to contract a healthy and clean environmental and to conserve natural and cultural heritage for the benefit of present and future generations; to maintain the sustainable development through effective management of natural resources and to enable to promote international, regional and bilateral cooperation in the matters of environmental conversation.
Section 3	c) to enable to emerge a healthy and clean environment and to enable to conserve natural and cultural heritage for the benefit of present and future generations; (d) to reclaim ecosystems as may be possible which are starting to degenerate and disappear;

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	(e) to enable to manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially;
Chapter IV Provisions of Duties and Powers relating to the Environmental Conservation of the Ministry: Section 7	<p>(a) To specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances in carrying out industry, agriculture, mineral production, sanitation and other activities;</p> <p>(b) To prescribe categories of hazardous substances that may affect significantly at present or in the long run on the environment;</p> <p>(c) To promote and carry out the establishment of necessary factories and stations for the treatment of solid wastes, effluents and emissions which contain toxic and hazardous substances;</p> <p>(d) prescribing environmental quality standards including standards on emissions, effluents, solid wastes, production procedures, processes and products for conservation and enhancement of environmental quality;</p> <p>(j) To prescribe the terms and conditions relating to effluent treatment in industrial estates and other necessary places and buildings and emissions of machines, vehicles and mechanisms;</p> <p>(m) To lay down and carry out a system of EIA and SIA as to whether or not a project or activity to be undertaken by any Government department, organization or person may cause a significant impact on the environment;</p> <p>(o) 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.</p>
Chapter VI Environmental Quality Standards: Section10	<p>The Ministry may, with the approval of the Union Government and the Committee, stipulate the following environmental quality standards:</p> <p>(a) suitable surface water quality standards in the usage in rivers, streams, canals, springs, marshes, swamps, lakes, reservoirs and other inland water sources of the public;</p> <p>(b) water quality standards for coastal and estuarine areas;</p> <p>(c) underground water quality standards;</p> <p>(d) atmospheric quality standards;</p> <p>(e) noise and vibration standards;</p> <p>(f) emissions standards;</p> <p>(g) effluent standards;</p> <p>(h) solid wastes standards;</p> <p>(i) other environmental quality standards stipulated by the Union Government.</p>
Section 14	A person causing a point source of pollution shall treat, emit, discharge and deposit the substances which cause pollution in the environment in accord with stipulated environmental quality standards.
Section 15	The owner or occupier of any business, material or place which causes a point source of pollution shall install or use an on-site facility or controlling equipment in order to monitor, control, manage, reduce or eliminate environmental pollution. If it is impracticable, it shall be arranged to dispose the wastes in accord with environmentally sound methods.
Section 16	<p>A person or organization operating business in the industrial estate or business in the SEZ or category of business stipulated by the Ministry:</p> <p>(a) is responsible to carry out by contributing the stipulated cash or kind in the relevant combined scheme for the environmental conservation including the management and treatment of waste;</p>

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	<p>(b) shall contribute the stipulated users' charge s or management fees for the environmental conservation according to the relevant industrial estate, SEZ and business organization;</p> <p>(c) shall comply with the directives issued for environmental conservation according to the relevant industrial estate, SEZ or business.</p>
Chapter X Prior Permission Section 24	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.
Section 25	The project proponent has to comply with the terms and conditions include in prior permission.
Section 29	The project proponent has to abide by the stipulations included in the rules, regulations, by-law, order, notification and procedure, which are issued by said law.
Chapter XIII Offences and Penalties Section 32	Whoever violates any prohibition contained in the rules, notifications, orders, directives and procedures issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year, or with fine, or with both.
Environmental Conservation Rules, 2014	
Rules 58	The Ministry shall form the EIA Report Review Body with the experts from the relevant Government departments, organizations.
Rules 59	The Ministry may assign duty to the Department to scrutinize the report of EIA prepared and submitted by any organization or person relating to EIA and report through the EIA Report Review Body.
Rules 61	The Ministry may approve and reply on the EIA report o IEE or EMP with the guidance of the Committee.
Sub-rule (a) of rule 68	The project proponent has to avoid emit, discharge or dispose the materials which can pollute to environment, or hazardous waste or hazardous material prescribed by notification in the place where directly or indirectly injure to public.
Sub-rule (b) of rule 68	The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem.
Chapter XIII Prohibitions Section 69	<p>(a) Any person shall not emit, cause to emit, dispose, cause to dispose, pile and cause to pile, by any means, the pollutants to environment and the hazardous waste or hazardous material stipulated by notification under the Law and any of these rules at any place which may affect the public directly or indirectly.</p> <p>(b) Any person shall not carry out the actions which can be damaged to natural environment which is changing due to ecosystem and such system, except the permission of the relevant Ministry in order to the interest of the public.</p>
Environmental Impact Assessment Procedure, December 2015	
Objectives	<p>The project proponent has to be liable for all adverse impacts caused by doing or emitting of project owner or contractor, sub-contractor, officer, employee, representative or consultant who is appointed or hired to perform on behalf of project owner, under sub-paragraph (a) of paragraph 102.</p> <p>The project proponent has to support, after consulting with effected persons by project, relevant government organization, government department and other related persons, to resettlement and rehabilitation for livelihood until the effected persons by the project receiving the stable socio-economy which is not lower than the status in pre-project, under</p>

	<p>sub-paragraph (b) of paragraph 102</p> <p>The project proponent has to fully implement all commitments of project and conditions included in EMP. Moreover, the project proponent has to be liable for contractor and sub-contractor who perform on behalf of him/her have to fully abide by the relevant laws, rules, this procedure, EMP and all conditions, under paragraph 103.</p> <p>The project proponent has to be liable and fully & effectively implement all requirements included in ECC, relevant laws and rules, this procedure and standards under rule 104.</p> <p>The project proponent has to inform the completed information, after specifying the adverse impacts caused by the project, from time to time, under paragraph 105.</p> <p>The project proponent has to continuously monitor all adverse impacts in the pre-construction phase, construction phase, operation phase, suspension phase, closure phase and post-closure phase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106.</p> <p>The project proponent has to submit, as soon as possible, the failures of his or her responsibility, other implementation, ECC or EMP. If dangerous impact caused by this failure or failure should be known by the Ministry the project proponent has to submit within 24 hours and other than this situation has to submit within 7 days from knowing it, under paragraph 107.</p> <p>The project proponent has to submit the monitoring report dually or prescribed time by Ministry in line with the schedule of EMP, under paragraph 108.</p> <p>The project proponent has to prepare the monitoring report in accord with the rule 109.</p> <p>The project proponent has to show this monitoring report in public place such as library, hall and website and office of project for the purpose to know this report by public within 10 days from the date which the report is submitted to the Ministry. Moreover, has to give the copy of this report, by email or other way which way agreed with the asked person, to any asked person or organization, under paragraph 110.</p> <p>The project proponent has to allow inspector to enter and inspect in working time and if it is needed by Ministry has to allow inspector to enter and inspect in the office and work-place of project and other work-place related to this project in any time, under paragraph 113.</p> <p>The project proponent has to allow inspector to immediately enter and inspect in any time if it is emergency or failure to implement the requirements related to social or environment or caused to it, under paragraph 115.</p> <p>The project proponent has to allow inspector to inspect the contractor and sub-contractor who implement on behalf of project, under paragraph 117.</p>
Screening: Section 23	<p>a) The project proponent shall submit the Project Proposal to the Ministry for Screening.</p> <p>b) The Ministry will send the Project Proposal to the Environmental Conservation Department to determine the need for environmental assessment.</p> <p>c) Following the preliminary Screening and verification that the Project Proposal contains all required documents and related materials, subject to Articles 8, 9, 10, 11, 26 and 27 the Department shall make a determination in accordance with Annex 1 = Categorization of Economic Activities for Assessment Purposes', taking into account Article 25 and the additional factors listed in Article 28 in order to designate the Project as one of the following, and then submit it to the Ministry:</p> <p>i) An EIA Type Project, or</p>

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	<p>ii) An IEE Type Project, or</p> <p>iii) A Non IEE or EIA Type, and therefore not required to</p>
<p>CHAPTER VIII.</p> <p>Monitoring</p> <p>Section 102</p>	<p>The monitoring reports shall include:</p> <p>a) documentation of compliance with all Conditions;</p> <p>b) progress made to date on implementation of the EMP against the submitted implementation schedule;</p> <p>c) difficulties encountered in implementing the EMP and recommendations for remedying those difficulties and steps proposed to prevent or avoid similar future difficulties;</p> <p>d) number and type of non-compliance with the EMP and proposed remedial measures and timelines for completion of remediation;</p> <p>e) accidents or incidents relating to the occupational and community health and safety, and the environment; and</p> <p>f) monitoring data of environmental parameters and conditions as committed in the EMP or otherwise required</p>
Section 103	<p>Within ten (10) days of completing a monitoring report as contemplated in Article 97 and Article 98 in accordance with the EMP schedule, the Project Proponent shall make such report (except as may relate to National Security concerns) publicly available on</p> <p>28 the Project's website, at public meeting places (e.g. libraries, community halls) and at the Project offices. Any organization or person may request a digital copy of a monitoring report and the Project shall, within ten (10) days of receiving such request, submit a digital copy via email or as may otherwise be agreed upon with the requestor</p>
Section 104	<p>The Ministry has the right, using its own officers at national, regional, state, Nay Pyi Taw Union Territory and/or local offices, the services of any consultant, or both, to conduct monitoring and inspections of a Project and activities related thereto in order to control and determine compliance by the Project with all applicable environmental and socio-economical requirements and, where possible, to prevent violations of the Project's obligations. The Ministry may also, for the implementation of monitoring and inspections, enlist the assistance of other relevant government departments and organizations.</p>
Section 105	<p>If, upon inspection, the Ministry identifies any non-compliance with the EMP or Conditions in the ECC, the Ministry may require the Project Proponent to undertake remedial measures and/or may impose penalties as provided for in this Procedure</p>
Section 106	<p>For purposes of monitoring and inspection, the Project Proponent shall grant to the Ministry and/or its representatives, at any time during normal working hours and from time to time as and when the Ministry may reasonably require, 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.</p>
Section 107	<p>In carrying out any inspection, the Ministry may take photographs and make other audio and video recordings of any type, take soil, sediment, water, and air samples, and examine computers, copy documents including digital files, interview persons, and carry out any other investigation which the Ministry believes to be necessary or appropriate. The Ministry, as it deems necessary, may carry out such inspection in coordination with any other ministries.</p>
Section 108	<p>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, including outside normal working</p>

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	hours.
Section 109	The Ministry's inspections may include without limitation sites, facilities, vehicles, computers, archives, documents and all other forms and types of media and information storage, and persons.
Section 110	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
Section 113	The Ministry shall indicate the manner in which environmental obligations are not being complied with by the Project Proponent, and shall give the Project a specified time period (determined by the Ministry to be reasonable under the circumstances) within which to bring the Project into compliance.
Section 115	All costs of the Ministry to conduct inspection and monitoring of the Project shall be borne by the Project Proponent. Such costs shall not exceed that which is necessary to ensure the Project's compliance with the Project commitments as set out in the EMP and in the ECC.
Section 117	The Ministry may require that Projects and other economic activities that derive from such policy, strategy, development plan, framework or program and which have been required to undertake a study to identify and assess the potential environmental and social impacts (as stipulated above) shall be developed and implemented (sited, designed, constructed and operated) in accordance with the environmental and social management and monitoring framework of such policy, strategy, development plan, framework or program.
National Environmental Quality (Emission) Guidelines (NEQG) (December 2015)	
Objectives	To provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.
National Environmental Policy of Myanmar (2019)	
National Environmental Policy Vision & mission	<p><u>Vision</u></p> <p>A clean environment, with healthy and functioning ecosystem, that ensures includes development and wellbeing for all people in Myanmar.</p> <p><u>Mission</u></p> <p>To establish national environmental policy principle for guiding environmental protection and sustainable development and for mainstreaming environmental consideration into all policies, laws, regulation, plans, strategic, programmes and projects in Myanmar.</p>
Foreign Investment Law, 2012	
Section 8	<p>(a) To support the primary objectives of the national economic development plan, and for businesses that cannot yet be run by the State and citizens or businesses that have insufficient funds and technology.</p> <p>(b) Development of employment activities</p> <p>(l) Protection and conservation of the environment.</p> <p>(q) Appearing the required modern services for the Union and citizens.</p>
Section 17	<p>(a) To abide by the existing laws of the Republic of the Union of Myanmar.</p> <p>(b) To carry out the business by forming a company under the existing laws of Myanmar by the investor.</p> <p>(h) To carry out not to cause environmental pollution or damage in accord with existing laws in respect of investment business.</p> <p>(k) To carry out the systematic transfer of high technology relating to the business which are carried out by the investor to the relevant enterprises,</p>

	departments or organizations in accord with the contract.
Foreign Investment Rule, 2013	
Rule 54	<p>The promoter or investor shall:</p> <ul style="list-style-type: none"> (a) comply with Environmental Protection Law in dealing with environmental protection matters related to the business; (b) shall carry out socially responsible investment in the interest of the Union and its people; (c) shall co-operate with authorities for occasional or mandatory inspection; (d) shall exercise due diligence to be in conformity and harmony with norms and standards prescribed by relevant Union Ministry in conducting construction of factories, workshops, buildings, and other activities; (e) shall enforce Safety and Health
Myanmar Investment Law, 2016	
Chapter II Objective Section 3	<p>The objectives of this Law are as follows:</p> <ul style="list-style-type: none"> (a) to develop responsible investment businesses which do not cause harm to the natural environment and the social environment for the interest of the Union and its citizens; (b) to protect the investors and their investment businesses in accordance with the law; (c) to create job opportunities for the people; (d) to develop human resources; (e) to develop high functioning production, service, and trading sectors. (f) to develop technology, agriculture, livestock and industrial sectors; (g) to develop various professional fields including infrastructure around the Union; (h) to enable the citizens to be able to work alongside with the international community; (i) to develop businesses and investment businesses that meet international standards.
Chapter XIII Employment of Staff and Workers Section 51	<p>The investor:</p> <ul style="list-style-type: none"> (a) may appoint of any citizen who is a qualified person as senior manager, technical and operational expert, and advisor in his investment within the Union in accordance with the Laws; (b) shall appoint them to replace, after providing for capacity building programs in order to be able to appoint citizens to different level positions of management, technical and operational experts, and advisors; (c) shall appoint only citizens for works which does not require skill; (d) shall appoint skilled citizen and foreign workers, technicians, and staff by signing an employment contract between employer and employee in accordance with the labor laws and rules; (e) shall ensure to obtain the entitlements and rights in the labor laws and rules, including minimum wages and salary, leave, holiday, overtime fee, damages, compensation of the workman, social welfare, and other insurance relating to workers in stipulating the rights and duties of employers and employees and occupational terms and conditions in the employment contract; (f) shall settle disputes arising among employers, among workers, between employers and workers, and technicians or staff in the investment in accordance with the applicable laws.

Chapter XVI Responsibilities of Investors Section 65	<p>The Investor:</p> <p>(f) shall not make any significant alteration of topography or elevation of the land on which he is entitled to lease or to use, without the approval of the Commission;</p> <p>(g) shall abide by applicable laws, rules, procedures and best standards practiced internationally for this investment so as not to cause damage, pollution, and loss to the natural and social environment and not to cause damage to cultural heritage;</p> <p>(i) shall close and discontinue the investment only after payment of compensation to employees in accordance with applicable laws for any breach of employment contracts, closure of investment, sale and transfer of investment, discontinuation of investment, or reduction of workforce;</p> <p>(j) shall pay wages and salaries to employees in accordance with applicable laws, rules, procedures, directives and so forth during the period of suspension of investment for a credible reason;</p> <p>(k) shall pay compensation and indemnification in accordance with applicable laws to the relevant employee or his successor for injury, disability, disease and death due to the work;</p> <p>(l) shall supervise foreign experts, supervisors and their families, who employ in their investment, to abide by the applicable laws, rules, orders and directives, and the culture and traditions of Myanmar;</p>
Chapter XVII Insurance Section 73	The investor shall insure the types of insurance stipulated in the provision of the rules at any insurance enterprise which is entitled to carry out insurance businesses within the Union.
Myanmar Investment Rules, 2017	
Rule 202	The project proponent has to comply with the conditions of the permit issued by the MIC and applicable laws when making the investment
Rule 203	The project proponent has to fully assist while negotiating with the authority for settling the grievance of the local community which has been affected due to investment
Rule 206.	The project proponent has to submit the passport, expert evidence or document of degree and profile to the MIC office for approval if decide to appoint a foreigner as senior management, technician expert or consultant according to subsection (a) of section 51 of Myanmar Investment Law
Myanmar Insurance Law (1993)	<p>Section 15 - If the project proponent uses the owned vehicles the project owner has to ensure the insurance for the injured person.</p> <p>Section 16 - The project proponent has to ensure insurance to compensate for general damages because the project may cause damages to the environment and injury to the public.</p>
The Export and Import Law (2012)	
Chapter II Objectives Section 3	<p>The objectives of this law are as follows:</p> <p>a) To enable to implement the economic principles of the State successfully.</p> <p>b) To enable to lay down the policies relating to export and import that supports the development of the State.</p> <p>c) To cause the policies relating to export and import of the State and activities are to be in conformity with the international trade standards.</p> <p>d) To cause to be streamlined and speedy in carrying out the matters relating to export and import.</p>
Chapter IV	No persons shall export or import restricted, prohibited and banned

Prohibitions Section 5	goods.
Section 6	Without obtaining license, no person shall export or import the specified goods which are to obtain permission.
Section 7	A person who obtained any license shall not violate the conditions contained in the license.
Chapter V Offences and penalties Section 8	Whoever violates the prohibition contained in section 5 or section 6, on conviction, shall be punished with imprisonment for a term not exceeding three years or with fine or with both.
Section 9	A person who obtained any permit violates the prohibition contained in section 7, on conviction, shall be punished with imprisonment for a term not exceeding three years or with fine or with both.
Section 10	A person attempts to commit or abets in the commission of any offence contained in this Law shall be punished in the same manner as if he had been committed such offence and the exhibits shall also be confiscated.
Myanmar Insurance Law (1993)	
Chapter II Establishment and Aim Section 4	The Myanmar Insurance is established with the following aims: - social and economic losses which the people may encounter, due to common perils; (b) to promote the habit of savings individually by effecting life assurance, thus contributing to the accumulation of resource, of the State; (c) to win the trust and confidence of the people in the insurance system by providing effective insurance safeguards which may become necessary in view of the social and economic developments.
Chapter VI Effecting Insurance and Granting of Benefits Section 15	Owners of motor vehicles shall effect compulsory Third Party Liability Insurance with the Myanmar Insurance.
Section 16	An entrepreneur or an organization operating an enterprise which may cause loss to State-owned property or which may cause damage to the life and property of the public or which may cause pollution to the environment shall effect compulsory General Liability Insurance with the Myanmar Insurance.
The Commercial Tax Law (1990) Amended 2014	
Chapter 5 Registration and Intimation of Commencement of Enterprise Article 11 (b)	Any Person who commences operation of a goods production enterprise or service enterprise shall furnish letter of intimation on the commencement of the operation as such to the relevant Township Revenue Officer as stipulated by regulations.
Chapter 6 Monthly Payment of Tax and Sending of Three-Monthly Return Article 12 (a)	Any person who has taxable proceed of sale or receipt from service within a year, shall pay due monthly tax within ten days after the end of the relevant month. Moreover, a three-monthly return shall be furnished to the relevant Township Revenue Officer within one month after the end of relevant three-month.
Article 12 (b)	The Township Revenue Officer may intimate any person to pay due monthly tax and send three-monthly return if there is cause to consider that he has taxable proceed of sale or receipt from service within a year.
Article 12 (c)	If it is failed to pay tax under sub-section (a) or (b), or if there is cause to consider that the tax paid is less than the tax payable, the Township Revenue Officer may, based on the information received, estimate and claim the tax payable or the additional tax payable.

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Article 12 (d)	The tax paid under sub-section (a), (b) or (c) shall be set-off from the tax due in the assessment.
Article 12 (e)	The tax payable on goods imported under sub-section (c) of section 4 of the Law shall be collected together with the customs duties by the Customs Department in accord with the manner of collecting customs duties.
The Amended Law for Factories Act, 1951 (Amended in 2016)	
Hygiene in Working Environment: Section 3	Mentions responsibilities of employer and manager regarding waste disposal, ventilation, extreme temperature, dust and gas generation, minimum space for each worker, lighting, portable drinking water and toilets for employees.
Safety in Working Environment: Section 4	States responsibilities of employer and manager concerning with machine guarding, personal protective equipment, housekeeping, aisles and exits, chemical storage and fire protection system to avoid accident.
The Private Industrial Enterprise Law, 1990	
Chapter II Basic Principles Section 3	Private Industrial Enterprises shall be conducted in accordance with the following basic principles: - (a) to enhance the higher proportion of the manufacturing value added in the gross national product and value of services, and to increase the production of the respective economic enterprises which are related to the industrial enterprise; (b) to acquire modern technical know-how for raising the efficiency of industrial enterprises and to establish the sale of finished goods produced by the industrial enterprise not only in the local market, but also in the foreign market; (d) to cause narrowing down of the gap between rural development and urban development by causing the development and improvement of industrial enterprises; (e) to cause opening up of more employment opportunities; (f) to cause avoidance of or reduction of the use of technical know-how which cause environmental pollution; (g) to cause the use of energy in the most economical manner.
Chapter III Registration of Private Industrial Enterprises Section 4	(a) Any person desirous of conducting any private industrial enterprise; (b) Any person conducting any private industrial enterprise on the day this Law is enacted; by using any type of power which is three horsepower and above or manpower of ten wage-earning workers and above shall register under this Law.
Chapter VI Duties and Rights of the Entrepreneur Section 13	The duties of the entrepreneur are as follows: - (b) shall abide by the terms and conditions of the registration certificate; (l) shall shift the place of enterprise, change the nature of enterprise, amalgamate enterprises and split up enterprises only with the approval of the Directorate; (g) shall abide by the orders and directives issued from time to time by the Ministry and the Directorate;
The Prevention of Hazard from Chemical and Related Substances Law, 2013	
Chapter II Aims Section 3	This law was enacted with the objectives of: a. To protect from being damaged the natural environment resources and being hazardous any living beings by chemical and related substances; b. To supervise systematically in performing the chemical and related substances business with permission for being safety;

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	<p>c. To perform the system of obtaining information and to perform widely educative and research for using the chemical and related substance systematically;</p> <p>d. To perform the sustainable development for the occupational safety, health and environmental conservation.</p> <p>Regarding the chemical management and storage, currently, regulations governing chemicals management are divided between various Acts, mostly dating from colonial times; hence the legislation is in many respects related to the British framework. The Factory Act and the Public Health Act contain the provisions for chemicals management and storage. Some chemicals are likely to require permits.</p>
Section 15	<p>A person who has obtained a licence, before starting the respective chemical and related substances business: -</p> <p>(a) shall be inspected for the safety and the power of resistance of the machinery and equipment by the respective Supervisory Board and Board of Inspection;</p> <p>(b) shall be attended the person who serve in the work to the respective foreign trainings or the trainings and the expert trainings on prevention of hazard from the chemical and related substances opened by the government department and the government organizations.</p>
Section 16	<p>A person who has obtained a licence: -</p> <p>(a) shall abide the licence regulations;</p> <p>(b) shall perform to abide strictly the instructions for being safety in using the chemical and related substances by himself and also the persons who serve the work;</p> <p>(c) shall keep the required safety equipment enough in the chemical and related substances businesses, furthermore shall grant the personal protection equipment and dresses free of charge to the working persons;</p> <p>(d) shall make the course of training and study and instruction if necessary to the working persons for using the occupational safety equipment, the personal protection equipment and the dresses systematically in the chemical and related substances business;</p> <p>(e) shall be inspected by the respective Supervisory Board and Boards of Inspection in respect of whether or not the hazard may impact on the Human Being and Animals' health and the environment;</p> <p>(f) shall make medical checkup the working persons who will work in the chemical and related substances business and shall permit to serve in that work after obtaining the recommendation that his health is suitable for that work. This medical checkup records shall be kept systematically;</p> <p>(g) shall send the copy of informative letter of the permission to the respective Department of Township Administration, if the hazardous chemical or related substances are permitted to store;</p> <p>(h) shall acquire in advance the guidance and agreement of the respective Department of Fire Brigade, if the business that is worried to fire hazard is operated by using the fire hazard substances or the explosive substances;</p> <p>(i) shall transport only the permitted amount of the chemical and related substances in accordance with the prescriptive stipulations, if they are transported in local;</p> <p>(j) shall take the permission from the Central Supervisory Board if the chemical and related substance is altered and transferred from one place to any other place which contained in the license;</p> <p>(k) shall abide and perform in accordance with the related environmental laws not to impact and damage to the environment in operating the chemical and related substances business.</p>

Section 17	A person who has obtained a licence, shall put the insurance in accordance with the prescriptive stipulations to be able to pay the compensation, if the impact and damage is occurred on the Human Being and Animals or the environment in respect of the chemical and related substances businesses.
Section 22	A person who has obtained the registration certificate shall abide the regulations consisted in the registration certificate furthermore shall also abide the order and instructions issued occasionally by the Central Supervisory Board.
Chapter IX Hazard Control and Decrease Section 27	A person who has obtained the licence to be complied the following matters to control and decrease the hazard of the chemical and related substances: - (a) classifying the hazard level to protect in advance the hazard according to the properties of the chemical and related substances; (b) expressing the Material Safety Data Sheet and Pictogram; (c) providing the safety equipment, the personal protection equipment to protect and decrease the accident and attending to the training to be used systematically; (d) performing in accordance with the stipulations in respect of transporting, possessing, storing, using, discharging the chemical and related substances;
Petroleum and Petroleum Product Law (2017)	
Chapter II Objective Section 3	The Objectives of this law are as follows: a.to carry out the petroleum and petroleum product businesses activities systematically in accordance with the provisions of the law, stipulated standards, procedures and conditions; b.to enable the petroleum and petroleum product business activities to carry out safely without environmental impact; c.to establish free and fair competition in carrying out petroleum and petroleum product business activities; d.to secure energy requirement and energy security of the Union; e.to obtain tax revenue of the Union
Chapter IV Application for Licence, Issue of Permit, Determining Conditions to be abided by, and Supervision Section 9	The Ministry of Transport and Communications shall carry out the following functions relating to any petroleum and petroleum product; a. issuing licence to vehicles, vessels and barges that carry any petroleum and petroleum product; b. determining period, form, conditions, means of applying for licence, permitting authority and fees to be assessed, for licences under subsection (a); c. determining and supervision on ports for vessels and barges that carry out import, export, and transport by water in accord with procedures; d. taking action, as necessary, in accordance with the existing laws if it occurs spill or accident in carrying out import, export, transport, and sale and distribution of petroleum and petroleum product by water; e. determining procedures and conditions to be abided by in carrying out transport business except transport by pipeline.
Section 10	The Ministry of Natural Resources and Environmental Conservation shall carry out the following functions relating to any petroleum and petroleum product; a. issuing licence for the right to store for the storage tanks and warehouses; b. issuing transport permit for the vehicles, vessels and barges that shall carry any petroleum and petroleum product;

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	<p>c. determining the period, form and terms and conditions, manners of applying licence, permitting authority and fees to be assessed, for licence under subsection (a) and permit under subsection (b);</p> <p>d. if it occurs environmental impacts in carrying out petroleum and petroleum product business activities, taking action, as necessary, in accordance with the existing laws of on-site inspection;</p> <p>e. determining, in coordination with ministries concerned, procedures and conditions relating to standard and quality of storage tanks and warehouse, and tanks of vehicles, vessels and barges that carry any petroleum and petroleum product.</p>
Section 11	On all receptacles containing any dangerous petroleum and petroleum product, the warning sign of danger by stamping, embossing, painting, printing or any other means shall be expressed. If it is impossible to express as such, similar warning signs of the nature of danger of gasoline, spirit or petroleum shall be expressed in writing at the ostensible place in salient words or signs near the receptacle.
Chapter VI Prohibition Section 31	<p>Any licensee:</p> <p>a. shall not violate any prohibition contained in the rules, regulations, bye-laws, notifications, orders, directives, procedures and conditions or fail the duty to implement;</p> <p>b. shall not use a receptacle and transport vehicles and pipelines that contains any dangerous petroleum and petroleum product without saliently mentioning in writing of warning signs;</p> <p>c. shall not import, transport, store and sell and distribute the dangerous petroleum and petroleum product, or non-dangerous petroleum and petroleum product except by the means stipulated in this law;</p> <p>d. shall not have the right to carry out without undertaking the environmental impacts, in operating petroleum and petroleum product business activities;</p> <p>e. shall not distribute and sell petroleum and petroleum products which do not fulfill or are not in conformity with the standard, quality and measurement.</p>
Industrial Use Explosive Substances Law, 2018	
Objective:	<p>The objectives of Industrial Use Explosive Substances Law (2018) are as follow:</p> <p>(a) to make, import, transport, store and use of exploiting materials that explode in the workplace must be carefully handle and use.</p> <p>(b) to take care of safety in the workplace which use yarns and accessories</p> <p>(c) to properly supervise the use of explosive materials in the workplace.</p>
Chapter 7 Prohibitions Article 18	Any license holder shall not be refused to perform the inspection of the inspector or the inspector general.
Article 19 (b)	Under Section 8, any explosive materials shall not be destroyed materials without the approval of the Defense Ministry's Executive Board.
Article 19 (c)	Rules and Regulations, orders, disciplines, instructions issued under this law must not fail to act.
The Law on Standardization (2014)	
Chapter (II) Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to enable to determine Myanmar Standards;</p> <p>(b) to enable to support export promotion by enhancing quality of production organizations and their products, production processes and</p>

	<p>services;</p> <p>(c) to enable to protect the consumers and users by guaranteeing imports and products are not lower than prescribed standard, and safe from health hazards;</p> <p>(d) to enable to support protection of environment related to products, production processes and services from impact, and conservation of natural resources;</p> <p>(e) to enable to protect manufacturing, distributing and importing the disqualified goods which do not meet the prescribed standard and those which are not safe and endangered to the environment;</p> <p>(f) to support on establishing the ASEAN Free Trade Area and to enable to reduce technical barriers to trade.</p> <p>(g) to facilitate technological transfer and innovation by using the standards for the development of national economic and social activities in accordance with the national development programme.</p>
Chapter 7 Taking Action by Committee No. 19	<p>The committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative order:</p> <p>warning suspending the certificate of certification for limited period</p> <p>cancelling the certificate of certification</p>
Chapter (VI) Application for and Issue of Certification Section 17	<p>A person desirous of obtaining certificate of certification shall apply to the department and organization which has obtained the accreditation.</p>
Chapter (VII) Taking Action by Committee Section 19	<p>The Committee may, if it is found out that holder of certificate of certification violates any term or condition contained in the relevant recommendation, pass any of the following administrative orders:</p> <p>(a) warning;</p> <p>(b) suspending the certificate of certification for limited period;</p> <p>(c) cancelling the certificate of certification</p>
Chapter (IX) Offences and Penalties Section 26	<p>If any person who obtained certificate of certification uses standardization mark on the product which is not in conformity with the relevant standard or relating to service shall be punished with imprisonment for a term not exceeding one year or with fine not more than one million Kyats or with both.</p>
Boiler Law (2015)	
Chapter II Objectives	<p>The objectives of this law are as follows:</p> <p>(a) To obtain boilers in compliance with Myanmar Standards or International Standards</p> <p>(b) To prevent the country and citizens from hazards caused by boiler accidents</p> <p>(c) To use boilers in compliance with Myanmar Standards or International Standards within the country</p> <p>(d) To develop boiler technology and to produce experts capable of manufacturing, handling, repair, and maintenance of boilers</p> <p>(e) To optimize the use of boilers through effective utilization of fuel energy</p> <p>(f) To reduce the environmental, social and health impacts through long-lasting use of boilers.</p>
Chapter III Boiler Standards and Regulations for Boiler Inspection	<p>The chief inspector, with the approval of the Ministry:</p> <p>(a) may issue regulations for boiler inspection and directives in accord with Myanmar standards or international standards in order to use a</p>

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Section 4	boiler safely under this Law, procedures and directives; (b) the only results of inspection made under approved and specified boiler standards and regulations for boiler inspection shall be conclusive.
Chapter IV Boiler Registration Section 5	Anybody who would like to use a boiler in any kind of business should be registered.
Section 6	Boiler should be manufactured according to Myanmar Standards or International Standards.
Section 7	Those who would like to apply for boiler registration according to Section 5 should apply to the inspector with the application, documents and vouchers related to boiler
Section 8	If the application regarding registration of boiler according to Section 7, the Registration Officer should conduct necessary inspection and submit results of the findings to the Inspector General.
Section 9	The Inspector General should assess and inspect the submission of the Registration Officer according to Section 8 and could allow or reject for registration of the boiler.
Section 10	The Inspector General shall define boiler size according to heated surface area in accordance with adopted procedures.
Chapter V Duties and Rights of the Owner Section 12	The owner shall: (a) apply to the respective inspector to obtain certificate in accord with the prescribed manner; (b) apply to register only for the boiler constructed in accord with Myanmar standards or international standards; (c) the prescribed fee shall be paid when the application is made under sub-section (a).
Section 14	The owner shall apply to the respective inspector in advance in order to obtain permission though he or she has obtained the certificate or the provisional order if desirous to carry out any of the following matters: (a) using of the boiler at more than allowable pressure; (b) repairing, altering, adding or renewing any steam-pipe, feed-pipe or any mounting or other fitting attached to such steam pipe, feed-pipe or mounting or other fitting attached to the boiler.
	The owner shall submit the certificate or provisional order when so requested by the respective government department and organization as may be necessary.
Section 15	The owner shall submit the certificate or provisional order when so requested by the respective government department and organization as may be necessary.
Section 18	The owner shall inform immediately to the inspector if any accident occurs.
Section 20	The owner shall not use the following boiler: (a) boiler without certificate or provisional order; (b) boiler of which certificate or provisional order is void; (c) boiler of which certificate or provisional order is revoked.
Section 21	The owner shall engrave the register number specified by the chief inspector in accord with the prescribed manner.
Section 24	He owner shall not: (a) carry out with the person who has not boiler repairer certificate on the receipt of notice to repair, alter, add or renew any boiler, steam-pipe,

	<p>feed-pipe or any mounting or other fitting attached to such boiler, steam-pipe and feed-pipe;</p> <p>(b) assign any person to charge the boiler used in the work except the person who operates and maintains the boiler.</p>
Chapter VIII Duties and Rights of Boiler Attendant, Section 31	The boiler attendant shall not use the boiler at more than allowable pressure.
Chapter IX Duties and Powers of Inspector Section 38	<p>The inspector, in accord with the prescribed manners, shall:</p> <p>(a) inspect the boilers existing within the area where he is responsible;</p> <p>(b) inspect any boiler existing anywhere according to the assignment of the chief inspector.</p>
Chapter XIII Prohibition	<p>59. According to Section 21, nobody must alter, change, deface, deform or make embossed registration unnoticeable illegitimately.</p> <p>60. Nobody is allowed to repair a boiler without boiler repair certificate.</p> <p>61. Nobody is allowed to maintain a boiler without boiler maintenance certificate.</p> <p>62. Nobody must alter safety relief valve in order to exceed the allowable pressure due to his consent or direction given by the owner.</p> <p>63. Nobody must manufacture boilers against Section 25, Subsection 25 (a) and (b) enacted.</p>
The Labour Organization Law (2011)	
Chapter V Rights and Responsibilities of the Labour Organization Section 17	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.
Section 18	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.
Section 19	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.
Section 20	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.
Section 21	The labour organizations have the right to participate in solving the collective bargains of the workers in accord with the labour laws.
Section 22	The labour organizations shall carry out peacefully in carrying out holding of meetings, going on strike and carrying out other collective activities in accord with their procedures, regulations, by-laws and any directives prescribed by the relevant Labour Federation.
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
The Pyidaungsu Hluttaw hereby enacts this Law 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.

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.

Chapter II Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to support the development of the State's economy through the development of production by causing to enjoy more security in social life and health care by the workers who are major productive force of the State by the collective guaranty of the employer, worker and the State;</p> <p>(b) to enjoy more security in social life and medical care by the public by effecting their insurance voluntarily;</p> <p>(c) to raise public confidence upon the social security scheme by providing benefits which are commensurate with the realities;</p> <p>(d) to have the right to draw back some of the contributions paid by the employers and the workers as savings, in accord with the stipulations;</p> <p>(e) to obtain the right to continued medical treatment, family assistance benefit, invalidity benefit, superannuation benefit, survivors' benefit, unemployment benefit, the right to residency and ownership of housing after retirement in addition to health care and pecuniary benefit for sickness, maternity, death, employment injury of the workers.</p>
Chapter V Social Security System and Benefits Section 11	<p>(a) 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 Labour in co-ordination with the Social Security Board:</p> <p>(i) production industries doing business whether or not they utilize mechanical power or a certain kind of power, works of production, repairing or services, or engineering works, mills, warehouses, establishments;</p> <p>(ix) works carried out with foreign investment or citizen investment or joint ventured businesses;</p> <p>(b) Any establishment which is applied with the provisions of compulsory registration under sub-section (a) shall continue to be applied by this Law even though any of the following situations occurs if it continues to carry out such work:</p> <p>(i) carrying out work by employing under stipulated minimum number of workers but more than one worker;</p> <p>(ii) changing the employer or changing the type of business.</p>
Social Security System Section 13	<p>The Social Security Board shall manage and keep the following social security systems in accord with the stipulations that insured persons may enjoy social security benefits:</p> <p>(b) Family Assistance Insurance System:</p> <p>i) education allowance benefit for the children of insured persons who earn below the specified amount of income;</p> <p>ii) health care and aid benefit in time of natural disaster;</p> <p>iii) suitable benefit for dependent family members.</p>
Section 15	<p>(a) The following funds are included in the Social Security Fund:</p> <p>(i) health and social care fund;</p> <p>(ii) family assistance fund;</p> <p>(iii) invalidity benefit, superannuation pension benefit, and survivors' benefit fund;</p> <p>(iv) unemployment benefit fund;</p> <p>(v) other social security fund for social security system of compulsory</p>

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	<p>registration and contribution specified by the Ministry of Labour, in co-ordination with the Social Security Board, according to clause (2) of subsection (e) of section 13;</p> <p>(vi) other social security fund specified as to which contribution may be paid after voluntary according to clause (2) of sub-section (e) of section 13;</p> <p>(vii) fund for Social Security Housing Plan;</p>
Section 18	<p>(b) The employer shall deduct contributions to be paid by worker from his remuneration and pay to the social security fund together with contribution to be paid by him. The employer shall also bear the expenses for such contribution.</p>
<p>Chapter VI</p> <p>Application to Employment Injury Benefit Insurance System,</p> <p>Employment Injury Benefit Fund and Benefits</p> <p>Section 45</p>	<p>The provisions contained in this Law relating to the employment injury benefit insurance system shall apply to the following workers:</p> <p>(a) workers at establishments which are applied to social security system who have registered compulsorily in accord with sub-section (a) of section 16 and contributed to the social security funds contained in clauses (1), (3), (4) and (5) of sub-section (a) of section 15;</p> <p>(b) workers specified as being applied to provisions of compulsory registration for employment injury benefit insurance system by notification of the Ministry of Labour, in co-ordination with the Social Security Board with the approval of the Union Government.</p>
Section 48	<p>(a) The employer shall effect insurance by registering for employment injury benefit insurance system contained in section 45 at the relevant township social security office and pay contribution to employment injury benefit fund in accord with stipulations in order that workers applied to provisions of compulsory registration may obtain the employment injury benefits;</p> <p>(b) The employers may effect insurance by registering voluntarily for insurance of the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system, by paying stipulated contribution to employment injury benefit insurance fund;</p> <p>(c) When registering to effect insurance for employment injury benefit in accord with sub-sections (a) and (b), the worker shall submit medical certificate.</p>
Section 49	<p>Non-application to the Workmen's Compensation Act</p> <p>(a) The employers and insured persons of establishments where the employer had registered compulsorily in accordance with sub-section (a) of section 48 or where the employer had registered voluntarily in accord with sub-section (b) of section 48 who have paid contribution to employment injury benefit fund shall not apply to the provisions contained in the Workmen's Compensation Act as regards the employment injury benefit;</p> <p>(b) The insured persons who has effected insurance for employment injury benefit in accord with sub-sections (a) and (b) of section 48 shall be entitled only to the employment injury insurance benefits contained in this Law.</p>
Section 53	<p>(a) The employers and workers shall co-ordinate with the Social Security Board or insurance agency in respect of keeping plans for safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment;</p>
Section 75	<p>The employer of establishments applied by this Law:</p> <p>(a) shall prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the</p>

	<p>stipulations:</p> <p>i) records and lists of workers' daily attendance;</p> <p>ii) records of appointing new worker, employing worker by changing of work, suspension from work, dismissal from work and resignation from work;</p> <p>iii) records of promotion and paying remuneration;</p> <p>iv) records and lists of employers, managers, and administrators; and records of changes of them;</p> <p>(b) shall inform the relevant township social security office if the following matters arise:</p> <p>i) change in number of workers and address of establishment;</p> <p>ii) change of employer, change of business, suspension from work, and termination of work;</p> <p>iii) employment injury, employment death, and occupational diseases;</p> <p>(c) shall produce work records and lists on requirement of inspection team or official assigned duty under this Law by the Social Security Head Office and various Regional Social Security Offices.</p>
Labor Dispute Settlement Law (28 Mar 2012 replacing 1929 version)	
<p>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.</p>	
Section 23	A party, employer or worker, may complain individual dispute relating to his grievance to the Conciliation Body and if he is not satisfied with the conciliation of such body in accord with stipulated manners, may apply to the competent court in person or by the legal representative.
Section 24	The relevant Conciliation Body shall, in respect of the collective dispute known or received by the complaint of either party, employer or worker, in respect of the dispute; information sent by the Minister or the Region or State Government or any other means, carry out as follows: (a) conciliating so as to be settled within three days, not including the official holidays, from the day of knowing or receipt of such dispute; (b) concluding mutual agreement if the settlement is reached in conciliating under sub-section (a), before the Conciliation Body.
Section 25	The Conciliation Body shall refer the collective dispute which does not reach settlement to the relevant Arbitration Body and inform the persons relating to the dispute.
Section 38	No employer shall fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause.
Section 39	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.
Section 40	The project proponent has to not close the work without negotiation, discussion on dispute in accord with this law, decision by Tribunal
Section 51	The project proponent has to pay the compensation decided by Tribunal if violates any act or any emission to omission to damage the interest of labour by reducing of product without efficient cause.
Section 46	Any employer who violates any prohibition contained in sections 38 and 39 shall, on conviction, be punished with a fine for a minimum of one-lakh kyats.

The Employment And Skills Development Law (2013)	
This law was enacted for safeguarding the right of workers or having skillful of workers and making peaceful workplace or obtaining the rights fairly, rightfully and quickly by settling the dispute of employer and worker justly. Employer shall conduct occupational training to enhance the skills of workers.	
Chapter (2) Employment and Employment Seeking Section 3	The Ministry shall manage the facilities and measures to help for selection of employment, obtaining employment for employment seeker suitable according to the age and strength; tenure in employment and skill development, and to help employers for obtaining workers suitable for the employment
Chapter (3) Making Contract of Employment Section 5	(a)(1) After the employer has employed a worker for any job, he shall within 30 days of so doing, sign a Contract of Employment with the worker. This clause however shall not apply to permanent workers of government departments and organizations. (2) If prior to employment, the worker is required to attend any per-employment training for a period or appointed on probation for a period, sub-section (1) shall not apply for that period. (c) The workplace rules in the Employment Contract shall conform to the rules made under existing laws and the rights of the workers in the Contract shall not be less than those in existing laws.
Chapter (5) Implementing Training Programs and Skills Development of Workers Section 14	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.
Chapter (8) Establishing and Utilizing Workers' Skills Development Fund Section 30	(a) 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. (b) The employer shall not deduct the contribution paid under sub-section (a) to the fund from the wages of the workers.
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.	
Chapter IV Determining the Categories of Work Section 6	The National Committee shall determine, by notification, commercial, production and service, agricultural and livestock breeding business which shall be applied by the provisions relating to minimum wage contained in this Law, in the whole country or relevant Union, Region or State. Moreover, it may amend the said businesses in accord with the changing situation from time to time.
Chapter VII The Duties of the Employer Section 12	The employer: (a) shall not pay wage to the worker less than the minimum wage stipulated under this Law; (b) may pay more than the minimum wage stipulated under this Law; (c) shall not 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; (d) shall 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

	<p>price, jointly according to the desire of the worker;</p> <p>(e) 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.</p>
Section 13	<p>The employer:</p> <p>(a) shall 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;</p> <p>(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;</p> <p>(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;</p> <p>(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;</p> <p>(e) shall 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;</p> <p>(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;</p> <p>(g) 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.</p>
<p>Chapter IX</p> <p>Assigning Duty to the Inspection Officer, Inspection and Taking Action</p> <p>Section 18</p>	<p>The inspection officer:</p> <p>(a) has the 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;</p> <p>(b) may summon, inspect the relevant persons under the assignment of duty by the Department, asking and copying for the relevant lists, schedules and documents.</p> <p>(c) 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;</p> <p>(d) in 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;</p> <p>(e) report to the Department in accord with the stipulations relating to the finding under sub-sections (a), (b) and (c), and documents and papers called for.</p>
Payment of Wages Law (2016)	
<p>The Payment of Wage Act 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.</p>	

<p>Chapter II Methods and Time of Payment of Wages Section 3</p>	<p>The employer:</p> <p>(a) shall pay wages to the workers employing in his business in local currency or foreign currencies stipulated by the Central Bank of Myanmar. Such payment may be paid in cash or cheque or deposit into the bank account of the worker with the agreement between the employer and the worker.</p> <p>(b) In paying such wages:</p> <p>(i) if it is necessary to pay particular benefit, profits and opportunities for workers working in commerce, production and service businesses, it may be paid in cash or some in cash and some in things set up by local price on own volition of workers in accordance with the stipulations.</p> <p>(ii) For workers employing in agriculture and livestock breeding business, it may be paid some wage in cash and something set up by local price according to custom, or on the volition of majority of worker or by collective agreement. In paying so, it shall be for personal use and the interest of his family, and shall be appropriate and equitable.</p> <p>(c) If any worker is conscripted under the Public Military Service Law, the (60) days of wages shall be paid as a special right</p>
<p>Section 4</p>	<p>The employer:</p> <p>(a) shall pay wages at the end of the work or at the time agreed to pay to the worker for hourly, daily, weekly or other part time work, or temporary or piece work;</p> <p>(b) shall not exceed one month than the period agreed with the worker under sub-section (a) to pay wages;</p> <p>(c) shall pay the wages for the permanent work monthly. In making such payment:</p> <p>(i) if workers are not more than 100, wages shall be paid at the end of the period for payment of wage;</p> <p>(ii) If workers are more than 100, it shall be paid no later than five days after the end of the period for payment of wage;</p> <p>(d) shall pay the due wages within two working days from the date of termination, if a worker is terminated;</p> <p>(e) shall pay the wages at the end of the period for payment of wages, if a worker resigns on his own volition by sending prior written notice of resignation;</p> <p>(f) shall pay the due wages to a legal heir within two working days after the decease, if a worker is deceased;</p> <p>(g) shall pay all wages on a working day</p>
<p>Section 5</p>	<p>If an employer encounters difficulties to make payment under sub-section(c) of the Section 4 due to any unexpected condition, including natural disaster, the employer shall submit that which date has been altered for the payment of wages with the consent of the workers to the Department on reasonable ground.</p>
<p>Chapter III Deduction from Wages Section 13</p>	<p>The employer:</p> <p>(a) may deduct from wages, except leaves which are entitled wages under the relevant law and public holidays, for the absent period from work;</p> <p>(b) may deduct expenses which are allowance accommodation and ferry service are arranged by the employer, meal allowance, electricity charges, water service charges and income taxes liable to be paid by worker and cash paid in excess under a mistake, which are not included in the expression of wages under this Law;</p> <p>(c) may deduct advance payment or reimburse or savings for the worker or any contribution under any law demanded by a worker from wages;</p>

	(d) may deduct from the wages of the worker under a decision of a Court or Arbitration Council or Arbitration Body.
Chapter IV Overtime Wages Section 14	The worker has the right to enjoy overtime wages stipulated by the law if he works over time.
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.	
Chapter VII The Duties of the Employee Section 12	<p>The employer:</p> <p>(a) shall not pay wage to the worker less than the minimum wage stipulated under this Law</p> <p>(b) may pay more than the minimum wage stipulated under this Law;</p> <p>(c) shall not 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;</p> <p>(d) shall 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 and partly in property, with prevailing regional price, jointly according to the desire of the worker;</p> <p>(e) in paying minimum wage to the workers working in the agricultural and live stock business, some cash and some property at prevailing regional price may be paid jointly according to local customer desire of the majority of workers or collective agreement. Such payment shall be for any personal use and benefit to the worker and his family and the value shall also be considerable and fair.</p>
Section 13	<p>The employer:</p> <p>(a) shall 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;</p> <p>(b) shall prepare and maintain the lists, schedules, documents and wages of the workers correctly;</p> <p>(c) shall report the lists, schedules and documents prepared and maintained under subsection (b) to the relevant department in accord with the stipulations;</p> <p>(d) shall accept the inspection when summoned by the inspection officer. Moreover, he shall produce the said lists and documents upon asking to submit;</p> <p>(e) shall 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;</p> <p>(f) if the workers cannot work due to sickness, shall give them holiday for medical treatment in accord with the stipulations;</p> <p>(g) 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.</p>
Chapter VIII The Rights of the Workers Relating to the Minimum Wage Section 14	<p>A worker working in any establishment relating to this Law:</p> <p>(a) has the right to obtain the minimum wage stipulated under this Law or, if the employer pay more than the said wage;</p> <p>(b) has the right to continue to enjoy the pay paid more, if the pay received is more than the minimum wage stipulated under this Law,</p>

	<p>before the coming into force of this Law;</p> <p>(c) has the right to enjoy the minimum wage stipulated under this Law, if the minimum wage contained in the employment agreement is less than the minimum wage stipulated under this Law;</p> <p>(d) has the right to enjoy not less than the minimum wage stipulated for each work where he is working when working in two or more works;</p> <p>(e) has the right to enjoy the stipulated minimum wage for the time worked in the part-time job, hourly job;</p> <p>(f) has the right to enjoy a holiday per week with pay in the salary-paid work. If he is employed in such holiday, he shall have the right to obtain over-time fee in accord with the existing law;</p> <p>(g) if working less than the working hours per day stipulated in a daily-waged job is not due to reduced working according to the desire of the worker, or if work has to be paused due to the failure of employer to give job, the full wage shall be paid as if the work is done full-time;</p> <p>(h) has the right to enjoy the stipulated minimum wage without discriminating between man and woman;</p> <p>(i) has the right to enjoy the minimum wage in cash, if he is a worker working in the commercial, production and service business. 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 at prevailing regional price jointly according to the desire of the worker;</p> <p>(j) if he is a worker working in the agricultural and livestock breeding business, the minimum wage may be enjoyed in some cash and some property at prevailing regional price jointly according to local custom or desire of the majority of workers or collective agreement for the worker and his family in accord with the stipulations.</p>
Chapter X Prohibitions and Penalties Section 22	<p>Any employer:</p> <p>(a) shall not fail to pay the workers the minimum wage stipulated under this Law;</p> <p>(b) shall not pay to the workers less than the minimum wages and other benefits which is entitled by the worker under section 14;</p> <p>(c) relating to the accounts, schedules, documents and lists of wage of the workers:</p> <p>(i) shall not make false entry, deceitful recording or false and deceitful reporting;</p> <p>(ii) shall not fail to report to the relevant department in accord with the stipulations;</p> <p>(iii) shall not fail to produce when required by the inspection officer;</p> <p>(d) shall not fail to go and accept inspection when summoned by the inspection officer;</p> <p>(e) shall not obstruct or interfere with the inspection officer who comes and inspects on duty.</p>
Section 24	<p>Any employer:</p> <p>(a) shall not violate any term and condition contained in the minimum wage notification;</p> <p>(b) shall not fail to inform the workers relating to the rates of minimum wage concerning to his workers among the rates of minimum wage stipulated under this Law and announce at the place where the workers are able to see it in the work centre and workplace;</p>
The Leave and Holidays Rules (1951, partially revised in 2018)	
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.	
Chapter (3) Leave Section 23	A worker has the right to take leave with respective wages or with respective salary according to the type of leave and designated period set-up by the law. However, workers are entitled to take earned leave with respective average wages or average salary.
Section 24	Workers have the right to take casual leave, medical leave or maternity leave within the probation period.
Section 25	For days in which a worker is not in the workplace after the end of a period of leave, such days shall not be counted as leave.
Section 26	If there are holidays just before or right after one's leave commences, these days cannot be counted as part of the leave period.
Section 27	Subjecting a worker to relocation, suspension of duty, reduction of salary or termination within their leave period is not allowed.
Chapter (4) Duties and Responsibilities of Worker Section 49	The worker (a) must ask for leave from the employer or the manager or from an authorized person with Form (1) within the normal working hours. (b) must report to the employer or to the manager or to an authorized person when the worker is back in the workplace after taking leave. (c) must inform employer or manager or authorized person, by phone or any other method, if the worker is unable to return to the workplace from their current location by the end of leave due to natural disaster or unforeseen happenings or accident occurring within the leave period.
Chapter (5) Duties and Responsibilities of an Employer Section 50	The employer (a) must provide the worker casual leave, medical leave and maternity leave with respective wages or salary. Moreover, must allow the worker earned leave with respective average wages or average salary. If the employer normally pays the cost of living, then the cost of living must also be included. (b) must provide the worker with earned leave starting from the day of entitlement within 12 months, with respective average wages or with average salary, and also must advance the entitled wage prior to the worker taking leave. (c) must announce the number of entitled earned leave calculations within three months starting from the last day of the 12-month period or entitled earned leave. In this way, workers can take leave by turns (alternatively). Moreover, to fix the eligibility period within which workers can take earned leave. (d) if the worker resigns or is terminated or in case of death, has to pay the respective wages/salary within two business/working days starting from the date of incidence. (e) has to pay the eligible wage/salary for earned leave to his/her official representative (if the worker is deceased). (f) has to pay for the respective earned leave period if there is a temporary or permanent shutdown. has to allow eligible earned leave if the nature of work is less than twelve months. (g) is not allowed to suspend, to reduce the salary, to relocate or to terminate a worker due to the worker taking maternity leave or medical leave. (h) has to fill up Form (1), (2), (3), (4), (5) and (6) according to the law.

	<p>These forms shall be easily accessible from the Inspector. The employer must maintain these documents for up to twelve months' period.</p> <p>(i) has to record the leave taken in Form (7) and submit to the Inspector not later than every seventh day of each month.</p> <p>(j) wants the worker to work on a gazette holiday, the employer must receive consent from the worker. The employer must submit Form (8) to the Inspector for approval.</p>
Public Health Law (1972)	
Chapter 2 Prevention of Public Health Objectives	<p>To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. This law focuses as follows:</p> <p>The project owner has to cooperate with the authorized person or organization in line with the section 3 and 5 of said law.</p> <p>The project proponent has to abide by any instruction or stipulation for public health under the section 3 of said law.</p> <p>The project proponent has to allow any inspection, anytime, anywhere if it is needed under the section 5 of said law.</p>
Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011)	
Chapter 2 Prevention and Response Section 3	<p>(a) In order to prevent the outbreak of communicable diseases, the Department of Health shall implement the following activities systematically under the guidance of the Ministry of Health:</p> <p>(i) immunization of children by injection or orally;</p> <p>(ii) immunization of those who have attained eligible target group including adult by injection or orally, when necessary;</p> <p>(iii) carrying out health education activities relating to communicable disease;</p> <p>(iv) carrying out the activities of surveillance, prevention and control concerning communicable disease;</p> <p>(v) carrying out the activities of medical examination for prevention of communicable disease in cross-border entrance and exit of the country, international airport, seaport, other necessary airport, seaport and bus terminal;</p> <p>(vi) prohibition or restriction of movements at home, hotel, motel and guest house;</p> <p>(vii) isolation of infected person of communicable disease or suspect of being infected there with;</p> <p>(viii) carrying out the activities of spraying, immunization by injection or orally and environmental sanitation necessary for prevention and control according to communicable diseases;</p> <p>(ix) giving advice to and coordinating with relevant Government departments, organizations and non-governmental organizations for construction of healthy housing, obtaining safe drinking water and fresh water for use, proper waste disposal in order to prevent occurrence of communicable disease for workers who are carrying out activities of social and economic development;</p> <p>(x) carrying out other functions prescribed by the Ministry of Health, from time to time.</p>
Section 4	The public shall comply with the measures undertaken by the Ministry of Health and the Department of Health under section 3 in respect of prevention of the occurrence and spread of communicable disease and control thereof."
Section 9	Sub-sections (d) and (e) contained in section 11 of the Prevention and

	Control of Communicable Diseases Law shall be substituted as follows: "(d) other necessary investigation; (e) prohibition of the right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."
Section 11	After sub-section (e) of section 14 of the Prevention and Control of Communicable Diseases Law, sub-section (f) shall be inserted as follows: "(f) right of movement of the vehicle carrying animal or animal product suspected of having epidemic disease."
Occupational Safety and Health Law (2019)	
Purpose:	To effectively implement measures related to safety and health in every industry and to set occupational safety and health standards;
Section-26 Sub-section (e)	The project proponent has to 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.
Section-26 Sub-section (1)	The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards.
Section-30 Sub-section (a)	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.
Section-30 Sub-section (d)	The worker shall proper and systematic use any equipment and tools, machines, any parts of the machines, vehicles, electricity and other substances being used at the workplace.
Section-30 Sub-section (e)	The worker shall take reasonable care for the safety and health of himself/ herself and of other persons who may be affected by his/ her acts or omissions at work.
Natural Disaster Management Law (2013)	
Chapter II Objectives Section 3	The objectives of this Law are as follows: (a) to implement natural disaster management programmes systematically and expeditiously in order to reduce disaster risks; (b) to form the National Committee and Local Bodies in order to implement natural disaster management programmes systematically and expeditiously; (c) 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; (d) to conserve and restore the environment affected by natural disasters; (e) to provide health, education, social and livelihood programmes in order to bring about better living conditions for victims.
Chapter VI Natural Disaster Management Section 13	The department, organization or person that has been assigned responsibility under this Law: (a) shall undertake the following functions after laying down the plan in accord with the natural disaster management plans in order to reduce damage and losses that are likely to be caused by natural disaster; (i) preparatory and preventive measures for natural disaster risk reduction in pre-disaster period; (ii) emergency responses including search and rescue during natural disaster; (iii) rehabilitation and reconstruction activities for improving better living standard in post disaster period and conservation of the environment that

	<p>has been affected by natural disaster;</p> <p>(b) shall give priority and protect infants, the elderly, the disabled and women (especially pregnant women or mothers and suckling mother) in carrying out the functions contained in sub-section (a);</p> <p>(c) shall refrain from the act that causes injuring human dignity in supporting the victims.</p>
Chapter VIII Offence and Penalties Section 25	Whoever, if the natural disaster causes or is likely to be caused by any negligent act without examination or by willful action which is known that a disaster is likely to strike, shall be punished with imprisonment for a term not exceeding three years and may also be liable to fine.
Section 26	Whoever interferes, prevents, prohibits, assaults or coerces any natural disaster management to the department, organization or person assigned by this Law shall, on conviction, be punished with imprisonment for a term not exceeding two years or with fine or with both.
Section 27	Whoever misinforms about the natural disaster for the purpose of dread to the public shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.
Section 28	<p>Any department, organization or person assigned by this Law commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:</p> <p>(a) falsification of data on damage and losses caused by natural disasters dishonestly;</p> <p>(b) willful failure to perform assigned responsibility.</p>
Section 29	Whoever violates any prohibition contained in rules, notifications and orders issued under this Law shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both.
Section 30	<p>Whoever commits any of the following acts or omissions shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both:</p> <p>(a) willful failure to comply with any of the directives of the department, organization or person assigned by this Law to perform any of the natural disaster management;</p> <p>(b) entering into the area or building affected by natural disaster without permission;</p> <p>(c) utilizing, trading, preventing or destroying food, relief items and rehabilitation materials provided for victims dishonestly;</p> <p>(d) making a false application for food, relief items and rehabilitation materials or cash assistance to the department, organization or person assigned by this Law as it is affected by natural disaster.</p>
Section 31	Whoever fails willfully to comply with the direction of remove or evacuation from an area or building at risk natural disaster to the public in such place for the purpose of reduction of damage and losses when the natural disaster strikes or it will be a natural disaster and for the purpose of no obstruction to the prevention and reduction activities of the natural disaster shall, on conviction, be punished with imprisonment for a term not exceeding one month or with fine or with both.
Myanmar Engineering Council Law, 2013	
Chapter 2 Objectives Section 3	<p>The Objectives of this law are as follows:</p> <p>(a) to develop the dignity, ethical principles and ability of Myanmar citizen engineers, graduate technologists and technicians who are working in the engineering services</p> <p>(b) to explore beneficial, useful and good methods to research and</p>

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	<p>develop the State's natural resources and human resources with the least environmental impact by a combination of engineering technology and information technology;</p> <p>(c) to guide, control, maintain and take necessary action with regard to specified standards and norms relating to specified subjects, systematic methods, safety and ethical principles and duties in teaching engineering subjects and in technological research and services;</p> <p>(d) to perform engineering and technological activities of the State and tasks assigned by the relevant ministry or organization from time to time;</p>
Chapter 13 Prohibitions and Penalties Section 37	No one shall perform any engineering work and technological work which are specified as being dangerous to the public by a rule enacted under this law without having received a registration certificate issued by the council, except for engineers appointed in a government department or an organization in the performance of their duties.
Section 37	No engineer, graduate technologist and technician shall use, together with his name, a title which is not compatible with his status.
Section 38	<p>No registered engineer, graduate technologist and technician-</p> <p>(a) shall transfer his registration certificate to anyone or allow it to be used by anyone;</p> <p>(b) shall fail to return his registration certificate to the council within 30 days from the day on which a decision is passed, or an administrative action is taken, under this law to cancel the registration certificate.</p>
Section 39	Anyone convicted of having violated the prohibition contained in section 37 shall be punished with imprisonment for not more than 2 years or with a fine or with both.
Section 40	any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in section 38 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 41	Any registered engineer, graduate technologist or technician convicted of having violated the prohibition contained in 39 shall be punished with imprisonment of not more than 1 year or with a fine or with both.
Section 42	Any registered engineer, graduate technologist or technician convicted of having violated any prohibition under this law shall be punished with imprisonment of not more than 6 months or with a fine or with both.
Myanmar Fire Brigade Law, 2015	
Chapter II Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to prevent destruction of State-owned property, private property, cultural heritage and the lives and property of the public by fire and other natural disaster;</p> <p>(b) to organize the Fire brigade systematically and to train members of the fire brigade;</p> <p>(c) to carry out extinguishing fire, prevention and search and rescue when fire, other natural disaster, epidemic disease or any kind of sudden disaster occurs;</p> <p>(d) to educate, organize and incite extensively so as to achieve public cooperation when any disaster occurs;</p> <p>(e) to participate and help, if necessary, for the State safety, peace of the public and the rule of law</p>
Chapter VIII Activities for Fire Safety Section 15	<p>The different levels of Fire Safety Body shall:</p> <p>(a) perform the activities for fire safety in accord with the procedures laid down by the Central Body;</p> <p>(b) organize and educate to obtain the cooperation of the public in the</p>

	<p>activities for fire safety;</p> <p>(c) supervise as may be necessary the participation of all the relevant members of fire brigade in accord with the work programmes laid down by the Central Body when fire hazard, other natural disaster, epidemic disease or sudden disaster occurs;</p> <p>(d) appoint fire safety warning groups in coordination with the relevant administrative organizations.</p>
Section 16	<p>The person-in-charge of the Township Fire Services Department shall:</p> <p>(a) issue, from time to time, the directives on fire safety to be abided by the residents in the city, ward or village - tract;</p> <p>(b) inspect or cause to inspect in accord with the stipulations whether the residents in the city, ward or village - tract abide by the directives issued under sub-section (a) and arrange to enable warning or taking action, as may be necessary, against those who do not abide by.</p>
Chapter XI Prohibitions Section 24	No person shall fail to abide by the directives of fire safety issued under section 16 by the head of the relevant Township Department of Fire Services.
Section 25	<p>The owner or manager of the factory, workshop, bus terminal, airport, port, hotel, motel, lodgings, condominium, market, department, organization or business exposed to fire hazard shall, in accord with the directive of the Department of Fire Services:</p> <p>(a) not fail to form the Reserve Fire Brigade;</p> <p>(b) not fail to provide fire safety equipment.</p>
Section 26	No person shall, knowing that there is no outbreak of fire, report fraudulently the outbreak of fire to the Fire brigade.
Section 25	No person shall, without cause, obstruct, block, disturb, or attack the members of the fire brigade and vehicles which departed to extinguish the fire and direct by any means to the place which is not related to the outbreak of fire.
Protection and Preservation of Cultural Heritage, 1998	
Chapter II Objectives Section 3	<p>The objectives of this Law are as follows:</p> <p>(a) to implement the protection and preservation policy with respect to perpetuation of cultural heritage that has existed for many years;</p> <p>(b) to protect and preserve the cultural heritage regions and the cultural heritage therein so as not to deteriorate due to natural disaster or man-made destruction;</p> <p>(c) to uplift hereditary pride and to cause dynamism of patriotic spirit of citizens by protecting and preserving the cultural heritage regions.</p> <p>(d) to promote public awareness and will as to the high value of the protection and preservation of the cultural heritage regions;</p> <p>(e) to protect the cultural heritage regions from destruction;</p> <p>(f) to carry out protection and preservation of the cultural heritage regions in conformity with the International Convention approved by the State.</p>
Chapter VI Applying for Prior Permission, Scrutinizing and Issuing Section 13	<p>A person desirous of carrying out one of the following shall abide by the provisions of other existing laws and also apply to the Department in accordance with stipulations to obtain prior permission under this Law :</p> <p>(a) within the ancient monumental zone or the ancient site zone:</p> <p>(1) constructing or extending a building;</p> <p>(2) renovating the ancient monument or extending the boundary of its enclosure;</p> <p>(b) within the protected and preserved zone, constructing, extending, renovating a hotel, motel, guesthouse, lodging house or industrial</p>

	<p>building or extending the boundary of its enclosure;</p> <p>(c) within the cultural heritage region</p> <p>(1) carrying out the renovation and maintenance work of the ancient monument without altering the original ancient form and structure or original ancient workmanship;</p> <p>(2) carrying out archaeological excavations;</p> <p>(3) building road, constructing bridge, irrigation canal and embankment or extending the same.</p>
Chapter VII Prohibitions Section 22	No person shall construct a building which is not in conformity with the conditions prescribed region wise by the Ministry of Culture in the cultural heritage region.
The Protection and Preservation of Ancient Monument Law (2015)	
Purpose	To ensure the protection of the ancient monument and information about it if it was in the project area. This law focuses as follows;
Section 12	-The project proponent has to report to the village-tract or ward administrators if the project proponent will find any ancient monument under the ground or on the ground or under the water.
Section 15	The project proponent has to obtain the prior permission of the Department of Ancient Research Museum if the project area is in the prescribed area of the Ancient monument.
Sub-section (f) of section 20	The project proponent has to obtain the prior permission, by written, of Department of Ancient Research and National Museum if the project proponent disposes of the chemical and solid waste in the Ancient Monument.
The Conservation of Water Resources and Rivers Law, 2016	
Chapter II Aims Section 3	<p>The aims of this Law are as follows:</p> <p>(a) to conserve and protect the water resources and rivers system for beneficial utilization by the public;</p> <p>(b) to smooth and safety waterways navigation along rivers and creeks;</p> <p>(c) to contribute to the development of State economy through improving water resources and river system;</p> <p>(d) to protect environmental impact.</p>
Chapter V Prohibitions Section 8	<p>No person shall:</p> <p>(a) carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks.</p> <p>(b) cause the wastage of water resources wilfully.</p>
Section 11	<p>No person shall:</p> <p>(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.</p> <p>(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.</p> <p>(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.</p>
Section 11	11. No person shall:

	<p>(a) dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk.</p> <p>(b) catch aquatic creatures within river-creek boundary, bank boundary or waterfront boundary with poisonous materials or explosives.</p> <p>(c) dispose of disposal soil and other materials from panning for gold, gold mineral dredging or resource production in the river and creek, into the river and creek or into the water outlet gully which can flow into the river and creek.</p>
Section 19	No one shall dispose of any substance into the river-creek that may cause damage to waterway or change of watercourse from the bank or vessel which is plying, vessel which has berthed, anchored, stranded or sunk.
Section 22	No one shall, without the permission of the directorate, pile sand, shingle and other heavy materials for business purposes in the bank area and waterfront area.
Chapter VI Penalties Section 29	Whoever attempts or conspires or abets in the commission of an offence under this Law shall be punished with the punishment provided for such offence in this Law.
Chapter VII Miscellaneous Section 30	Any government department and organization or any person desirous of constructing drainage, utilizing river water intake, constructing bridges spanning rivers, connecting underground pipe, connecting underground electric power cable, connecting underground telecom cable or digging in rivers and creeks, bank boundary and waterfront boundary, under the requirement of work, shall in order not to adversely affect the water resources and rivers and creeks, carry out only after obtaining the approval of the Ministry of Transport.
Underground Water Act (21st June, 1930)	
<p>The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Burma. This act prohibits sinking of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub-divisional officer had power to close a license tube after exercising jurisdiction over the local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue.</p>	
Section 3	<p>No person shall sink a tube for the purpose of obtaining underground water except under and in accordance with the terms of a licence granted by the water officer.</p> <p>Every person owning a tube which was in existence before the extension of this Act to the local area concerned shall apply to the water officer for a licence for the said tube, and such licence shall be granted free of charge.</p>
Section 5	Every person obtaining or attempting to obtain underground water shall supply the water officer with such information as the President of the Union may by rule prescribe.
Section 6	<p>The President of the Union may make rules 1-</p> <p>(a) prescribing the conditions subject to which licences may be granted by the water officer under section 3;</p> <p>(b) prescribing the form of and the procedure for granting such licences and the fees payable for the issue thereof;</p> <p>(c) prescribing the information to be supplied to the water officer under section 5.</p>

The Electricity Law (2014)	
<p>In 2014, the new Electricity Law, a comprehensive piece of legislation covering licensing, a new regulatory commission, standards, inspection, tariff, and restrictions, replaced the Electricity Law of 1984. 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.</p>	
The Motor Vehicles Law, 2015	
Chapter 2 Objectives Section 3	<p>The main objectives of this law are as follows:</p> <p>(a) For the safe driving of motor vehicles in public areas through registration according to official rules and regulations.</p> <p>(b) To provide driving licenses for driving particular types of motorized vehicles after qualification checks.</p> <p>(c) For the easy flow of road users and for the protection against road risks and vehicle perils.</p> <p>(d) To avoid traffic congestion and to use high technology transportation systems efficiently in order to implement protection against road risks and vehicle perils.</p> <p>(e) To reduce environmental pollution caused by motor vehicles.</p>
Chapter (3) Motor vehicle registration Section 4	Every owner of a motor vehicle must register the vehicle with the registration officer.
Section 5	The owner of a motor vehicle must maintain the vehicle in a safe condition equal to the standard condition.
Section 6	The registration officer may not register the motor vehicle if the vehicle is disqualified for failing to comply with safety standards or the engine is broken or if the applicant has failed to disclose previous facts about former registrations of the vehicle.
Section 8	<p>(a) The owner of the vehicle can request the registration officer to issue a temporary registration according to the regulations.</p> <p>(b) The temporary registration according to this section cannot be valid for more than three months. And this law does not allow temporary registration more than one time.</p>
Section 10	The owner of a vehicle must notify the registration officer if the main parts of his/her vehicle needs to be changed or repaired.
Chapter (9) Prohibitions Section 45	<p>No one is allowed to drive, request someone to drive, or park, motor vehicles in public places under the following conditions:</p> <p>(a) The motor vehicle is not registered.</p> <p>(b) The registration has been suspended, revoked or expired; the registration card is not displayed.</p> <p>(c) The registration card has been revoked or is expired.</p>
Section 46	No one is allowed to drive, or allow to drive, motor vehicles in public places without risk insurance for others. This prohibition does not extend to passengers.
Section 47	<p>(a) No one is allowed to drive a motor vehicle in public places without carrying the driving license with him/her.</p> <p>(b) No one is allowed to drive a motor vehicle in public places without a driving license.</p>

	(c) The owner of, and the person responsible for, a motor vehicle are not allowed to give permission to someone without a driving license to drive in public places.
Section 50	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.
Section 50	No one is allowed: (a) To operate a business of manufacturing, selling or equipping motor vehicles without a business license. (b) To operate a business of maintaining or repairing motor vehicles without a business license.
The Forest Law, 3rd November, 1992	
Chapter II Basic Principles Section 3	This Law shall be implemented in accordance with the following basic principles: - (a) to implement the forestry policy of the Government; (b) to implement the environmental conservation policy of the Government; (c) to promote the sector of public co-operation in implementing the forestry policy and the environmental conservation policy of the Government; (d) to develop the economy of the State, to contribute towards the food, clothing and shelter needs of the public and for perpetual enjoyment of benefits by conservation and protection of forest; (e) to carry out in accordance with international agreements relating to conservation of forests and conservation of environment; (f) to prevent the dangers of destruction of forest and bio-diversity, outbreak of fires, infestation of insects and occurrence of plant disease; (g) to carry out simultaneously conservation of natural forests and establishment of forest plantations; (h) to contribute towards the fuel requirement of the country.
Chapter III Constitution of Reserved Forest and Declaration of Protected Public Forest Section 8	(a) A standing teak tree wherever situated in the State is owned by the State; (b) The Minister may declare, alter or cancel according to the locality the species of reserved trees which are to be conserved by the Forest Department.
Chapter V Establishment of Forest Plantation Section 16	A person having obtained the right to extract forest produce on a commercial scale who has the responsibility of establishing forest plantations or carrying out natural regeneration under a permit for the State shall carry out the same at his own expense and in accordance with stipulation.
Chapter VI Permission for Extraction of Forest Produce Section 16	A person who has obtained permission for extraction of forest produce shall: - (a) abide by the conditions contained in the permit; (b) abide by the orders, directives, prohibitions and restrictions issued by the Forest Department in accordance with this Law; (c) pay the royalties, security deposits and advances due; (d) affix the mark after measuring in the manner prescribed or affix the property- mark which has been registered.
Chapter VII Removal of Forest Produce	a) Whoever is desirous of moving any forest produce from one township to another within the country shall apply for a removal pass from the

Section 23	Forest Officer empowered by the Director- General for this purpose. (b) The provision of sub-section (a) shall not apply to the following cases: - (i) moving forest produce within the area permitted for extraction thereof; (ii) moving minor forest produce not exceeding the prescribed quantity and not on a commercial scale; (iii) moving from one township to another in a City Development area.
Chapter IX Establishment of Wood-based Industry Section 30	A private entrepreneur who is desirous of establishing a sawpit, sawmill, tongue-and-groove mill, plywood mill, veneer mill or a wood-based industry with the exception of wood-based cottage industries and furniture industries has the right to establish the same only after obtaining a permit from the Forest Officer empowered for this purpose.
Chapter X Search, Arrest and Administrative Action Section 34	If a person who has obtained permission to extract forest produce or his agent or his labourer violates any condition of the permit, the person granting permission to extract forest produce may pass any of the following orders: - (a) causing the suspension of the whole or any portion of the work carried out under the permit; (b) causing payment of the prescribed penalty to be made and permitting the work to be carried on; (c) cancelling the permit; (d) cancelling the permit and confiscating the security deposit and advances; if it is considered necessary causing payment of the prescribed penalty.
Chapter XII Offences and Penalties Section 40	Whoever commits any of the following acts shall, on conviction, be punished with fine which may extend to kyats 5,000 or with imprisonment for a term which may extend to 6 months or with both: (a) trespassing and encroaching in a reserved forest; (b) pasturing domestic animals or permitting domestic animals to trespass in a reserved forest; (c) breaking up any land, clearing, digging or causing damage to the original condition of the land without a permit in a reserved forest; (d) causing damage to a water-course, poisoning the water, using chemicals or explosives in the water in a reserved forest; (e) catching animals, hunting or fishing in a reserved forest; (f) kindling, keeping and carrying any fire or leaving any fire burning which may set fire to the forests in a reserved forest; (g) moving forest produce without submitting to examination at the revenue station; (h) violating any provision of the rule, procedure, order, directive or notification issued under this Law
National Land Use Policy, 2014 October	
Chapter I Basic Principles of the National Land Use Policy Section 8	In terms of the National Land Use Policy: (a) It shall use the land resources of the State sustainably and systematically by conserving and protecting them for the interest of all peoples of the State; (b) It shall enact the National Land Law which harmonize the existing laws relating to use of land resources and land tenures in the whole country including rural and urban areas and which may be implemented systematically; (c) It shall cause to decide the matters relating to land disputes arisen

	between the land users and the stakeholders transparently and truly in accord with the National Land Law;
Section 8	<p>In implementing the continued entry of the foreign direct investments, sustainable economic development, effectiveness of the environmental conservation and protection, social harmonization, firmness of land tenures, immovable property right and settlement of land dispute:</p> <p>(a) It shall increase responsible undertaking and respect the rule of law;</p> <p>(b) It shall strengthen the clean governance system by carrying out land use management, land tenure management in accord with law systematically and truly;</p> <p>(c) It shall establish modernized systems to enable to have access to correct information relating to land use management and land tenure management;</p> <p>(d) It shall establish the land dispute settlement mechanism which is easily implementable and impartial;</p> <p>(e) It shall arrange and carry out coordination process with the stakeholders transparently.</p>
Chapter II The Situation of the Existing Land Management Mechanism Section 12	The State has arranged and carried out to expand agricultural land use by the State-owned organizations, cooperative societies, associations, joint ventures, other organizations which acquire agricultural land for businesses and individual agriculturalists after forming the Vacant, Fallow and Virgin Lands Management Central Committee under the Notification 44/91 dated 13 th November, 1991.
The Protection of Wildlife and Conservation of Natural Areas Law ,1994 (Amended in 2018)	
Chapter II Objectives Section 3	<p>The objectives of this Law are as follows: -</p> <p>(a) to implement the Government policy for wildlife protection;</p> <p>(b) to implement the Government policy for natural areas conservation;</p> <p>(c) to carry out in accordance with the International Conventions acceded by the State in respect of the protection and conservation of wildlife, ecosystems and migratory birds;</p> <p>(d) to protect endangered species of wildlife and their natural habitats;</p> <p>(e) to contribute for the development of research on natural science;</p> <p>(f) to protect wildlife by the establishment of zoological gardens and botanical gardens.</p>
Chapter V Protected Wildlife Section 15	<p>The Director General shall, with the approval of the Minister:</p> <p>(a) determine and declare endangered species of wild animal which are to be protected according to the following categories:</p> <p>(i) completely protected species of wild animals;</p> <p>(ii) normally protected species of wild animals;</p> <p>(iii) seasonally protected species of wild animals;</p> <p>(b) determine and declare the endangered species of wild plants and their nature habitats thereof;</p> <p>(c) lay down and carry out measures for the preservation of protected wildlife species;</p> <p>(d) co-ordinate with the relevant department or organization if the wildlife which are to be determined for protection are under the administration of another Government department or Government organization.</p>
Chapter X Appeal	A person dissatisfied with an administrative order passed by a Forest Officer may file an appeal to the Director General within 30 days from the date of such order.

Section 33	
Chapter XI Offences And Penalties Section 35	Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 3 years or with fine which may extend to kyats 10,000 or with both: - hunting without a licence; violation of any condition of the hunting licence; raising without permission, for commercial purpose normally protected wild animals and seasonally protected wild animals; causing water and air pollution, causing damage to a water-course or putting poison in the water in a natural area; possessing or disposing of pollutants or mineral pollutants in a natural area; establishing and operating a zoological garden or a botanical garden without a licence.
Section 36	Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 5 years or with fine which may extend to kyats 30,000 or with both: - (a) killing, hunting or wounding a normally protected wild animal or seasonally protected wild animal without permission, possessing, selling, transporting or transferring such wild animal or any part thereof without permission; (b) extracting, collecting or destroying in any manner any kind of protected wild plants within the prescribed area without permission; (c) destroying ecosystem or any natural state in the natural area; (d) altering, removing, destroying or obliterating without permission. any boundary mark of a natural area or any boundary mark of a zoological garden or botanical garden administered by the Government or in which the Government has subscribed share capital.
Section 37	Whoever commits any of the following acts shall, on conviction be punished with imprisonment for a term which may extend to 7 years or with fine which may extend to kyats 50,000 or with both: - (a) killing, hunting or wounding a completely protected wild animal without permission, possessing, selling, transporting or transferring such wild animal or any part thereof without permission; (b) exporting without the recommendation of the Director General a completely protected wild animal or a protected wild plant or any part thereof.
Section 38	The provisions of section 36 sub-section (a) or section 37 sub-section (a) shall not apply to: - the possessing as a souvenir or wearing as a traditional custom of any part of normally protected wild animal or a seasonally protected wild animal; the possessing or wearing with a certificate of registration issued under section 27 subsection (b) of any part of a completely protected wild animal; the possessing, use, sale, transport or transfer of a drug prepared from a part of a protected wild animal.

4.2. AUTHORIZED INSTITUTIONS AND RECOMMENDATIONS

The Ministry of Environmental Conservation and Forestry (MOECF) was reformed as the Ministry of Natural Resources and Environmental Conservation (MONREC) on 30th March, 2016 in order to undertake both environmental and natural resources conservation and management more effectively. Under Section 3 of the Environmental Impact Assessment Procedure (2015), pursuant to section 21 of the law and Articles 52, 53 and 55 of the Environmental Conservation Rules, all

projects and project expansions undertaken by any organization, which may cause impact on environmental quality that, are required to obtain prior permission. This is to be in accordance with section 21 of the Environmental Conservation Law, and Article 62 of the Environmental Conservation Rules, having the potential to cause adverse impacts, that are required to undertake IEE or EIA or to develop an EMP, and to obtain an Environmental Compliance Certificate (ECC) in accordance with this EIA procedure.

4.3. INTERNATIONAL GUIDELINES

Organizations's Guidelines, World Bank Safeguard Policies, IFC Performance Standards and National Environmental Quality (Emission) Guidelines (2015) are referred for EMP of the proposed factory project.

4.4. INTERNATIONAL AND REGIONAL TREATIES

Myanmar has signed several international treaties related to the environment. However, the contents of those treaties still need to be incorporated into domestic law. Presents a list of the conventions signed by Myanmar to date that are potentially relevant to the Project.

Table 4-2 International and Regional Treaties to Which Myanmar is a Party

Theme	Convention/treaty/agreement	Status*	Focal point
Climate	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification (UNCCD), Paris, 1994	Accession (1997)	MONREC/FD
Air and climate change	United Nations Framework Convention on Climate Change (UNFCCC), New York, 1992	Ratification	MONREC/ ECD, MOT/DMH
	Kyoto Protocol to the Convention on Climate Change, Kyoto, 1997	Accession (2003)	MONREC/ ECD
	Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	Ratification (1993)	MONREC/ ECD
	Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987 + amendments	Ratification (1993, 2012 for Recent amendments)	MONREC/ ECD
	ASEAN Agreement on Transboundary Haze Pollution, Kuala Lumpur, 2002	Ratification (2003)	MONREC
	Paris Agreement to combat climate change and adapt to its effects, 2016	Ratification (2017)	MONREC
Pollution control	Stockholm Convention on Persistent Organic Pollutants (POPs), Stockholm, 2001	Accession (2004)	MONREC/ ECD
	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Basel, 1989	Accession (2015)	MONREC/ ECD

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Theme	Convention/treaty/agreement	Status*	Focal point
	International Convention for the Prevention of Pollution from Ships (MARPOL), London, 1973 + amendments in 1978	Accession 4/8/1988	MOT
Biodiversity and natural resources	Convention on Biological Diversity (CBD), Rio de Janeiro, 1992	Ratification (1994)	MONREC/ ECD
	Cartagena Protocol on Biosafety to the CBD, Cartagena, 2000	Ratification (2008)	MONREC, MOAI
	Nagoya Protocol on Access and Benefit Sharing (ABS) to the CBD, Nagoya, 2010	Accession (2014)	
	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),	Accession (1997)	MONREC/FD
Theme	Convention/treaty/agreement	Status*	Focal point
	Washington, D.C., 1973 + amendments (1979 Bonn, Germany)		
	Agreement on Establishment of ASEAN Regional Centre for Biodiversity	Ratification (2009)	MONREC/ FD
	ASEAN Agreement on the Conservation of Nature and Nature Resources, Kuala Lumpur, 1985	Signatory (1997)	MOFA
	Ramsar Convention on Wetlands of International Importance especially as Water-fowl Habitat, 1971 + amendments in 1982 and 1987	Accession (2004)	MONREC/ FD
	MRC Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin – April 1995	Became Dialog Partner with MRC in 1996	Directorate of Water Resources and Improvement of River Systems (DWIR) Ministry of Transport
	Agreement between International Union for Conservation of Nature (IUCN), and the government of the Republic of the Union of Myanmar to establish an IUCN Office in Myanmar. This laid the foundation for future collaboration on addressing challenges and maximizing opportunities related to biodiversity conservation and sustainable development in the country.	31 March 2016 Host Country Agreement (HCA) signed	Forest Department, MONREC

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Theme	Convention/treaty/agreement	Status*	Focal point
	Mangroves for the Future (MFF) – MFF was founded on the vision, "Healthy coastal ecosystems for a more prosperous and secure future for coastal communities." The vision was supported by a mission statement, "To promote healthy coastal ecosystems through a partnership-based, people focused and policy relevant approach that builds and applies knowledge, empowers communities and other stakeholders, enhances governance, secures livelihoods, and increases resilience to natural hazards and climate change." https://www.mangrovesforthefuture.org/what-we-do/focus-areas-and-objectives/we-do/focus-areas-and-objectives/	In 2014, Myanmar joined as the 11th member country.	National Coordinating Body (NCB), which is chaired by the Director General of the Forest Department.
Cultural heritage	The Convention for the Protection of the World Culture and Natural Heritage, Paris, 1972	Acceptance (1994)	MOC
	Declaration on ASEAN Heritage Parks	Signatory (2003)	MONREC/ FD
	Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970	Ratified	National Cultural Central Committee
	Convention for the Safeguarding of the Intangible Cultural Heritage, 2003	Ratified	National Cultural Central Committee
<p>*) All of the terms (Ratification, Accession, Approval and Acceptance) signify the consent of a state to be bound by a treaty and consequently their legal implications are the same. All countries that have ratified, acceded to, approved or accepted a treaty are therefore Parties to it and legally bound by it. (The primary distinction is only between ratification and accession, as only states which have signed a treaty when it was open for signature, can proceed to ratify it. Afterwards, states which have not signed a treaty during the time when it is open for signature can only accede to it. The terms "acceptance" and "approval" are of more recent origin and apply under the same conditions as those that apply to ratification. The uses of these terms have to do with the diversity of legal systems.)</p>			

4.5. COMMITMENT OF LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD.

Project proponent shall be responsible for the preservation of the environment at and around the area of project site. In addition to this, it shall carry out as per instructions made by Ministry of Natural Resources and Environmental Conservation (MONREC) in which to conduct an IEE process and an EMP which describe the measure to be taken for preventing, mitigation and monitoring significant environment impacts resulting from the implementation and operation of proposed project or business or activity has to be prepared and submitted and to perform activities in accordance with this IEE and be abided by the environment policy, Environmental Conservation Law and other environmental related rules and procedures. Project proponent shall be responsible for the environmental assessment of factory development as follows:

- To set up welfare plan such as staff medical checkup, training program and Public talk for getting knowledge, risk prevention, bonus and social security services.

- To promote Corporate Social Responsibility- (CSR) with 2% of the net profit for development of safe, economic and social environment
- To carry out fire safety assessment and ensure adequate and appropriate fire safety measures for employees
- To carry out disposing wastes according to Yangon City Development Committee regulations, protect, and preserve the project environment from pollution of air, water and land by following laws and guidelines lay down by MONREC.

CHAPTER 5 SURROUNDING ENVIRONMENT

The purpose of this Chapter is to predict how environmental and socio-economic conditions will affect because of the implementation of the proposed Project. This requires a sound understanding of the baseline conditions at the Project Site, which established through desktop study research, site surveys, primary data collection and projections for future developments. Findings provide the current and future characteristics of the Project Site and the value and vulnerability of the key environmental and socio-economic resources and receptors. The following sections provide a description of the environmental and socio-economic aspects of the Project.

5.1. METHODOLOGY FOR DATA COLLECTION AND ANALYSIS

The followings are methodologies used for Environmental Management Plan (EMP) for this IEE report preparation;

- Onsite Measurements and Analysis – Baseline parameters such as air quality and noise quality of the existing project site during the operation phase were measured onsite. The analyzed results are mentioned in this chapter.
- Secondary data collection of proposed project site area – Socio economic condition, physical/biological environment, and weather data are collected from official township data of Dagon Myo Thit (Seikkan) Township, Yangon Region.

5.2. ENVIRONMENTAL BASELINE STUDY

The field observation for determining the environmental baseline of the proposed project area was undertaken during operation period. The survey team consists of the senior consultant and environmental quality team. The baseline data collected regarding the environmental condition of the project area was conducted in the following section. The environmental setting around the project site and monitoring location point is shown in Table 5-1.

Table 5-1 Environmental Setting around the Proposed Project Site

Particulars	Detail
Coordinate Point	16°59'42.38"N and 96° 4'56.17"E
Climate Conditions (Department of Meteorology and Hydrology - DMH)	Annual Mean Maximum Temperature: (42) °C Annual Mean Minimum Temperature: (16) °C Annual Rainfall: 106.3 inches
Wind Speed	3.05 m/s
Present land use at the proposed site	Industrial Land Use Type
Nearest Road	No.2 Main Road (4.17 km) far from project site
Nearest Water bodies	Bago River (4 Kilometer) distance from project site
Forest Area	No Exist
Wetlands	No Exist
Protective Area	No Exist

5.2.1. Light

Activities of the workers in the sewn timber factory are highly dependent on the quality of light. Therefore, the consultant conducted the light measurement in the sewn timber factory is presented. The illustrates the recommended illumination and limiting glare index applicable to typical works (fairly severe to very severe tasks) in sewn timber industry is provided in Table 5-2.

Appropriate lighting is the need for every department, irrespective to the task being handled. Although, there are some areas where focus on maintaining proper illumination is very crucial in a sewn timber factory, like the inspection points (on-floor and in stores), sampling, and the finishing section, as these areas are crucial for the quality of the production. The tasks involved in these areas require high levels of worker focus and accurate lighting to ensure lower errors and defects passing on to the next stage.

However, according to the result of light measurement at operation area (inside the production sector) is in normal condition and at the acceptable level of standard.

Table 5-2 Recommended illumination and limiting glare index based on IES Code, 1968

Visual test	Illumination (lux)	Glare index
Casual seeing	100	28
Rough task with large detail	200	25-28
Ordinary task medium detail	400	25
Fairly severe task, small detail (e.g. drawing office, sewing)	600	19-22
Severe, prolonged task, very small detail (e.g. fine assembly, hand tailoring)	900	16-22
Very severe, prolonged task, very small detail (e.g. gem cutting, hosiery mending, gauging very small parts)	1,300 -2,000	13-16

Source: Koenigsberger, et al. 1975



Figure 5-1 Light Quantity Measurement Photo

Table 5-3 Result of Light Measurement in LP (Myanmar) Industrial Manufacturing Co., Ltd.

No.	Location	Measure value (Lux)	Standard*
1	Sewing Area	1194	400

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2	Trimming Area	1663	1000
3	Joint Lumber Sotting	1440	600
4	Planing Section	1434	900-1500
5	Warehouse	784	600

* Lighting standards and codes usually provide recommended illuminance ratios between the task area and its surroundings (EN 12464-1 2002) (CIBSE 1997) (IESNA 2000, 676708).

5.2.2. Noise

The average noise level in the project site area is presented in Table 5-4. Receptor (outside of production area at project site) noise level measurement is dB and within the comfortable range of 40-60 decibel. However, found to be the Noise source monitoring at operation area (inside the production sector) noise level not exceeding the level of National Environmental Quality (Emission) Guideline and outside of production area at the project site is acceptable when compared with National Environmental Quality (Emission) Guideline. Therefore, no obvious influence can be caused occupational health and safety of employees during operation. Moreover, Personal Protective Equipment (PPE) to decrease adverse impact of noise will be provided for employees when necessary.

Table 5-4 Comparison of Noise level measurement

Area	GPS location	Average Noise Level	NEQ Guideline
Operation Area	16°59'42.15"N and 96° 4'56.54"E	79.58 dB	70 dB



Figure 5-2 Noise level measurement in the factory

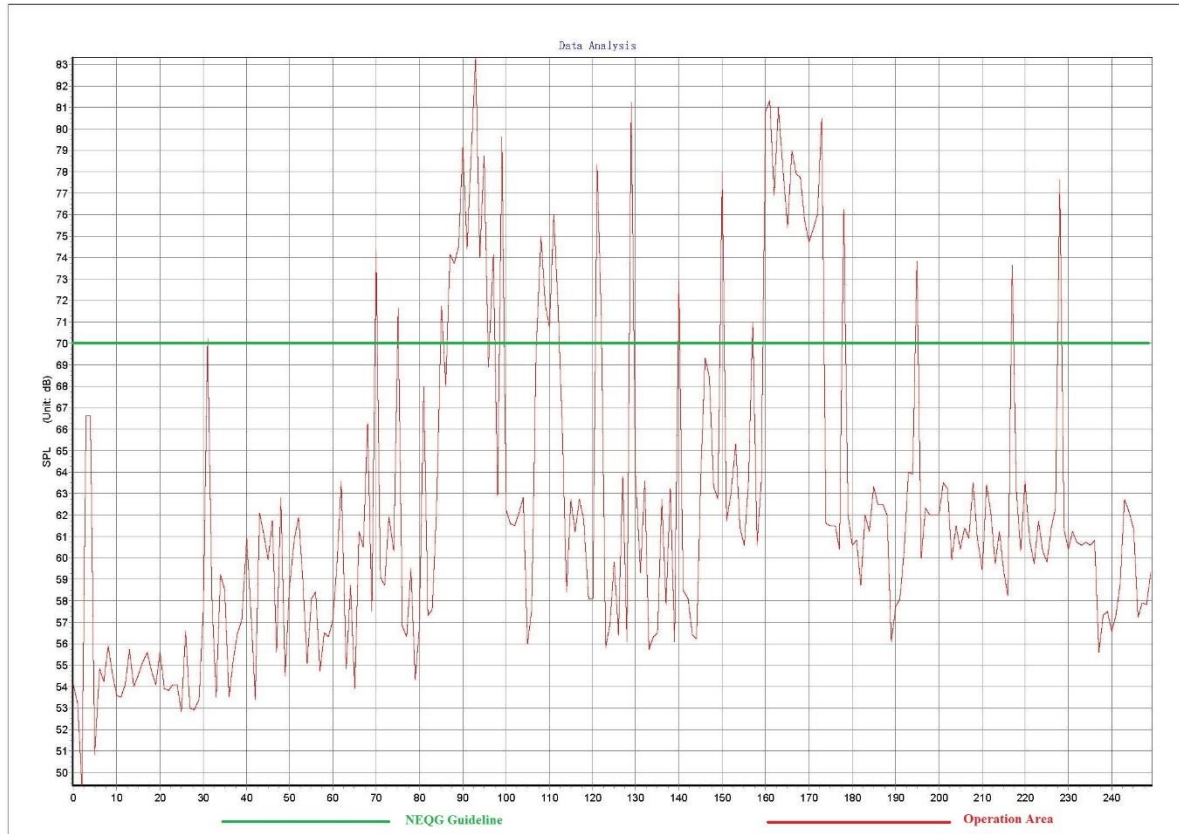


Figure 5-3 Sound analysis graph

5.2.3. Air Quality

To determine the existing baseline ambient air quality status within the project site on 3 December 2021, 8-hours of working period air pollutants level, which include dust PM_{10} and $PM_{2.5}$, SO_2 , and NO_2 were measured at the selected site using the Oceanus AQM 09 air monitoring station. To reveal the existing status of baseline air quality, the average ambient air qualities measured were compared with National Environmental Quality (Emission) Guideline. The measurement location point is situated at latitude $16^{\circ}59'41.85''N$ and longitude $96^{\circ}4'53.94''E$.

It was observed that the air quality of $PM_{2.5}$ and SO_2 , are highly over the guideline value of NEQG and PM_{10} , NO_2 , O_3 and CO gases are in guideline limit so that can be assume these gases are satisfy with the National Environmental Quality (Emission) Guideline. However, the proponent factory shloud need to reduce or implementation of control measures for $PM_{2.5}$ and SO_2 .

Table 5-5 Observed air quality results

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM_{10}	52.025	50	$\mu g/m^3$	NEQG	24 hrs
$PM_{2.5}$	48.66	25	$\mu g/m^3$	NEQG	24 hrs
SO_2	823.1	500	$\mu g/m^3$	NEQG	10 minutes
NO_2	20.7	200	$\mu g/m^3$	NEQG	1 hr
O_3	2.2	100	$\mu g/m^3$	NEQG	8 hrs

Parameters	Observed value	Guideline value	Unit	Organization	Period
CO	0.4	-	$\mu\text{g}/\text{m}^3$	-	

NEQ = National Environmental Quality (Emission) Guideline

**Figure 5-4 Air Quality Measurement Photo****5.2.3.1. Air Quality Index (AQI)**

In LP Myanmar will be used the semi-automatic process control system. In which assigned person from the operation line will operate each processing step. The major sources of air emission in the LP MYANMAR will be defined as below. The project factory is already constructed during environmental assessment study and site visit. During construction phase, dust emission was addressed as potential environmental impact and is expected to be non-significant because the construction phase is a short-term affect. So, we are not assessed potential environmental impact for construction phase.

During the operation phase, there is no emission of smoke from the process of production but mass amount of particulate matters and gases are emitting from the rubber sewn timber factory. There are spreading and generating of dust particles, NO_2 and SO_2 . Various activities as cooking from kitchen, using air conditioners in office, transportation of raw materials, vehicles movements, operating diesel generators would also be a factor slightly affecting to air quality. However, these anticipated impacts are in manageable limits to control the air pollution with relevant mitigation measures and the proposed factory will be managed by using their HSE guidelines.

The United States Environmental Protection Agency (EPA) has developed an Air Quality Index that is used to report air quality. This AQI is divided into six categories indicating increasing levels of health concern. An AQI value over 300 represents hazardous air quality and below 50 the air quality is good.

AQI Values	Level of Health Concern	Colour
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for sensitive group	Orange
151 to 200	Unhealthy	Red

2001 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

Computing the AQI

The air quality index is a piecewise linear function of the pollutant concentration. At the boundary between AQI categories, there is a discontinuous jump of one AQI unit. To convert from concentration to AQI this equation is used;

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}}(C - C_{low}) + I_{low}$$

Where;

- I = the (Air Quality) Index
- C = the pollutant concentration
- C_{high} = the concentration breakpoint that is ≥ C
- C_{low} = the concentration breakpoint that is ≤ C
- I_{high} = the Index breakpoint corresponding to C_{high}
- I_{low} = the index breakpoint corresponding to C_{low}

Items	O3	PM 2.5	PM 10	CO	SO2	NO2	AQI value	Level of health concern
	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	C _{low} - C _{high} (Avg)	
Air Quality Index	3	17.53	17.41	11	28.52	50	47	Good

5.3. PHYSICAL COMPONENT

5.3.1. Topography

The proposed project area is situated in Plot No (41), Myay Taing Block No.50, TharDuKan Industrial Zone, Shwe Pyi Tar Township, and its topographic condition is flat. The proposed project site is primarily agricultural land, but now is initiated into the industrial zone area. Yangon area is the largest; most populated and urbanized area in Myanmar. There are thirty-three townships in Yangon City where located at the convergence on the Yangon and Bago River region about 34km away from the Gulf of Martaban.

5.3.2. Geology

The Yangon area is underlain by alluvial deposits (Pleistocene to Recent), the non-marine fluviatile sediments of Irrawaddy formation (Pliocene), and hard, massive sandstone of Pegu series (early-late Miocene). Alluvial deposits are composed of gravel, clay, silts, sands and laterite which lie upon the eroded surface of the Irrawaddy formation at 3-4.6 m above mean sea level (MSL). The rock type in Yangon is mainly soft rocks, which consist of sandstone, shale, limestone and conglomerate. Geological map of Yangon Regional area is shown in Figure 5-5.

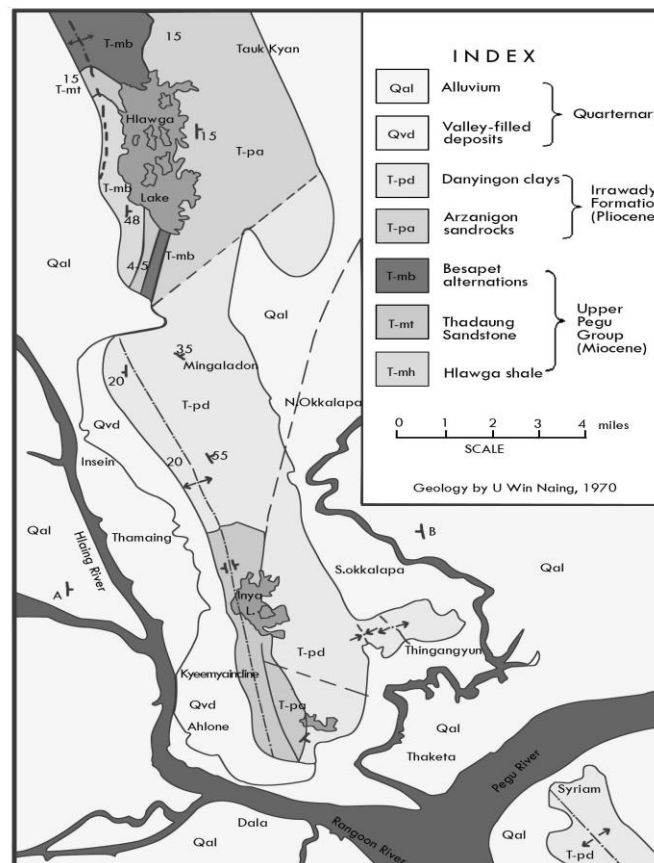


Figure 5-5 Geological Map of the project area

5.3.3. Tectonics

Yangon is situated in the southern part of the Central Lowland which is one of the three major tectonic provinces of Myanmar. The Taungnio Range of the Gyophyu catchments area of Taikkyi District, north of Yangon, through the Thanlyin Ridge, south of Yangon forming a series of isolated hills probably resulted from the progressive deformation of the Upper Miocene rocks as the eastern continuation of the subduction or stretching and compression along the southern part of the Central Basin and regional uplifting of the Pegu Yoma (Aung Lwin 2012).

5.3.4. Soil

The underlying soil type at the Project Site and its surroundings is characterized as the Meadow and Meadow Alluvial Soil. Meadow Soil is soil, which occurs near the river plains exposed to occasional tidal floods, is non-carbonate and usually contains a large amount of salt. Both materials mainly comprise salty clay loam and neutral soil rich in plant nutrient. The upper layers (approximately 0 to 7 m) of the soil at the Project Site comprise largely of cohesive layers with

traces of sand and gravel, followed by sand layers with low silt content and trace gravel from 7 to 35 m. The lower layers comprise denser silt layer with traces of sand and gravel from approximately 57 to 70 m. Standard Penetration Test (SPT) results obtained from testing at the Project Site indicate that the soil strength generally increases with depth. The STP results showed that the current soil quality could accommodate the construction of the Project.

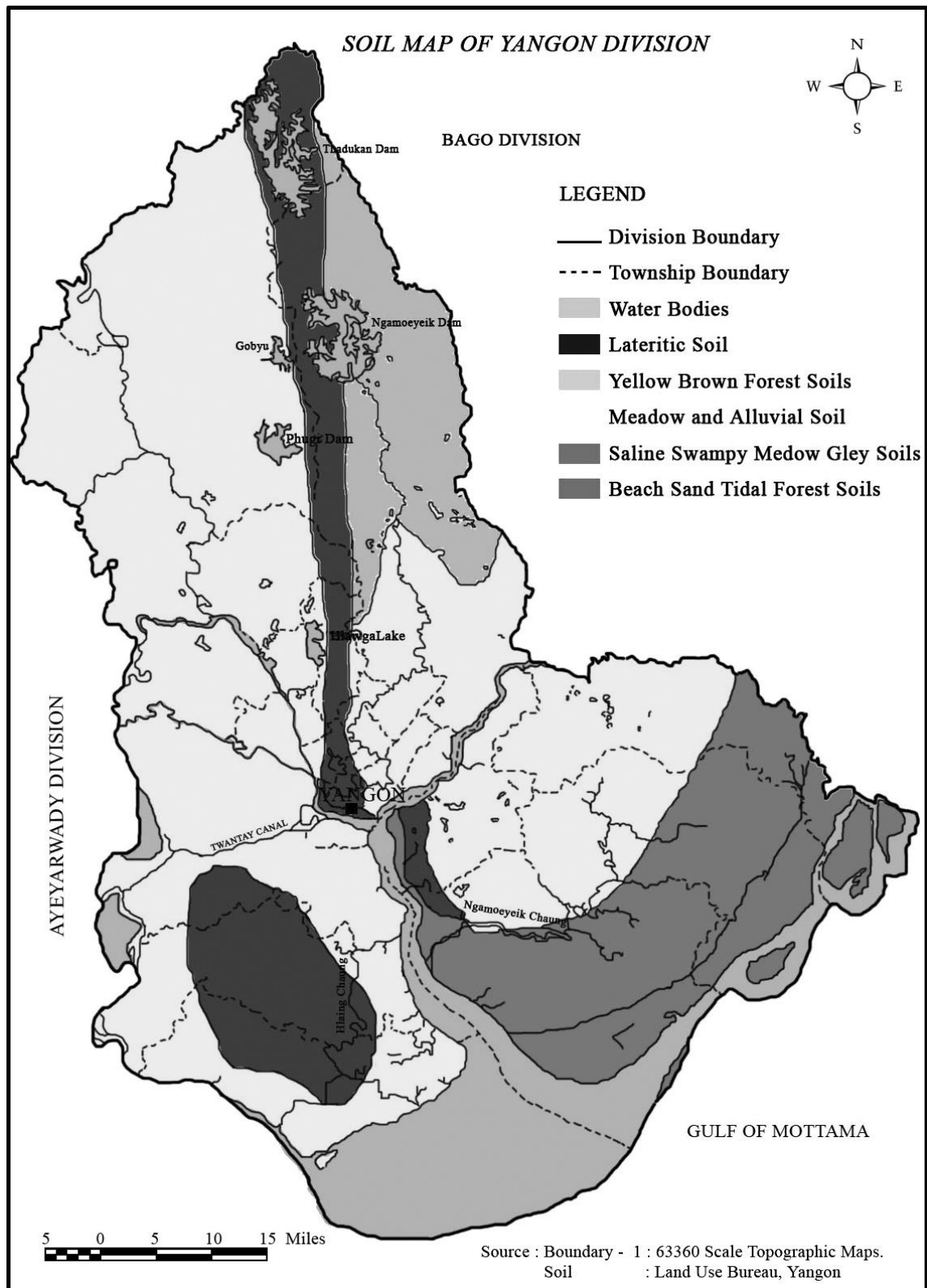


Figure 5-6 Soil Map of Yangon (Source: Land use of Bureau of Yangon)

5.3.5. Hydrology

Yangon is rich in groundwater resources conserved by unconsolidated Tertiary-Quaternary deposits. In Yangon, groundwater is mostly extracted from Valley filled deposits and Ayeyarwady sandstones.

Groundwater: Groundwater availability is generally based on the distribution of permeable and relatively impermeable rocks. The nature of openings in the rocks determines permeability of rocks. Based on local geological considerations, potential groundwater source of Yangon can be roughly divided into two sub regions, namely the low potential area and high potential area. Low potential areas are areas with those rock units of Hlawga Shale, Thadugan Sandstones and Basepet Alternation of upper Pegu Group (Miocene epoch) and Danyingon Clays of Irrawaddy rocks. These rocks and formations are a dense, massive and consolidated nature and have impervious characteristic. High potential areas are underlain by Pliocene Series and recent Formations. High potential area covers approximately 85 percent of the Yangon city including Pabedan. Stand pipe piezometers were installed at a depth of up to 30 m from the existing ground level while a pumping well was installed upon completion of the soil investigation works. Based on the results recorded up to the 8th of December 2012, stabilized groundwater level was observed to range between 0.49 m MSL to -1.81 m MSL.

Water Supply: The Yangon City Development Committee (YCDC) has an overall responsibility for the management and distribution of water for Yangon City. Presently, YCDC's water supply is obtained from two main sources: (1) reservoir (Hlawga, Gyobu, Pugyi and Ngameoyeik reservoirs) and, (2) groundwater from YCDC's tube wells. Water from these sources is utilized to varying degrees. Areas not supplied with water from the YCDC rely on shallow surface wells and private boreholes. Water supply for the Project Site will be obtained from onsite borewells for both construction and operations due to the poor reliability of municipal supply. Permitting is part of the Planning Consent Application currently underway. The boreholes will be provided and operated by the Developer.

Hydrology: The Project Site lies near the catchment area of Hlawga Lake which exists as the essential and important of water resources for the surrounding settlements. The Yangon River (also known as the Rangoon River or Hlaing River) is formed by the confluence of the Pegu and Myitmaka rivers and flows into the Gulf of Martaban which is part of the larger Andaman Sea. The river flows along a 40 km stretch flowing from southern Myanmar as an outlet of the Ayeyarwady River into the Ayeyarwady delta. A small portion of the Bago River (the estuary) lies within the Yangon Division. The Pazundaung Creek and Bago River joins the Yangon River and from there, flow towards the southwestern direction into Andaman Sea.

5.3.6. Climate and Meteorology

5.3.6.1. Average Weather in Yangon

In Yangon, the wet season is oppressive and overcast, the dry season is muggy and partly cloudy, and it is hot year round. Over the course of the year, the temperature typically varies from 67 °F to 97 °F and is rarely below 62 °F or above 101 °F. ^[6]

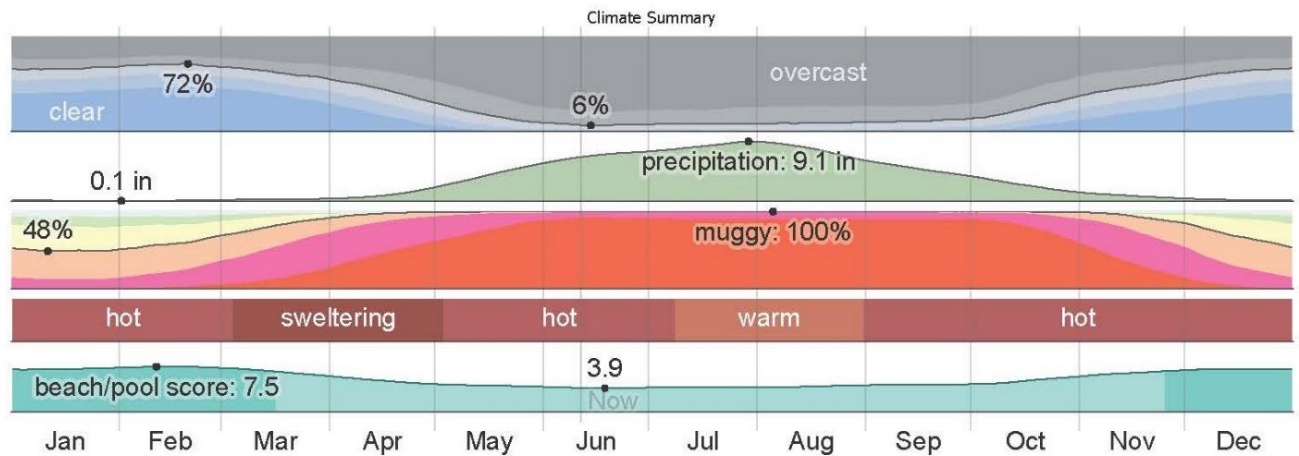


Figure 5-7 Climate Summary of Yangon Region

5.3.6.2. Temperature

The hot season lasts for 2.0 months, from March 2 to May 3, with an average daily high temperature above 95 °F. The hottest day of the year is April 11, with an average high of 97 °F and low of 78 °F.

The cool season lasts for 3.9 months, from June 2 to September 29, with an average daily high temperature below 87 °F. The coldest day of the year is January 10, with an average low of 67 °F and high of 88 °F.

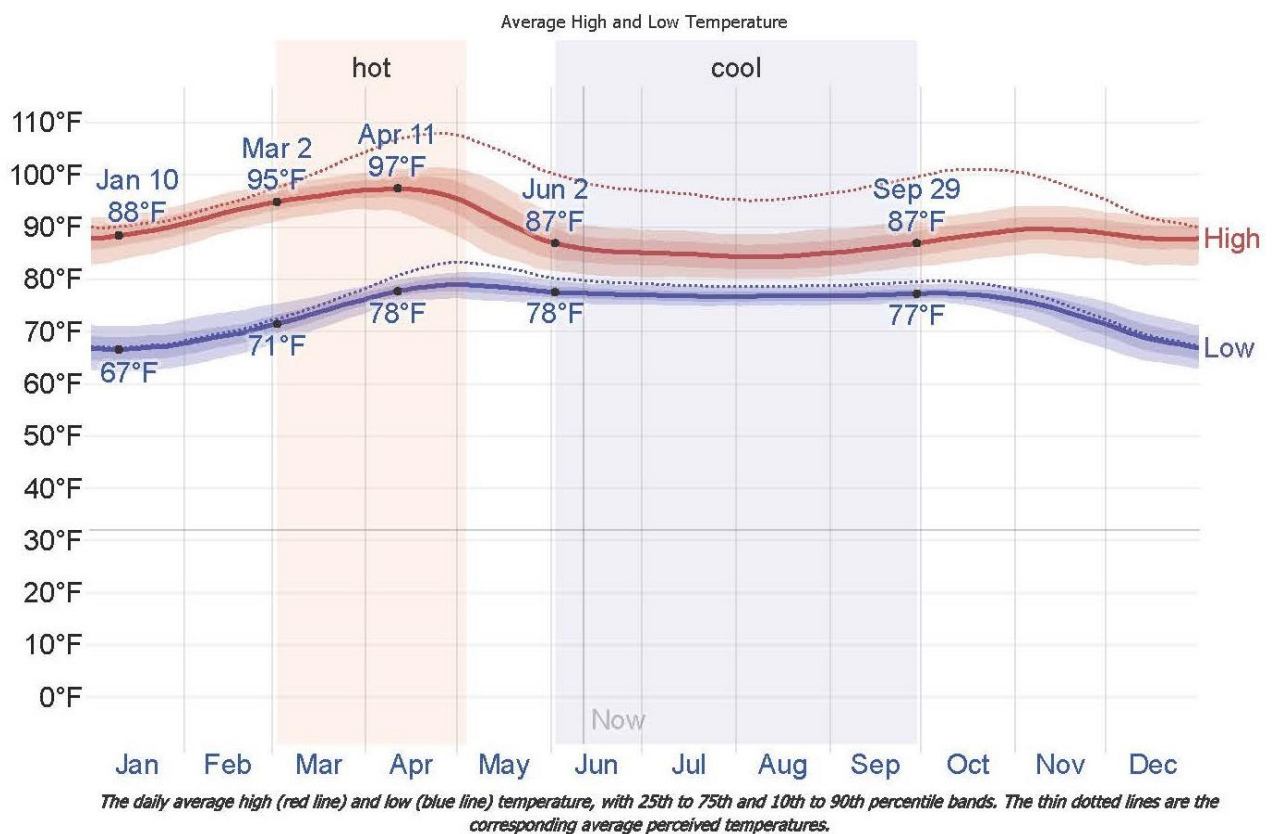


Figure 5-8 Average Temperature of Yangon Region

5.3.6.3. Clouds

In Yangon, the average percentage of the sky covered by clouds experiences extreme seasonal variation over the course of the year. In clearer part of the year in Yangon begins around November 2 and lasts for 5.6 months, ending around April 22. On December, the clearest day of the year, the sky is shiny, mostly clear, or partly cloudy 72% of the time, and overcast or mostly cloudy 28% of the time.

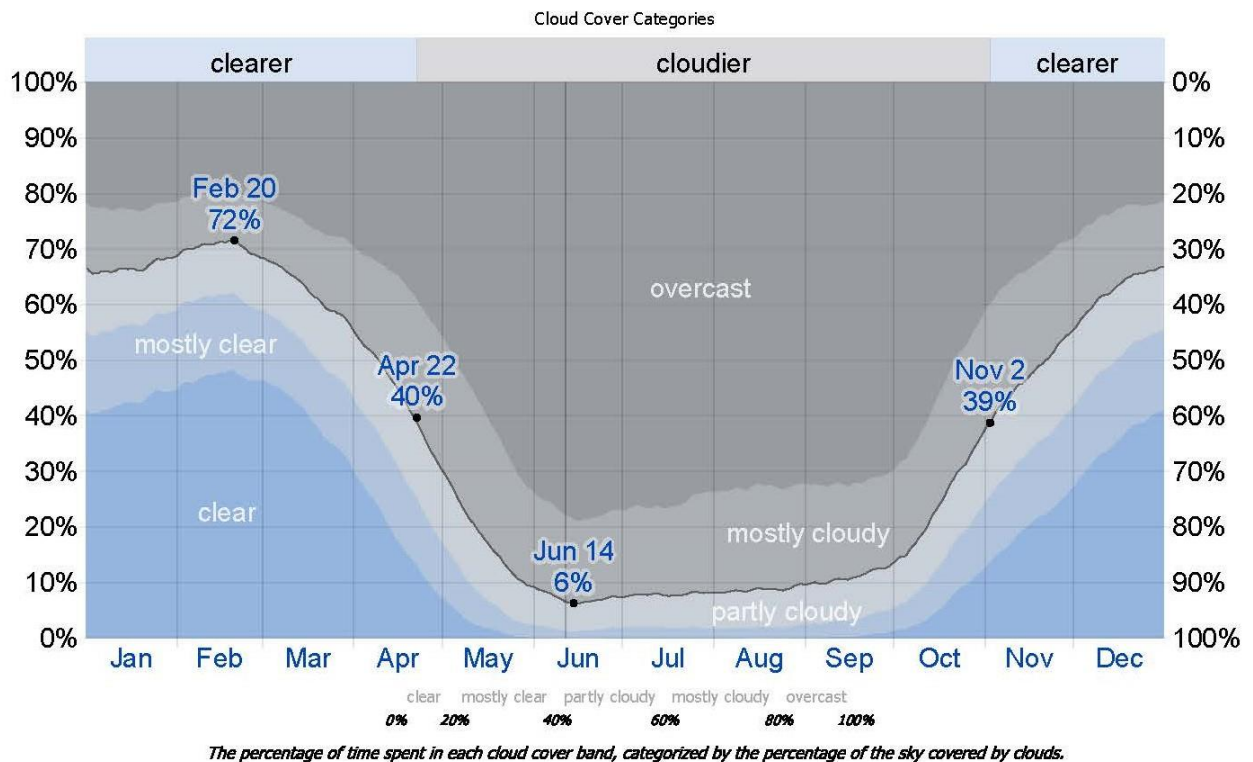


Figure 5-9 Cloud Cover Categories

5.3.6.4. Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Yangon experiences extreme seasonal variation in monthly rainfall. The rainy period of the year lasts for 7.7 months, from April 5 to November 28, with a sliding 31-days rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around July 30, with an average total accumulation of 9.1 inches. The rainless period of the year lasts for 4.3 months, from November 28 to April 5. The least rain falls around February 1, with an average total accumulation of 0.1 inches.

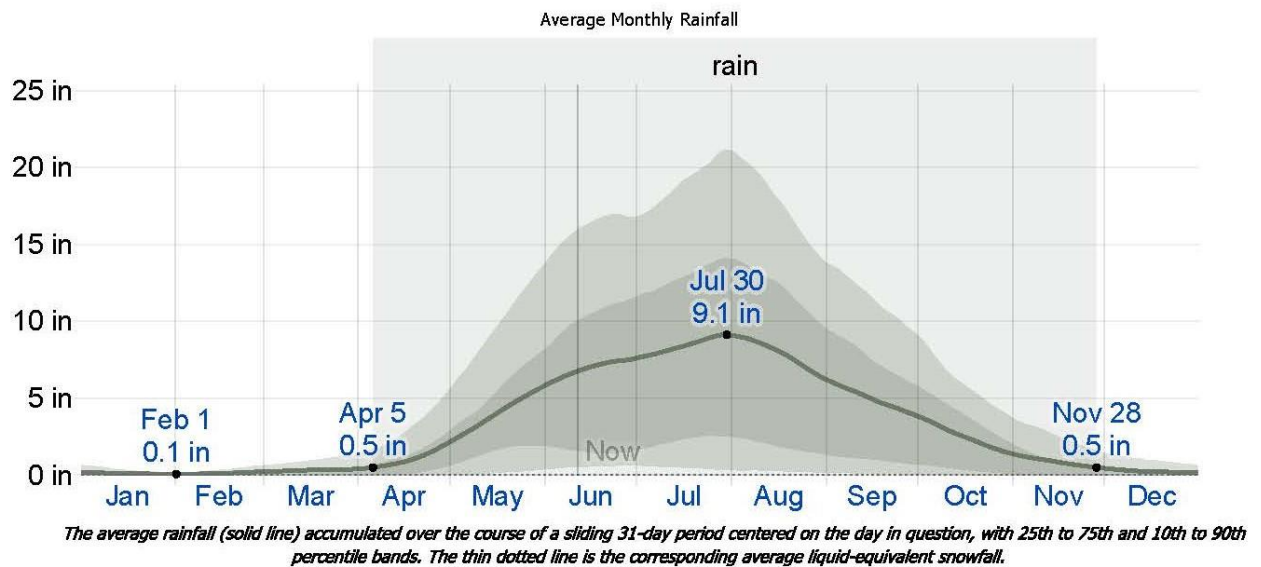


Figure 5-10 Average Monthly Rainfall at Yangon Region

Table 5-6 Annual rainfall and temperature

Year	Rainfall		Temperature	
	Raining day	Rainfall value (Inches)	Summer season Max (°C)	Winter season Min (°C)
2016	102	79.20	45°C	15°C
2017	101	138.85	42°C	18°C
2018	113	134.53	40°C	12.5°C
2019	112	122.35	45°C	15°C

Source: Department of Administrative Dagon Myo Thit (Seikkan) Townships, Regional data (www.gad.gov.mm.com)

5.3.7. Indoor Temperature and Humidity

We base the humidity comfort level on the dew point, as it determines whether perspiration will evaporate from the skin, thereby cooling the body. Lower dew points feel drier and higher dew points feel more humid. Unlike temperature, which typically varies significantly between night and day, dew point tends to change more slowly, so while the temperature may drop at night, a muggy day is typically followed by a muggy night.

Yangon experiences extreme seasonal variation in the perceived humidity. The muggier period of the year lasts for 10 months, from February 22 to December 23, during which time the comfort level is muggy, oppressive, or miserable at least 61% of the time. The muggiest day of the year is August 5, with muggy conditions 100% of the time. The least muggy day of the year is January 11, with muggy conditions 48% of the time. In March 30, 2020, the weather condition of proposed project is 41.2 °C average temperature and 69.1 % average humidity as shown in Table 5-7.

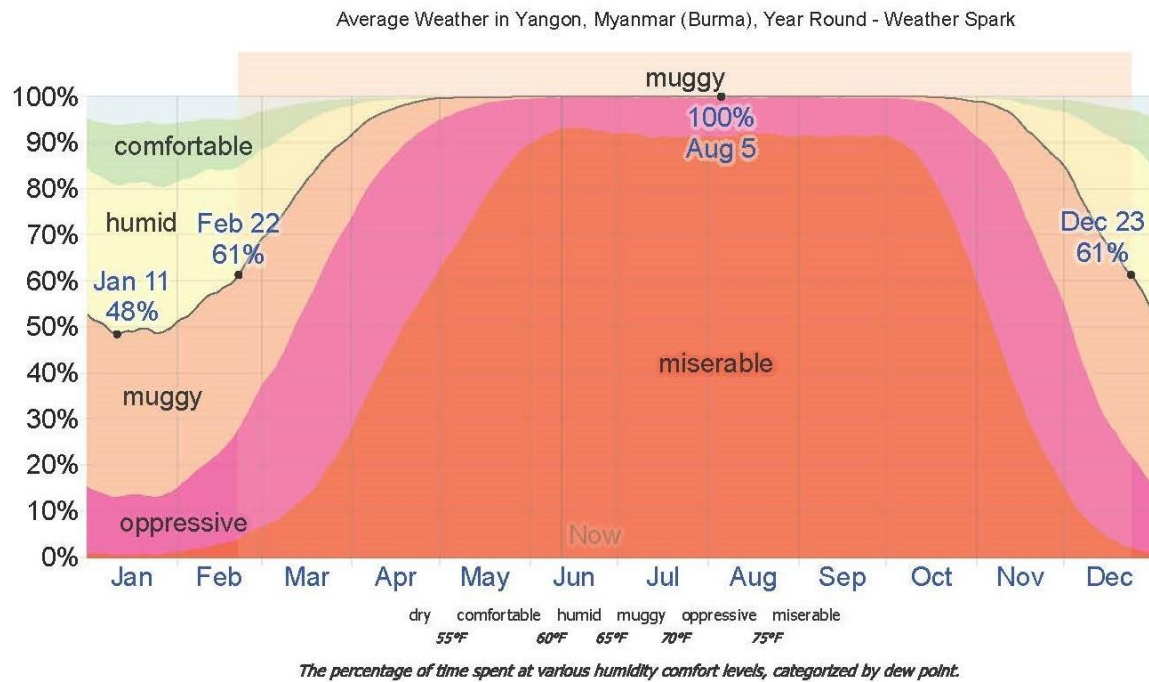


Figure 5-11 Humidity of Yangon

Table 5-7 Temperature and Humidity Measurement at Factory

Date and Time	Description	Result value	Environmental parameter air station guideline
3 Dec 2021 (11:00 pm to 4:00 pm)	Relative Humidity RH %	27.26 %	Present condition
	Temperature	37.5 °C	Present condition



Figure 5-12 Temperature and Humidity measurement

5.3.7.1. Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly depended on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The average hourly wind speed in Yangon experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 4.1 months, from May 1 to

September 4, with average wind speeds of more than 8.2 miles per hour. The windiest day of the year is June 24, with an average hourly wind speed of 10.6 miles per hour. The calmer time of year lasts for 7.9 months, from September 4 to May 1. The calmest day of the year is January 9, with an average hourly wind speed of 5.8 miles per hour.

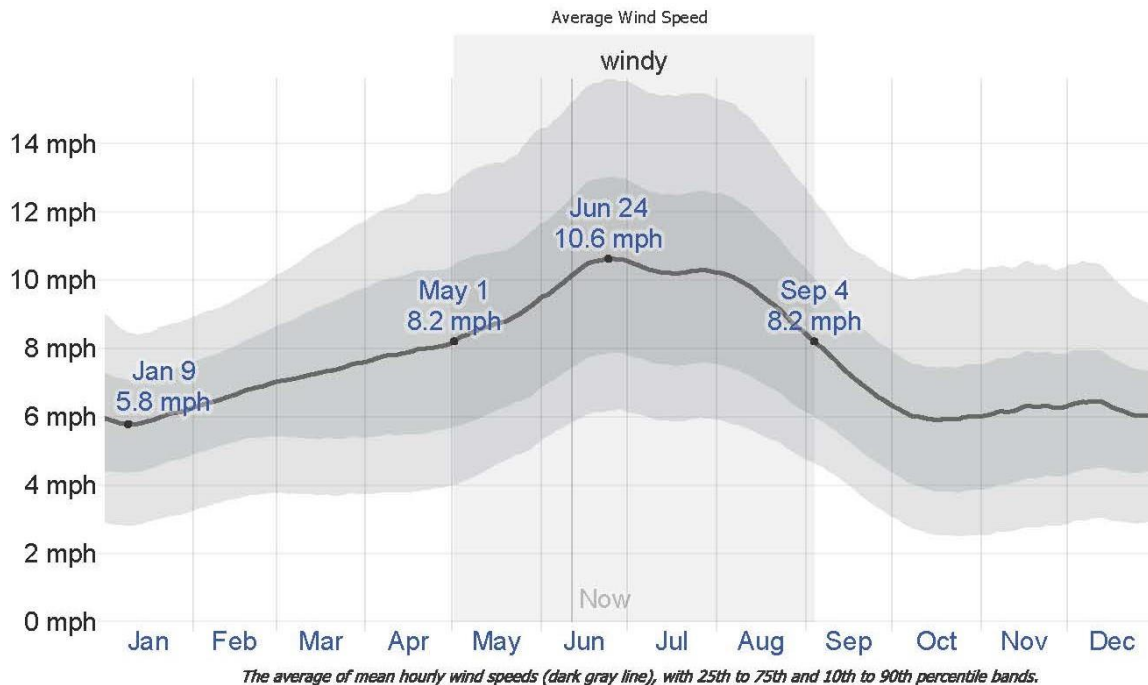


Figure 5-13 Average Wind Speed in Yangon

5.4. BIOLOGICAL COMPONENT (SECONDARY DATA)

As the proposed project area is located in the industrial zone, the information of ecological resources is very unlikely. In addition, within the proposed project area, there are no forests, protected areas and coastal resources. The proposed project site is not located in or near a sensitive ecosystem as the proposed project area is situated in the Shwe Pyi Thar Township. The Project Site is a built-environment and the species of flora surveyed at the site are native species uncommon to the Yangon area.

Ecological Resources	Existing condition
Fisheries, aquatic biology	The nearest water source is Hlawga Lake and fresh water fish species are habiting in the river
Wildlife	Non existence
Forests	Non existence
Rare or endangered species	Non existence
Protected areas	The nearest protected area is Hlaw Gar Park which is located in the northeastern part of the project site

5.5. SOCIO-ECONOMIC COMPONENT

5.5.1. Population

In 2019, the population of Shwe Pyi Thar Township is about 284,922 people as present in Table 5-8.

Table 5-8 Population of Males and Females at Shwe Pyi Thar Township (2019)

Item	Over 18 year			Under 18 year			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Urban	80,330	93,866	174,196	32,429	33,876	66,305	112,759	127,742	240,501
Rural	15,444	18,964	34,408	4,960	5,053	10,013	20,404	24,017	44,421
Total	95,774	112,830	208,604	37,389	38,929	76,318	133,163	151,759	284,922

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

5.5.2. Religion

The different kinds of religion present in Shwe Pyi Thar Township are shown in Table 5-9. More than 90% of the people living in the township are Buddhists. ^[1]

Table 5-9 Religion in Shwe Pyi Thar Township (2019)

Township	Buddhist	Christian	Hindu	Muslim	Total
Shwe Pyi Thar	269,764	7,476	2,601	4,882	199

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

5.5.3. Local Economy

Among regional towns, Shwe Pyi Thar Township has a variety of businesses and services operating in the community with other businesses/services, based in the region. Most of the source of livelihood in the Township is employment of factory. Services and facilities available include:

- post office
- beauticians
- butcher
- hairdressers
- furniture and electrical store
- restaurants
- cafes
- shoe and clothing shops
- industrial services
- pharmacy
- veterinarian
- bus service
- gift stores
- music store
- pubs and bars
- florist

5.5.4. Public Infrastructure and Access

5.5.4.1. Communication and Transportation

Major transportation route in Shwe Pyi Thar Township are railway, port, and car road as presented in Table 5-10. ^[1]

Table 5-10 Transportation Route

Categories	Township		Miles
	From	To	
Railway (Yangon-Pyay railway)	Hlwaga	1 ward	4.2
Inland water way	18 ward	Hlwaga	4.2
Bus line (39, 40, 42, 44, 65, 69, 72, 73, 74, 77)	Hlwaga	Downtown area	
Car (No 4. Main road)	1 ward	Hlwaga	5.1

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

5.5.4.2. Electricity

The electricity demand of Shwe Pyi Thar Township is higher and higher due to the normally increased in population and infrastructure. ^[1]

5.5.4.3. Education

Location of major schools were situated i.e. basic education primary school (B.E.P.S.), basic education middle school (B.E.M.S), basic education high school (B.E.H.S) and Computer University, in the Shwe Pyi Thar Township. The name and the located village tract/ ward of schools are described in Table 4-10. ^[1]

Table 5-11 List of major school in Shwe Pyi Thar Township

No.	Name of School	Location
1	Computer University Yangon	Kyaung Gone Village Tract
2	BEHS (1)	No 6. Ward
3	BEHS (2)	Hlawga Village Tract
4	BEHS (3)	No 8. Ward
5	BEHS (4)	Zee Gone Village Tract
6	BEMS (Branch) (2)	No 19. Ward
7	BEMS (Branch) (3)	No 5. Ward
8	BEMS (Branch) (4)	No 9. Ward
9	BEMS (Branch) (8)	No 23. Ward
10	BEMS (Branch) (11)	No 8. Ward
11	BEMS (1)	Hlawga Village
12	BEMS (5)	No 15. Ward
13	BEMS (6)	No 17. Ward
14	BEMS (7)	No 9. Ward

No.	Name of School	Location
15	BEMS (9)	No 11. Ward
16	BEMS (10)	No 14. Ward
17	BEMS (12)	No 10. Ward
18	BEMS (13)	No 20. Ward
19	BEPS (1-43)	Shwe Pyi Thar Township

Source: Department of Administrative Shwe Pyi Thar Township, Regional data (www.gad.gov.mm.com)

5.5.4.4. Health Status

The diseases of high prevalence reported in 2019 are Tuberculosis (TB), followed by hypertension, diarrhea, dysentery and hepatitis. With reference to the Township Health Profile 2019 of Shwe Pyi Thar Township, no accidental work injuries reported to the township hospital in 2013. The common diseases are shown in Table 5-12.

Table 5-12 Common Diseases in the Shwe Pyi Thar Township

Diseases	Shwe Pyi Thar Township	
	Morbidity	Mortality
Hypertension	921	13
Diarrhea (Per 100000P)	76	-
TB (Sputum+)(Per 10000P)	192	-
Dysentery	6	-
Hepatitis	392	-
HIV/AIDS	12	-

Table 5-13 Lists of hospital in the Shwe Pyi Thar Township

Hospital Name	Beds/Services	Responsible
Township Hospital	35	Government

Source: Department of Administrative Shwe Pyi Thar, Regional data (www.gad.gov.mm.com)

5.6. CULTURAL AND VISUAL COMPONENTS

Shwe Pyi Thar Township is growing into a busy and vibrant community. The population fluctuates; however, there has been steady growth over the last decade. It tends to be a stopover on a journey rather than a destination. It has a number of sites that are interesting; however, there is no main attraction. Visitors to the town are generally visiting for work, investment, or family reasons.

CHAPTER 6

IMPACT ASSESSMENT AND MITIGATION MEASURE

6.1. IMPACT IDENTIFICATIONS

The development of infrastructure for the proposed project likely to happen changes in the local environment in terms of physical, biological and socio-economic aspects along with the perspective on both positive and negative impacts. In this IEE study, the potential environmental impacts brought by various activities of proposed factory project will be identified and judged by site surveying with checklist, meeting with client team, including plant manager and supervisor, representatives from the factory operators and assessing the environmental baseline information for operation and decommissioning phases along with its mitigation measure.

6.1.1. Positive Impact

During the project implementation, local people can get job opportunities in administrative sectors, office works, transportation sectors, skill and unskilled workers, etc. Due to the implementation of the project, there will carry employment opportunities especially for workers from the local community. Employees will also improve more in their professional knowledge and skills. The net effect of job creation is the improvement of the livelihoods and living standards of the beneficiaries and poverty reduction, development of local people's livelihood. Cause of the proposed project is located in Tardukan Industrial Zone, there may have business opportunities to local people. Local people can have a market by selling foods, snacks and drinks nearby the factory.

6.1.2. Negative Impact

The following Figure 6-1 briefly described the potential negative impacts of the proposed project. There are four main types of impacts; impact on environmental resources, impact on ecological resource, impact on human and impact of waste generation.

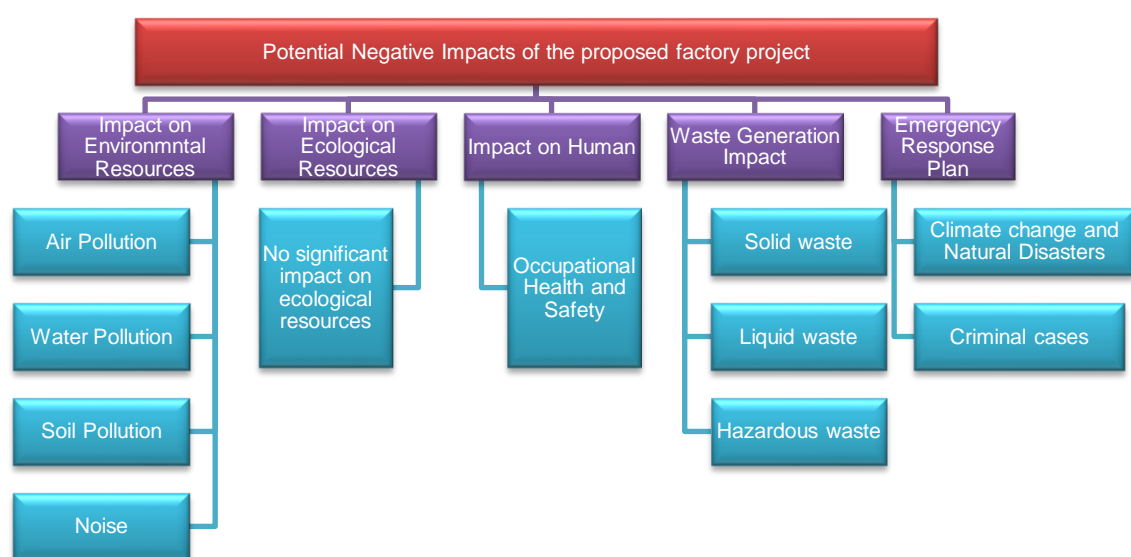


Figure 6-1 Potential negative impact affect from proposed factory project

6.1. METHODOLOGY FOR THE ASSESSMENTS

The assessment of each impact is based on consideration of the magnitude, duration, spatial and frequency of activities, which are going to be carried out during three phases and characteristics of the project site. The assessment is qualitative and the significance of each impact is classified into 5 categories in overall.

The following methodology has been applied to assess the environmental impacts of the factory mainly on air, water, land, biodiversity, including human beings. Each source of impact has been assessed by four parameters, magnitude, duration, extent and probability and each assess point have 5 scales as mentioned in Table 6-1.

Table 6-1 Impact assessment parameters and its scale

Assessment	Scale				
	1	2	3	4	5
Magnitude (M)	Insignificant	small and will have no effect on working environment	Moderate and will result in minor changes on working environment	High and will result in significant changes on working environment	Very high and will result in permanent changes on working environment
Duration (D)	0 - 1 year	2 - 5 year	6 - 15 year	Life of operation	Post Closure
Extent (E)	Limited to the site	Limited to the local area	Limited to the region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

Then, the Significant Point (SP) calculated by following formula.

$$\text{Significant Point (SP)} = (\text{Magnitude} + \text{Duration} + \text{Extent}) * \text{Probability}$$

Impact Significance: Based on calculated significant point, impact significance can categorize as follows:

Significant Point (SP)	Impact Significance
<15	Very Low
15-29	Low
30-44	Moderate
45-59	High
60	Very high

6.2. PROJECT ACTIVITIES AND ITS SIGNIFICANT IMPACTS DURING OPERATION PHASE

The relative importance of each impact is assessed based on the understanding that general mitigation measures will be integrated into the baseline project. Therefore, when the general mitigation measures reduce impacts to the point of rendering them negligible, they are excluded from further analysis. Once the significance of the impact is established as more than negligible, it is described and additional, specific mitigation measures may be proposed to allow optimal integration of the project into the environment.

Table 6-2 Evaluation and Perdition of Significant Impacts for Operation Phase

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
Impact on Environmental Resource									
Air	<ul style="list-style-type: none">Emission of smoke and pollutants from firewood boiler and sewn timber production processesEmission of gases from emergency diesel generator and vehicles movement	3	4	1	4	31	Moderate	<ul style="list-style-type: none">Air pollution and contamination due to the operations of dimension sorting, planning and transporations.Inhaling pollutants, indoor air pollution can risk on human health especially respiratory ststem and eyes.People with heart or lung disease, older adults and children are at greater risk from air pollution.	<ul style="list-style-type: none">To control pollutants withing the factory, prepare the large door and entrance and boiler and generators have to check and maintain regularly.To prevent respiratory diseases the factory should PPE masks provide to workers cause the sawdusts and particulate matters are spreading in the factory not to trap the indoor pollutants.The factory uses chimney for generator and firewood steam boiler through which the flue gases are emitted for reducing the impact of stack emission on environment.
Water	<ul style="list-style-type: none">Stickering process	2	4	2	2	16	Low	<ul style="list-style-type: none">The factory not generated wastewater from production process on CMP basic	<ul style="list-style-type: none">To implement systemically the chemical liquid waste disposing systemTo plan the sewage and sewage storing system in accord to the employees
	<ul style="list-style-type: none">Boiler blow down water and cleaning the apparatus	2	4	2	2	16	Low	<ul style="list-style-type: none">The factory uses about 0.5 m³ per hourVery little mount of blow down water (214	<ul style="list-style-type: none">After cooling the blow down water to discharge the industrial drainage and measure the temperature of it.

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								gal / day)	
Soil	<ul style="list-style-type: none"> Engine oil leaks, spills at diesel storage and during fuel refueling. 	1	4	1	1	6	Insignificant	<ul style="list-style-type: none"> The factory compound area was paved with concrete and hence, contamination due to the oil spillage at this area is insignificant. 	<ul style="list-style-type: none"> No Mitigation Measure for soil conservation
Noise and Vibration	<ul style="list-style-type: none"> Generating noise from the production of band sawing machines 	5	4	2	5	55	High	<ul style="list-style-type: none"> The factory operates heavy machineries and vehicles Basically, the major noise source of CMP basic operation activities such as Sawing, Preservation, Seasoning and packaging by respective machines. The boiler room and generator are separated to their compartment. There is high significant impact on surrounding environment and within the factory. 	<ul style="list-style-type: none"> To control noise from vertical and horizontal sawing machines and trucks and forklifts movement, earmuffs and earpieces should be provided for every employee. The industry should be installed with soundproof cavity walls.
Impact on Ecological Resources									
Flora and	Operation of the rubber	1	4	1	1	6	Insignificant	<ul style="list-style-type: none"> Not Significant Impact 	<ul style="list-style-type: none"> No Mitigation Measure

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
fauna on terrestrial and aquatic life	wood factory							on Ecological Resources	
Impact on Human									
Fire	<ul style="list-style-type: none"> Poor electrical installations Waste disposed area raw materials and chemical storage 	3	5	2	4	40	Moderate	<ul style="list-style-type: none"> Serious damage to property and even injury and death because the factory utilize materials are very flammable rubber timber and that is a type of fuel. Impact range may extent not only within factory but also near rubber plantations and near villages. 	<ul style="list-style-type: none"> The factory provides fire extinguishers, fire hose reels, fire hydrants and sand tanks on the walls of the factory for fire emergency cases. The emergency fire alarms are installed at the factory for alerting the workers in case of fire. To do regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases.
Occupational Safety	<ul style="list-style-type: none"> Accidental cases cause by band sawing machines. Unloading, transporting, cutting, 	3	4	1	4	32	Moderate	<ul style="list-style-type: none"> Accident in workplace (physical injuries or even death) can occur during operation. 	<ul style="list-style-type: none"> First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. According to the observed light

Initial Environmental Examination

Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	sawing And scraping activities. <ul style="list-style-type: none"> Accidental cases of thermic fluid heater 								intensity values, the proponent provides sufficient lighting for workers for safe working and reducing optical problems of the workers. <ul style="list-style-type: none"> To provide personal protective equipment (PPEs) like earmuffs, safety gloves, helmets and goggles are provided for every person. To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures.
Health	<ul style="list-style-type: none"> Influx of people Noise from the generating of the emergency generators and sawing machines 	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> Overcrowded of population may be a fuel in infection of corona virus disease. Change in demographic structure, new diseases form immigrant workers To cause a range of health problems ranging from stress, poor concentration, productivity losses in the workplace, and 	<ul style="list-style-type: none"> Provide the hand-wash basin, hand sanitizer and face masks and then specify the social distancing. Manage the drainage systems of the factory to prevent health risk of the workers. The maximum allowable noise level for workers is 90dBA for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.

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Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
								communication difficulties and fatigue from lack of sleep, to more serious issues	
Waste Generation Impact									
Solid Waste	<ul style="list-style-type: none"> Residual pieces of wood scraps from the production lines Sawdust and residues from sawing machines and boiler burning Waste from kitchen, dormitory and office. 	3	4	1	4	32	Moderate	<ul style="list-style-type: none"> Within factory pollution and soil contamination 	<ul style="list-style-type: none"> Provides separate garbage bins at each building. Some of timber fragments and residues distribute to villages as a CSR activity in filling of road. All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area. Final wastes should be disposed by connecting with YCDC.
Liquid Waste	<ul style="list-style-type: none"> Septic system and sewage. Domestic liquid waste disposal from office, kitchen and dormitory. 	2	4	2	2	16	Low	<ul style="list-style-type: none"> Contamination of soil, surface water, ground water 	<ul style="list-style-type: none"> Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations.
Hazardous Waste	<ul style="list-style-type: none"> Used oil and lubricant discharged from the maintenance of vehicles and 	2	4	1	2	14	Very Low	<ul style="list-style-type: none"> Reduce the risk of contamination from fuels, oils and hazardous wastes Response effectively 	<ul style="list-style-type: none"> Proper inspection and maintenance in storage of hazardous waste. Dispose of hazardous chemicals and containers in accordance with

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Categories	Source of Impact	Significant of Potential Impacts					Impact Significance	Reason	Mitigation Measure
		M	D	E	P	SP			
	machines.							to incident and accident	occupational health, safety and environmental requirements. <ul style="list-style-type: none"> The empty chemical containers will hand over to suppliers for recycle or appropriate disposal The hazardous wastes are disposed by connecting with Mudon Township municipal)
Emergency Response Plan	<ul style="list-style-type: none"> Unexpected emergency cases like as accidental burning, crisis situation and revolutionary attempts. 	4	4	4	3	36	Moderate	<ul style="list-style-type: none"> Loss of investment, injuries, retard the factory processes and increases the unemployment rate. 	<ul style="list-style-type: none"> Prepare for the blinded cases, carefully take the precautions and response plan especially fire We, human kind should conserve the health of world and environmental conservation so as a pollutants emitting factory need to participate in the preservation and conservation of environment and group the Environmental management team

According to the result of analysis, it can be concluded that most of the project activities have low significance on environment, in all phases. Project activities that can produce solid waste and liquid waste are moderate significance. Moreover, project activities that emit dust and GHGs and accidental cases are moderately significant. Fire hazard potential of the proposed project and noise pollution are highly significant. But this can be prevented or mitigated by using the following mitigation measures. The following figure shows the impact significance of the proposed project.

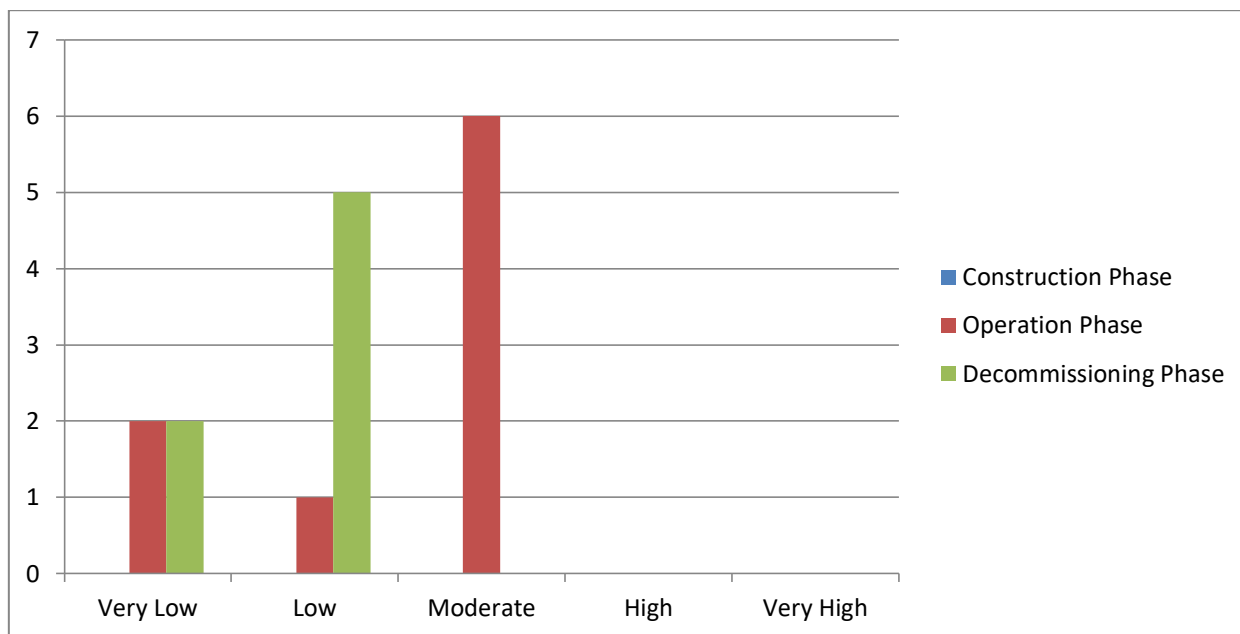


Figure 6-2

Impact Significance of the proposed project

CHAPTER 7 ENVIRONMENTAL MANAGEMENT ACTION

The EMP for LP Myanmar has been prepared to address potential issues based upon discussion with factory management, workers, local community view, stakeholder consultation and the site visit. The IEE is additional to and complements the factory's safety management system. The following environmental impact issues which require environmental management plans based upon the potential impacts activities of LP (Myanmar) Industrial Manufacturing Co., Ltd. are as follows:

7.1. AIR POLLUTION/ DUST MANAGEMENT PLAN

Objective	<ul style="list-style-type: none"> ➤ To minimize the adverse impact to air quality caused by pollutants, smoke and particulate matters emission from production area and boiler and also dust management generated from vehicular movement ➤ To comply with relevant government rules and laws 	
Relevant Government Law and Rule	<ul style="list-style-type: none"> ➤ National Environmental Quality (Emission) Guideline 2015, ➤ Motor Vehicles Act (2015), ➤ Boiler Law (2015) 	
Time Frame	➤ Entire life spans of proposed project operation	
Management Action	<ul style="list-style-type: none"> ➤ Must be establish plantation and garden around the proposed project to reduce carbon emission ➤ Should be prohibited burning of wood fragments at the proposed project site ➤ Must be control air pollution, firewood boiler, the vehicles, generators and machineries have to check and maintain regularly ➤ The factory should use standard height chimney for generator and firewood steam boiler through which the flue gas and smoke for reducing the impact of stack emission on environment ➤ The employees in the factory should take to provide the protective masks and hand gloves for safety 	
Monitoring and Reporting	Frequency	Biannually
	Monitoring Point	Outdoor of proposed project
	Parameters	PM _{2.5} , PM ₁₀ , SO ₂ , NO ₂ , CO and O ₃
Estimated Cost	1,000,000 Kyats per year	
Responsible Person	Management of the proposed factory; <ul style="list-style-type: none"> ▪ Head of maintenance: Total implementation of above of air pollution management plan ▪ Production manager: Air quality in the production area is good enough 	

	<ul style="list-style-type: none"> ▪ Manager: To hire organization/ independent third-party analysing air quality ▪ EHS officer: Monitor the cleanness of ambient air quality in surrounding of the factory
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7.2. NOISE MANAGEMENT PLAN

Objective	➤ The specific objectives of noise management are to develop criteria for the maximum safe noise exposure levels, and to promote noise assessment and control as part of environmental health programmes.
Relevant Government Law and Rule	➤ National Environmental Quality (Emission) Guideline 2015
Time Frame	➤ Throughout the project life
Management Action	<ul style="list-style-type: none"> ➤ Control the noise generation and vibration of vertical and horizontal band sawing machines and limit the working hour at least to reduce the noise impacts ➤ Building noise insulated generator room and ensure satisfactory maintenance of relevant equipment ➤ Prohibit speed limit to track and vehicles at the transportation route. ➤ Provide sufficient personal protective equipment (PPE) at the work place ➤ All the related personnel will be provided proper trainings about the relevant issues and ensure PPE wear during working in noisy area.
Monitoring and Reporting	Frequency Biannually
	Monitoring Point Two points in operation area (especially Foam cutting and warehouse)
	Parameters Sound Decibel
Estimated Cost	100,000 Kyats per year
Responsible Person	HSE Manager or Environmental Management Team of Glory Home (Myanmar) Limited

7.3. FIRE MANAGEMENT PLAN

Objective	➤ To ensure that fire control plants on site to minimise the risk of fire from site operations and stored rubber wood
Relevant Government Law and Rule	➤ Myanmar Fire Brigade Law 2015

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Time Frame	➤ Entire life spans of proposed project operation
Management Action	<ul style="list-style-type: none"> ➤ Must be provide fire extinguishers, fire hose reels and fire hydrants on the walls of the factory for fire emergency cases. ➤ Must be indicated the emergency exit and assembly point in public area. ➤ Regular inspection for existing firefighting equipment must be done. In case of fire emergency, water storage tank for fire frightening. ➤ The emergency fire alarms are installed at the factory for alerting the workers in case of fire. ➤ The main entrances and route for emergency cases of the factory must not be blocked with materials or machines for fire emergency cases ➤ Restrict the smoking area at the factory compound
Monitoring and Reporting	To check monthly Visual inspection, Firefighting equipment (fire extinguishers, firefighting hose, portable fire pumps, fire hose reels, fire monitor alert system) and firefighting tanks.
Estimated Cost	500,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of Glory Home (Myanmar) Limited

7.4. OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PLAN

Objective	➤ To provide a broad framework for improving standards of workplace health and safety to reduce work-related injury and illness.
Relevant Government Law and Rule	<ul style="list-style-type: none"> • Public Health Law (1972), Prevention and Control of Communicable Diseases Law 1995 (Amendment 2011), Occupational Safety and Health Law (2019)
Time Frame	➤ Entire life spans of proposed project
Management Action	<ul style="list-style-type: none"> ➤ First aid training, safety training, firefighting training or other essential training for machinery handling must be provided for emergency cases of workers. ➤ According to the observed light intensity values, the proponent should provide sufficient lighting for workers for safe working and reducing optical problems of the workers. ➤ Personal Protective Equipment (PPE) like earmuffs, safety gloves, helmets and goggles are provided for each department. ➤ To prevent electric shock hazards, electrical maintenance staff (handyman) is to be assigned to do regular inspections and take preventive measures. ➤ Manage the drainage systems of the factory to prevent health risk of the

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	<p>workers.</p> <ul style="list-style-type: none"> ➤ The maximum allowable noise level for workers is 90dB(A) for 8hours exposure a day. Thus, adequate protective noise impact measures in the form of ear muffs/ear plugs to the workers working in high noise areas.
Monitoring and Reporting	<ul style="list-style-type: none"> ➤ Weekly check fire extinguishers and water hydrant in position ➤ Daily inspect that all fire exist are open ➤ Servicing fire extinguisher and records accidents
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager, Operation Manager or Environmental Management Team of LP (Myanmar) Industrial Manufacturing Co., Ltd.

7.5. SOLID WASTE MANAGEMENT PLAN

Objective	<ul style="list-style-type: none"> ➤ To assess the activities involved for the proposed and determine the type, nature and estimated volumes of waste to be generated ➤ To identify any potential environmental impacts from the generation of waste at the site
Relevant Government Law and Rule	<ul style="list-style-type: none"> ➤ Yangon City Development Committee Law (2018), National Waste Management Strategy and Action Plan (Draft 2018)
Time Frame	<ul style="list-style-type: none"> ➤ Entire life spans of proposed project
Management Action	<ul style="list-style-type: none"> ➤ Must be provides separate garbage bins at each building. ➤ All of the solid wastes will be collected separately in garbage based on their types and stored in relevant separated waste storage area ➤ Final wastes should be disposed by using YCDC's service.
Monitoring and Reporting	<ul style="list-style-type: none"> ➤ Daily waste has to be collected and handover to YCDC waste collector ➤ The inventory record of waste disposal will be maintained as proof for proper management as designed
Estimated Cost	50,000 Kyats per month
Responsible Person	<p>Manager (HR)</p> <ul style="list-style-type: none"> ▪ Responsible for overall site cleanliness and waste management ▪ Regular waste collection to minimize excessive waste storage

7.6. LIQUID WASTE MANAGEMENT PLAN (WASTEWATER)

Objective	<ul style="list-style-type: none"> ➤ To implementation plan for the management of liquid waste from collection, through treatment and resource recovery, to residual
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	disposal
Relevant Government Law and Rule	➤ Yangon City Development Committee Law (2018), National Environmental Quality (Emission) Guidelines (2015), Underground Water Act
Time Frame	➤ Entire life spans of proposed project
Management Action	➤ Regular inspection and cleaning, oil traps, septic tank and adequate covers for all storage and waste disposal areas can decrease these contaminations. ➤ Avoid the discharges of chemical contained glue into the municipal drains.
Monitoring and Reporting	Frequency Biannually
	Parameters pH, Turbidity, Conductivity, Iron, Sulphate, TSS, TDS, Manganese, COD, BOD, Cyanide, Copper, Zinc, Carbonate
	Proper maintenance of drainage and sewerage system will be conducted periodically
Estimated Cost	500,000 Kyats per year
Responsible Person	Manager: To hire organization/ Independent third-party testing wastewater quality EHS officer: Monitor the condition of factory's drainage and sewerage system

7.7. HAZARDOUS WASTE MANAGEMENT PLAN

Objective	➤ To avoid environmental pollution and adverse health effects due to its improper handling & disposal of chemical contained glue
Relevant Government Law and Rule	➤ Yangon City Development Committee Law (2018), Explosive Ordnance Disposal Law (2018)
Time Frame	➤ Entire life spans of proposed project
Management Action	➤ Proper inspection and maintenance in storage of hazardous waste. ➤ Dispose of hazardous chemicals and containers in accordance with occupational health, safety and environmental requirements. ➤ The empty chemical containers will hand over to suppliers for recycle or appropriate disposal ➤ The hazardous wastes are transported by specially licensed carriers and disposed in a licensed facility (e.g., DOWA and YCDC)
Monitoring and	Any hazardous materials purchased should include a Material Safety Data Sheet (MSDS), otherwise known as a Safety Data Sheet (SDS) or Product

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Reporting	Safety Data Sheet (PSDS). By mandate of the World Health Organization's Inter-Organization Programmed for the Sound Management of Chemicals (IOMC), all manufacturers of hazardous materials are required to provide a MSDS so that end users can treat the materials properly.
Estimated Cost	1,000,000 Kyats per year
Responsible Person	HSE Manager or Environmental Management Team

7.8. ENERGY MANAGEMENT PLAN

Objectives:	➤ To improve energy efficiency, reduce cost, optimize capital investment, reduce environmental and greenhouse gas emissions, and conserve natural resources
Relevant government law and rule	➤ National Energy Management Committee (Myanmar Energy Master Plan 2015)
Time Frame	Once in a year throughout the factory life
Management Action	<ul style="list-style-type: none"> ➤ Installation of timers and thermostats to control heating and cooling ➤ Energy saving light installed in different area of the factory for saving energy ➤ Used of energy saving devices must be installed ➤ Ensure that good housekeeping measures such as turning off equipment and lights when not in use
Monitoring & Reporting	Conduct annual energy efficiency of audit to find out the scope for energy saving
Estimated cost	Approximately 1,000,000 Kyats per year
Responsibility	<p>Manager</p> <ul style="list-style-type: none"> ➤ To arrange energy, audit technical personnel ➤ To monitor and record electricity consumption, other related energy issues and take necessary actions if any problem arises

7.9. EMERGENCY RESPONSE AND NATURAL DISASTER MANAGEMENT PLAN

Objectives:	➤ To reduce the harmful effects of all hazards, including disasters. The World Health Organization defines an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming a disaster, which is even harder to recover from.
Relevant government law and rule	➤ Natural Disaster Management Law (2013)
Time Frame	➤ Entire life spans of the factory operation
Management Action	<ul style="list-style-type: none"> ➤ The factory management has taken proper measures to handle any emergency situation like fire, earthquake, flood and storm ➤ Provision and inspection of firefighting equipment and fire hydrant system in all the sections ➤ A detail evaluation plan (fire exist, emergency exit door, etc.) is established and communicated with workers ➤ Periodic inspection of safety relief valve provided with pressure vessels and

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	<p>equipment, preventive maintenance; aware the workers about electric shock by necessary training.</p> <ul style="list-style-type: none"> ➤ Regular fire drill operation is conducted ➤ Workers are informed about what to do in earthquake like stay in a safe place such as under table of desk, not to try move outside during earthquake, workers who will be outside during earthquake shall remain stay out of the building, trees, lump post, etc. Other relevant safety instruction of emergency situation it informed to workers by training ➤ Workers are aware of dangers from physical hazards such as obstacles covered by floodwater (storm debris, drainage opening, ground erosion) and from displaced reptiles (Snake) or other animals. ➤ A medical team has been prepared for primary treatment (First Aid) ➤ Prepare an emergency contact directory consisting contact numbers of nearest fire service, local police station, hospitals, etc. and display it in a place that everybody can see it easy. ➤ Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every month to discuss about safety management ➤ Ensure proper training of the employees about the disaster management, fire safety as well as occupational health and safety
Monitoring & Reporting	<p>Weekly check fire extinguishers and water hydrant in position</p> <p>Daily inspect that all fire exist are open</p> <p>Servicing fire extinguisher and records accidents,</p>
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	<p>Manager and EHS officer</p> <ul style="list-style-type: none"> ➤ Arrange firefighting training after every 3 months ➤ Responsible for fire control and response ➤ Monitoring daily danger warning and bans

7.10. CRISIS SITUATION MANAGEMENT PLAN

Objectives:	<ul style="list-style-type: none"> ➤ To reduce the harmful effects of all potential crisis situations. The World Health Organization defined an emergency as the state in which normal procedures are interrupted, and immediate measures (management) need to be taken to prevent it from becoming accidental or crisis issues, which are even harder to recover from normal situations.
Relevant government law and rule	<ul style="list-style-type: none"> ➤ Prevention and Control of Communicable Disease Law 1995 (Amendment in 2011), Myanmar Fire Brigade Law (2015), Occupational Safety and Health Law (2019), Social Security Law (2012)
Time Frame	<ul style="list-style-type: none"> ➤ Entire life spans of the factory
Management Action	<ul style="list-style-type: none"> ➤ The factory management has taken appropriate escape ways to handle any emergency situations like crisis, political cases and other criminal cases. ➤ Strictly Follow the prevention measures of COVID-19 during pandemic periods ➤ Prepare the factory from losing of unexpected adverse offensive and move all easily flammable materials are in or not in free crisis area ➤ Build a safety committee which from firefighting team, rescue team. The committee arrange a meeting every week to discuss about safety management of the factory within crisis periods. ➤ Ensure proper training of the employees about the crisis management, fire safety as well as health and safety.

Monitoring & Reporting	Daily check fire fighting equipment and water hydrant in position Daily care the health of workers in order not to spread the infection Ready position in fire fighting equipment, COVID-19 preventive measures and records accidents,
Estimated cost	Approximately 1,500,000 Kyats per year
Responsibility	Manager, OHS team, and fire fighting officer

7.10.1. Environmental Monitoring Plan

Monitoring of the anticipated environmental and social impacts in the receiving environments is important in evaluating the effectiveness of mitigation plan and compliance with the regulatory measures in place. During the operation phase, monitoring will be undertaken to ensure that proposed mitigation measures for negative impacts and enhancement measures for positive impacts are implemented. Main objectives of environment monitoring plan include;

1. To identify and resolve environmental issues and other functions that may arise during the operation phase
2. To implement air quality and noise affect monitoring plan during the operation phase
3. To check and quantify the overall environmental performance, implement action plans and recommend and implement remedial actions
4. To conduct regular reviews of monitored data as the basis for assessing mitigation measures are identified, designed and implemented;
5. To assess and interpret all environmental monitoring, data to ascertain whether environmental control measures and practices are functioning in accordance to specifications
6. To predict the unforeseen impacts

7.10.2. Environmental Monitoring Schedule and Reporting

The EMoP cell members responsible may conduct daily, weekly, or monthly general inspections of the project are and facilities. The objective is to identify non-compliance to EMoP is provided the environmental monitoring schedule for LP Myanmar. The proposed factory submits monitoring report to the Ministry not less frequently than every six (6) months, as provided in a schedule in the EMP,

Table 7-1 Environmental Monitoring Process

Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
Operation Phase					
Common	Monitoring of mitigation measures	Yearly (3 years after operation)	The project	2,500,000 Kyats	Environmental Management Team's LP (Myanmar) Industrial Manufacturing Co., Ltd.
Air quality	SO ₂ , NO ₂ , CO, O ₃ , PM _{2.5} , PM ₁₀	Biannually monitoring and reporting to ECD	Outdoor of proposed project	1,000,000 Kyats per year	Environmental Management Team's LP (Myanmar) Industrial

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Issues	Parameter	Frequency	Area to be monitored	Monitoring cost	Responsible Organization
		(first 3 years after operation)			Manufacturing Co., Ltd.
Waste Generation	Solid waste, Liquid waste and Hazardous waste	Weekly	Recycle house and temporary storage area at the factory office	50,000 Kyats per month	Environmental Management Team's LP (Myanmar) Industrial Manufacturing Co., Ltd.
Fire Hazardous	Visual inspection, firefighting equipment	Monthly	At the factory	500,000 Kyats per year	Environmental Management Team's LP (Myanmar) Industrial Manufacturing Co., Ltd.
Natural Disaster		Monthly	The whole factory	1,500,000 Kyats	Environmental Management Team's LP (Myanmar) Industrial Manufacturing Co., Ltd.
Crisis Situation	Loss of property and injuries	Monthly	The whole factory	1,500,000 Kyats	Environmental Management Team's LP (Myanmar) Industrial Manufacturing Co., Ltd.
Decommissioning Phase					
Air quality	SO ₂ , NO ₂ , CO, O ₃ , PM _{2.5} , PM ₁₀	One time during this phase	One point in the production area	1,000,000 Kyats	Land Owner
Noise	Noise level in decibel (dBA)	One time during this phase	One points in demolishing area	1,000,000 Kyats	Land Owner
Rehabilitation	Recovering and Revegetation		All decommissioning area	Depends on ability and situation	Land Owner

CHAPTER 8 PUBLIC CONSULTATION

8.1. PUBLIC CONSULTATION PROCESS

This chapter presents public consultation and information disclosures during the remaining period of the Environmental Management Plan (EMP). Public consultation is a process for gathering opinions and suggestions from related stakeholders. It will help to improve the implementation of the project, set the scope for the environmental impact assessment and development mitigation measures, which will be reported in the project's EMP report.

Public consultation conducted as part of this EMP project has three purpose:

- 1) Information the stakeholders about the Project, environmental and social issues related to project construction and operation, and mitigation measures to minimize environmental and social impacts;
- 2) Considering the views, concerns, and perceptions of stakeholders, communities and individuals that could be affected by the project or who otherwise have an interest in the project;
- 3) Participation and partnership where issues and needs are jointly discussed and assessed.

Although the public consultation is the effective way to achieve the information purpose, to seek views of the participation and partnership purpose, it cannot hold due to the current condition of Covid-19 diseases which started spreading in Myanmar since April, 2020.

During the preparation of this report, the third wave of COVID-19 (Omicrons) becomes serious in Yangon. The Ministry of Health and Support declared to avoid gathering more than 5 people by closely contacting and to prevent spreading of disease. Thus, the present condition, the project's environmental condition and the management plans are through the social media of Myanwei Environmental Solution Company Limited Facebook page

(<https://drive.google.com/file/d/1Eah0aeY93ZLwRS2AZENLWWlp1KbCfOmS/view?usp=drivesdkde>)

clared on 27st January 2022. The suggestions, complains and comments from the public, organization and stakeholder are warmly welcome and accept via mailing, comment, telephoning and messengers.

Details of project information disclosure in the public consultation Power Point presentation (Annex H) which is describing in below and includes as follows;

- Objective of EMP
- Project Description
- Existing Environment and Monitoring
- Potential Impact and Mitigation measures

- Cooperative Social Responsibility (CSR)



LP (Myanmar) Industry Manufacturing Co.,Ltd၏ CMP စနစ်ဖြင့်



CHAPTER 9 ENVIRONMENTAL MANAGEMENT PLAN

9.1. OBJECTIVE OF ENVIRONMENTAL MANAGEMENT PLAN

An Environment Management System (EMS) is a framework that helps an organization achieves its environmental goals through consistent review, evaluation, and improvement of its environmental performance. The assumption is that this consistent review and evaluation will identify opportunities for improving and implementing the environmental performance of the organization. The EMS itself does not dictate a level of environmental performance that must be achieved; each organization's EMS is tailored to its own individual objectives and targets.

An EMS encourages an organization to continuously improve its environmental performance. The system follows a repeating cycle. The organization first commits to an environmental policy, then uses its policy as a basis for establishing a plan, which sets objectives and targets for improving environmental performance. The next step is implementation. After that, the organization evaluates its environmental performance to see whether the objectives and targets are being met. If targets are not being met, corrective action is taken. The results of this evaluation are then reviewed by top management to see if the EMS is working. Management revisits the environmental policy and sets new targets in a revised plan. The company then implements the revised plan. The cycle repeats, and continuous improvement occurs.

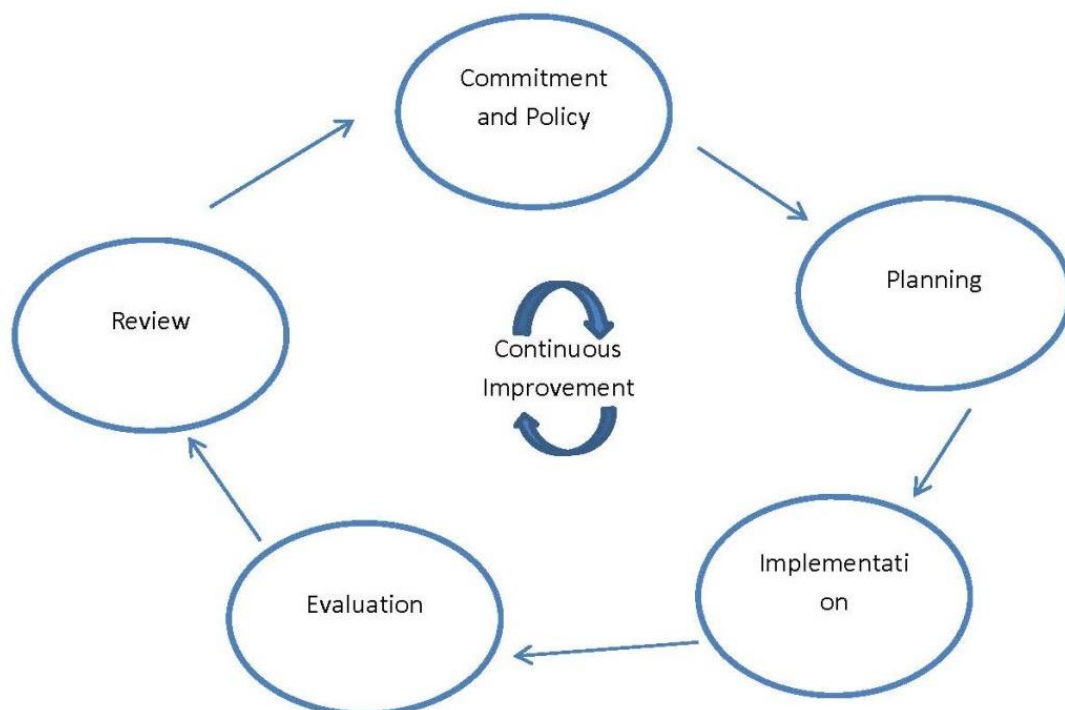


Figure 9-1 Continuous Improvement Circle

- **Commitment and Policy** – Top management commits to environmental improvement and establishes the organization's environmental policy. The policy is the foundation of the EMS.

- **Planning** – An organization first identifies environmental aspects of its operations. Environmental aspects are those items, such as air pollutants or hazardous waste that can have negative impacts on people and the environment. An organization then determines which aspects are significant by choosing criteria considered most important by the organization. For example, an organization may choose worker health and safety, environmental compliance, and cost as its criteria. Once significant environmental aspects are determined, an organization sets objectives and targets. An objective is an overall environmental goal (e.g., minimize use of chemical X). A target is a detailed, quantified requirement that arises from the objectives (e.g., reduce use of chemical X by 25% by September 1998). The final part of the planning stage is devising an action plan for meeting the targets. This includes designating responsibilities, establishing a schedule, and outlining clearly defined steps to meet the targets.
- **Implementation** – An organization follows through with the action plan using the necessary resources (human, financial, etc.). An important component is employee training and awareness for all employees. Other steps in the implementation stage include documentation, following operating procedures, and setting up internal and external communication lines.
- **Evaluation** – A company monitors its operations to evaluate whether targets are being met. If not, the company takes corrective action.
- **Review** – Top management reviews the results of the evaluation to see if the EMS is working. Management determines whether the original environmental policy is consistent with the organization's values. The plan is then revised to optimize the effectiveness of the EMS. The review stage creates a loop of continuous improvement for a company.

9.1.1. Institutional Requirement

LP Myanmar will be managed the development of the proposed project. The project proponent should appoint Health, Safety and Environment (HSE) issues throughout the duration of the project phases. HSE team is responsible for implementation and monitoring of Environmental Management Plan (EMP) and Monitoring Plan as well as coordination with local authorities and the nearby communities. The HSE Team also makes regular review of EMP to cover all potential impacts, amendments and modifications.

9.2. RESPONSIBILITIES OF THE ENVIRONMENTAL MANAGEMENT PLAN

In order to ensure the sound development and effective implementation of the EMP, it will be necessary to identify and define the responsibilities. The environmental management practices, procedures, and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and regulations of the Republic of the Union of Myanmar. The following entities should be involved in the implementation of this EMP:

LP (MYANMAR) INDUSTRIAL MANUFACTURING CO., LTD. The proponent will be charged with the responsibility for ensuring that the proposed development has been accomplished in an environmentally sound manner. This can be achieved by inclusion of environmental specifications in the tender specifications, selection of environmentally conscious contractors, and supervision to ensure that the objectives of this EMP are met. The implementation of Environmental

Management Plan (EMP) process will prepare and follow up by appointed persons for health, safety, and environmental management under the instruction of management team of LP Myanmar for EMP implementation facilities.

Environmental Conversation Department (Yangon Region): The responsibility of ECD is to exercise general supervision and coordinating over all matters relating to the environment and to be instrumental in providing guidance for recognized regulatory frameworks.

Third-Party Environmental Consultant: The environmental consultant will have to ensure that the proposed EMP is up to date and is being followed properly by the proponent. Periodic audits of the EMP will have to be done to ensure that its performance is as expected, by comparing with operating standards so that any corrective actions can be taken.

9.2.1. Structure and Responsibilities for the EMP Development and Implementation

The HSE officer is responsible to the HSE components of the project and on matters relating to the implementation of the EMP throughout operation life. The S&E officer will have responsibilities that include:

- Ensure a monitoring system is in place to track and report all health, safety and environmental incidents;
- Carry out a thorough initial site inspection of environmental controls prior to work commencement;
- Record and provide a written report to the General manager and production team of non-conformances with the EMP and require the HR supervisor to undertake mitigation measures to avoid or minimize any adverse impacts on environment or report required changes to the EMP;

9.3. ENVIRONMENTAL IMPACT MITIGATION PLAN FOR THE OPERATION PHASE

According to the impact assessment occurred in during the operation phase mentioned in **Chapter 6** and environmental issues associated with the operational phase primarily include the following issues:

1. Impact of gases emission
2. Impact of Noise from operation of machinery, air compressor and generator operation
3. Impact of Electricity consumption
4. Impact of Solid Waste and Wastewater Discharge
5. Occupational Health and Safety for employees and workers

Although the proposed LP Myanmar has a number of adverse impacts on the surrounding environment, all of impacts will be reduced to some extent by related proper mitigation measures. However, the unavoidable impacts would evolve from Occupational Health and Safety of workers in the aspect of physical hazards with long term and short-term working. So, mitigation plan of operation phase is mentioned in Table 9-1. These activities shall be carried out to show that the factory operations comply with the maximum allowable environmental norms and standards.

Table 9-1 Environmental impact mitigation plan

Components	Recommended mitigation measures	Residual Impact	Time Frame	Responsible Person
Air Pollution <ul style="list-style-type: none"> Smoke and pollutants emission from sawing sections, boiler and generator 	<ul style="list-style-type: none"> Plant plantation programs must be implement at the project site Supply the PPE and regularly collect the shaved fragments 	Moderate	Throughout Operation Phase	HSE Coordinator
Noise Generation <ul style="list-style-type: none"> Operations, boiler and movement of forklifts Emergency Use of Generator 	Ensure all the machineries are well maintained to reduce noise <ul style="list-style-type: none"> Monitor the ambient and work zone noise level to conform the stipulated norms Emergency use of diesel generator must be ensured by soundproof Noise level monitoring programs must be designed and conducted by trained specialists at production area 	Very Low	Throughout Operation Phase	HSE Coordinator
Water consumption	Install water meter for internal control of water consumption <ul style="list-style-type: none"> All staff must be trained and made aware conservation practices and proper methods of water use must be placed in the toilets and other areas of water consumption 	Low	Throughout Operation Phase	HSE Coordinator
Effect of sewage effluents from the factory processing	<ul style="list-style-type: none"> Properly designed and installed the sewage effluents treatments facilities to prevent any hazard to public health or contamination of land, nearest surface water and ground water Ensure that lines and sewage system of factory drainage and the nearest public drainage are watertight and sufficient capacity Regular monitoring the sewage treatment facilities and follow the NEQE guideline Clean the factory 's drainage to avoid odor emission and to avoid the block of water flow 	Low	Throughout Operation Phase	HSE Coordinator
Waste Disposal <ul style="list-style-type: none"> Production waste, packaging materials, food waste from canteen and office waste 	<ul style="list-style-type: none"> Use of less excessive and more environmentally friendly packaging materials Regularly inspection must be carried out of all bulk containment on site prevent leakage and product loss Train both cleaners and employees for proper good housekeeping practice at production area 	Low	Throughout Operation Phase	HSE Coordinator

Components	Recommended mitigation measures	Residual Impact	Time Frame	Responsible Person
	<ul style="list-style-type: none"> Regular check the temporary storage site of generated solid waste from the whole factory All employee must be followed and practiced by the principle of waste reduction, recycling, recovery and reusing Solvents and Oil waste must be collected by designated jerry cans Provide appropriate control devices in storage of solvents, diesel to avoid possible leakages Dispose at permitted areas specially designed to receive the waste Separate areas must prepare for rejected products, waste materials and chemicals. All waste must be disposed of any applicable environmental regulation Ensure that all inside and outside areas, buildings, facilities and equipment are kept clean and in good state to function as intended and to prevent contamination 			
Occupational Health and Safety <ul style="list-style-type: none"> Accident and incidents leading to serious injuries Exposure of Noise Risk of increase in road accidents Electrical Hazards Risk of fire 	<ul style="list-style-type: none"> Monitor and strict of employee and workers to wear the uniform and full personal protective equipment (PPE) during working at operation area Arrange appropriate health check-up facilities Measure the PM 10 and PM2.5 concentration in production area by quarterly and compare with NEQ (emission) guideline Plant must implement the safety and health program designed to identify, evaluate, monitor and control safety and health hazards All employee must not be exposed at noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. Use of hearing protection must be enforced actively when the equipment sound level over 8 hours reaches 85 dB (A) Ensure all rooms are well ventilated and Lighting Ensure factory laws are strictly followed Clearly display warning signs or symbols for dangerous areas at the factory Monitoring plan must be prepared by accredited professionals Regular maintenance of the road 	Low	Throughout operation phase	HSE Coordinator/ Operation Manger

Components	Recommended mitigation measures	Residual Impact	Time Frame	Responsible Person
	and Use of traffic signs <ul style="list-style-type: none"> The employee must review and assess known and suspected presence of biological agents at the work place and implement appropriate safety measures, monitoring, training, and training verification programs 			

9.4. CAPACITY BUILDING AND TRAINING PLAN

The emergency preparedness is vital, as quick and correct response is necessary in case of emergency to reduce injuries, harm and other damage. Care should be given for during processing activities in order to prevent synthetic errors and accidental cases (e.g., electricity shock and fire hazards).

The emergency response plans should be established for handling all foreseeable emergencies in the workplace and must provide the following;

9.4.1. Assignment of responsibilities

All senior staff such as a line/production manager or safety officer should be assigned to lead the emergency response team and charged with the duties of (1) assessing the emergency and taking necessary actions (2) overseeing the implementation of the emergency response plan (3) organizing regular drill (4) ensuring all emergency equipment is well maintained.

9.4.2. Emergency procedures

Emergency procedures are operating instructions for employees to follow in emergency case




About work safety in the concerned processing, the management team should




- Identify and list out all possible emergency situations in the workplace
- Assess the effects and impacts of the emergency situations
- Establish emergency response plans
- Provide and maintain emergency equipment and other necessary resources
- Ensure that staff are familiarized with the arrangements in case of emergencies by providing procedural instructions and employee training and organizing drills

9.4.3. Training for Emergencies

The type, amount and frequency of training varies, depending upon the task's employees are expected to perform. Although training must be provided to employees at least annually, safety meetings and drills should be conducted at more frequent intervals.

Regardless of the specific type of facility, training should include, though not be limited to the following;

-  Hazard recognition and prevention (fire, explosion, etc.)
-  Proper use of fire extinguishers
-  Emergency reporting procedures

-  Preventive maintenance
-  Hazardous materials spill response
-  First Aid

9.4.4. Fire Prevention and Protection

The fire prevention and protection program must address the following topics:

Prevention; policies, practices and procedures designed to keep the conditions necessary for a fire from coming together

- Hot work permits
- Lockout/tag out policies
- Design specifications for storage of flammable materials

Severity reduction; policies, practices and procedures designed to reduce the spread of fire and end the fire.

- Emergency plans
- Alarm systems
- Portable fire extinguishers
- Fire Protection Equipment

Cleanup; policies, practices and procedures designed to return the affected area to an operational level and reduce other losses created by improper cleanup

- First aid
- Removal of debris to an appropriate waste site
- Equipment and facility repair

9.4.5. Fire Protection Equipment

1. **Explosion Suppression Systems:** Explosion suppression systems should be used in unusually hazardous areas such as elevator legs, boots and head, or in areas such as bins, distributors and tanks.
2. **Portable Fire Extinguishers:** All buildings within a facility must have fully charged and operable portable fire extinguishers. If employees are expected to use portable extinguishers or other firefighting equipment against incipient fires, they must be trained to use the equipment. Training must include the following:
 - Correct type of extinguisher to use on different classes of fire
 - Proper techniques for use of the equipment to extinguish a fire
3. **Standpipes and Hoses:** All areas within a facility that are above 75 feet from ground level and in which combustible materials other than grain are stored should have wet or dry standpipes and hoses installed.
4. **Automatic Sprinkler Systems:** Automatic sprinkler systems are recommended in areas containing combustible materials.
5. **Fire Hydrants:** All grain and feed mill facilities should have adequate public or private fire hydrants on site. Each fire hydrant should have an adequate water supply.

9.4.6. Fire Safety and Evacuation Plan

Fire Evacuation plans should include the following information

- Emergency escape routes must be clearly shown on floor plans and workplace maps
- Employers must know that their employees know the emergency escape routes
- Procedures for employees who must remain to operate critical equipment before evacuating
- Identification and assignment of personnel responsible for rescue or emergency medical aid

Fire Safety Plans should include the following information:

1. Procedure for reporting a fire or other emergency
2. Site plans indicating the following
 - The Occupancy assembly point
 - The locations of fire hydrants
 - The normal routes of fire department vehicles access
3. Floor Plans identifying the locations of the following
 - Exits
 - Primary evacuation routes
 - Secondary evacuation routes
 - Accessible egress routes
 - Areas of refuge
 - Exterior area for assisted rescue
 - Manual fire alarm boxes
 - Portable fire extinguishers
 - Occupant-use hose stations
 - Fire alarm annunciators and controls

The following American National Fire Fighting Association (NFFA) Standards must be following.

Table 9-2 American National Fire Fighting Association (NFFA) Standards

No.	Parameters	Proposed Capacity	Remark
1	Fire water flow	14 bars	
2	Deluging rate	12.0 liters/m ² /min	
3	Foam rate	10.0 liters/m ² /min	
4	Maximum water pressure	190 liters/min	For storage area

Emergency evacuation Drill: An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency excavation procedures

Employee Training and Response Procedures: Employee shall be trained in the fire emergency procedure described in their fire evacuation and fire safety plans and training should be based on these plans;

Frequency: Employee shall receive training in the contents of fire safety and evacuation plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the fire code official upon request.

Employee Training Program: Employee shall be trained in fire prevention, evacuation and fire safety in accordance with the following sections.

Fire Prevention Training - Employee shall be apprised of the fire hazards of the materials and processes to which they are exposed. Each employee shall be instructed in the proper procedures for preventing fires in the conduct of their assigned duties

Evacuation Training – Employees shall be familiarized with the fire alarm and evacuation signals, their assigned duties in the event of an alarm or emergency, evacuation routes, areas of refuge, exterior assembly areas and procedures for evacuation

Fire Safety Training – Employee assigned fire-fighting duties shall be trained to know the locations and proper use of portable fire extinguishers or other manual fire-fighting equipment and the protective clothing or equipment required for its safe and proper use.

9.4.7. Site Fire Control

1. Alert other people through fire alarm
2. If small, control using an extinguisher
3. Contact fire brigade if not under immediate control
4. Attend to human life in immediate danger
5. For electrical fires turn off power before fighting
6. Once out of the building, stay out. Do not allow people to go back into the burning building to collect valuables. While evacuating the building, close doors (but do not lock) to slow down the spread of fire
7. Obey all instructions
8. Proceed to an emergency evacuation area (Muster Point)

9.4.8. Fire Safety Plan and Firefighting System Prepared

For fire safety plan, LP has a plan to keep sufficient amount of fire extinguishers, in case of emergency fire problems in factory building. Firefighting training plan is also prepared for all employees by using the instructions, techniques and guidelines in concern with fire emergency matters according to the guidelines of Myanmar Fire Services Department. Moreover, smoking inside the building is strongly prohibited to avoid unwanted fire problems and fire water will be stored by capacity of (6,000 gallon) of overhead water tank.



Figure 9-2 Fire Safety Plan and Firefighting system

9.4.9. Employee Information and Training

Employees must be informed about any operations in their work area where hazardous chemicals or materials are present. They must also be informed about the locations and availability of the hazard communication program, list of chemicals and SDSs. Employees must receive training on the following:

- Methods for detecting the presence or release of a hazardous chemical, such as monitoring devices and the visual
- appearance or odor of the chemical
- Physical and health hazards of chemicals in their work area
- How to protect themselves using work practices, emergency procedures and personal protective equipment
- How to interpret the information on the labels and MSDSs

9.4.10. Health and Safety Training Plan for Worker

Health and Safety Training plan currently used and provided in LP Myanmar to all employees and workers by trainings internally and externally. Specific trainings are recommended and conducted according to the health and safety guidelines to enhance worker's health and to prevent all potential risks and hazards might occur in the factory. All required trainings related to

health and the respective departments propose safety or operational parts, top management makes decision and HR organizes and conducts the trainings.

Table 9-3 Training Plan Used

No.	Health and Safety Guidelines	Training needs
1.	Management	General fire and emergency response plan, evacuation. All training materials and procedures covering health and safety for workers and employees
2.	Machine safety and noise management	Training for machine operations to all operators Use of PPE and proper use of any necessary protection Maintenance and Emergency procedures
3.	Environment safety	Understanding and training on recognition and maintenance not to affect environment
4.	Material storage and safety	Safety use of related devices and machines Use of necessary protections in working areas Sanitation work
5.	Fire Safety	Firefighting and evacuating training and practices Firefighting materials/ devices use
6.	First Aid	first aid / CPR/ AED training from providers (Outsource) training on hazard of pathogens

9.5. CORPORATE SOCIAL RESPONSIBILITY (CSR) PLAN

The CSR activities have the objective to uplift quality of life and gain favorable relations from all communities in the operation area. The CSR program for LP Myanmar consists of three main sectors; Health, Education and Community Development Sector. CSR activities are conducted in compliance with MIC's guideline for implementation of CSR program.

LP Myanmar will contribute 2% of our Net Profit to social welfare activities that will help society and country of Myanmar. Our social welfare activities shall include training of our employees such as on job training to be more qualified, language (Chinese) training on weekends with experienced teachers and providing necessary healthcare such as medical checkups and giving proper medical knowledge about diseases and its prevention. Part of our CSR activity such as donations will also contribute to public school around our factory (Table 9-4).

Table 9-4 CSR plan

No	Particle	Contribution
1	Public school	0.5%
2	Non-profit training	1
3	Employees healthcare	0.5%

9.5.1. Public School

We will contribute 0.5% of our net profit to the public school near the factory to be a part of creating the better community. We will also work together with the school to understand more about the needs and we will also ensure that our contributions will be used in the most effective and efficient way for the society.

9.5.2. Non-profit Training

We will contribute 1% of our net profit for the trainings of our Employees. Our trainings include job-related trainings, language trainings and safety trainings. The main objective of our trainings is that we want our rubber wood sewn timber with their work but also improving their other skills such as language and promoting knowledge about safety measures and occupational health employees to be not only become more productive and more qualified.

9.5.3. Healthcare

One of our main concern is the well-being of our employees. We will contribute 0.5% of our net profit for the healthcare, which includes medical checkup for the employees and providing health education to our workers.

9.6. BUDGET PLAN FOR ENVIRONMENTAL MANAGEMENT AND MONITORING

This section describes the budget plans for the environmental management and environmental monitoring by the project proponent. On the other hand, LP Myanmar will take necessary environmental mitigation measures and its expenses for the environmental management not only at the construction and operation phases but also at the closing phase in accordance with their responsibility for the studies of recommendation.

The following table shows the expenditures for the implementation of EMP for operation phase annually. Estimation cost for EMP implementation is presented in Table 9-5.

Table 9-5 Cost estimation for EMP implementation

No	Item	Frequency/Times	Cost (USD)
Mitigation Plan			
1	Maintenance of air ventilation system	Once per year	200 per year
2	Grass plantation within the area of factory compound	Once per three month	70 per three month
3	Solid waste disposal	12	1000 per year
4	Purchase of Personal Protective Equipment (PPE)	Once per half a year	150 per half a year
5	Medical Check-up and Health Insurances	Once per year	500 per year
Emergency Preparedness			
1	Fire extinguisher	Once per month	300 per month
2	Fire alarm system	Once per month	
3	First Aid Fits	Once per month	
Monitoring Plan			
1	Air quality	2	800 per year
2	Noise level	2	300 per year
3	Environmental compliance auditing	1	1,000 lump sums

9.7. GRIEVANCE REDRESS MECHANISM (GRM)

People who live near the project affected area or stakeholders can complain about the problems and impacts that they suffer; they can complain through Grievance Committee, which

includes the responsible persons of LP Myanmar representative from Thar Du Kan and representative from General Administration Department (Shwe Pyi Tar Township). Small issues will be solved at the Grievance Committee stage and other unsolved problems will be submitted to higher responsible authorities and finally the responsible person decided by the court in legal terms. The following diagram (Figure 9-3) show steps of Grievance Redress Mechanism of Proposed Factory Project.

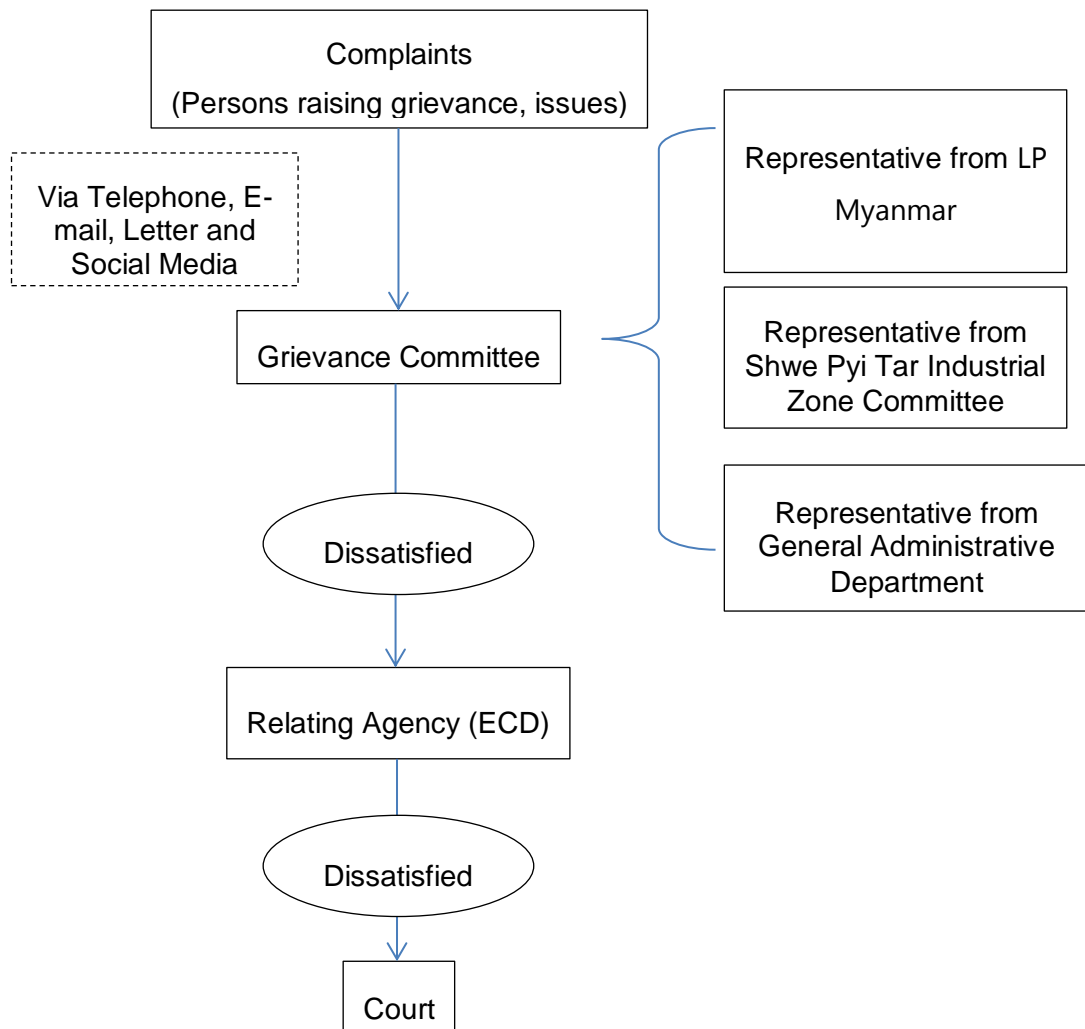


Figure 9-3 Grievance Redress Mechanism flow diagram

CHAPTER 10

CONCLUSION AND RECOMMENDATION

10.1. CONCLUSION

IEE has been prepared for LP Myanmar is located at Land Plot No.(41),Myay Taing Block No.5, TharDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region. The main objective of the study is focused specially on the required environmental management measures or creating environmentally friendly workplace. An IEE has been carried out for the factory according to the requirement of the proponent as it has been made for manufacturing and export of Rubber Wood Sewn Timber by using local Rubber Wood.

Thus, the factory management can take proper mitigation steps against adverse environmental impacts by following this IEE. The necessary measure to mitigate impact regarding different environmental parameter such as air, water, waste, noise has been proposed in this IEE.

However, all necessary implementation measures to mitigate adverse environmental, health and safety impacts have already been taken to meet National Environmental Quality (Emission) Guideline (2015). On the other, the factory has positive impacts in terms of environmental in the operation phase. Further, this will indirectly help in boosting up the national economic condition through foreign investment. An outline of IEE has been given in the present report to mitigate/enhance the impacts, which occurs during operation phase of the factory.

The effective implementation of the mitigation measures proposed will ensure towards good environmental management within the proposed project area. Furthermore, the environmental monitoring plan prepared as part of the EMP will provide adequate opportunities to address any residual impacts during the operation phase.

In conclusion, it has been figured out that, the proposed Rubber Wood Sewn Timber factory is going to generate local employment opportunities and enhance capabilities and working skills of employees. Consequently, their socio-economic standard is expected to be improved and undertaking corporate social responsibilities (CSR) as recommended. The study further concluded that positive impacts will be of immense benefit to the local community and national development as well.

10.2. RECOMMENDATION

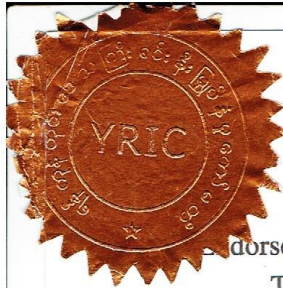
This is recommended that;

- All appropriate environmental management measures detailed in this report, together with any other environmental management commitments should be implemented throughout the entire life of the factory
- Solid wastes, liquid wastes, air pollutions and noise problems need to implement managements systematically according to EIA Guidelines, YCDC rules and regulation.
- Workers should be provided proper training and it should be ensured that workers use PPE during factory operation area.

- Daily, monthly and annual action plan shall be formulated based on this EMP (Chapter 8) and practiced at operation level.
- Keep full records of environmental management activities and present to annual independent third-party environment audit.
- Abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

Finally, the proponent should follow the comments and suggestions made by ECD after reviewing this IEE report. Once concerned authorities approve IEE report, effective implementation of IEE by the project proponent is essential. The proponent should abide environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar.

APPENDIX A
YRIC Endorsement of LP (MYANMAR) INDUSTRIAL MANUFACTURING
CO., LTD.



THE REPUBLIC OF THE UNION OF MYANMAR
YANGON REGION INVESTMENT COMMITTEE
ENDORSEMENT



Endorsement No. YGN – 079 /2018

Date 30 August 2018

This endorsement is issued by Yangon Region Investment Committee according to the section 25, sub-section (d) of the Myanmar Investment Law-

- (1) Name of Investor MR. PENG, HAO
- (2) Citizenship CHINESE
- (3) Residence Address NO.11, 2ND FLOOR, UNIT 1, BUILDING 28, NO.330,SECTION 1, NORTH RING ROAD, JINNIU DISTRICT, CHENGDU CITY,SICHUAN PROVINCE, PEOPLE'S REPUBLIC OF CHINA
- (4) Name and Address of Principal Organization -
- (5) Place of Incorporation -
- (6) Type of business MANUFACTURING AND EXPORT OF RUBBER WOOD SEWN TIMBER BY USING LOCAL RUBBER WOOD ON CONTRACT MANUFACTURING PROCESS (CMP) BASIS
- (7) Place(s) of investment Project PLOT NO. 41, MYAY TAING BLOCK NO. 50, THARDU KAN INDUSTRIAL ZONE, SHWE PYI THAR TOWNSHIP, YANGON REGION
- (8) Amount of Foreign Capital US\$ 0.922 MILLION
- (9) Period for Foreign Capital to be brought in WITHIN TWO YEARS FROM THE DATE OF ISSUANCE OF ENDORSEMENT
- (10) Total Amount of Capital (Kyat) EQUIVALENT IN KYAT OF US\$ 0.922 MILLION
- (11) Construction/ Preparation Period 2YEARS AND 6 MONTHS
- (12) Validity of Endorsement 35 YEARS
- (13) Form of Investment WHOLLY FOREIGN OWNED
- (14) Name of Company Incorporated in Myanmar LP (MYANMAR) INDUSTRIAL MANUFACTURING COMPANY LIMITED



YRIC2018079

Handwritten signature of the Chairman

Chairman

Yangon Region Investment Committee



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ
အတည်ပြုမိန့်

အတည်ပြုမိန့်အမှတ် ရကတ-၀၇၉ /၂၀၁၈ ၂၀၁၈ ခုနှစ် ဩဂုတ်လ ၃၀ ရက်
ရန်ကုန်တိုင်းဒေသကြီး ရင်းနှီးမြှုပ်နှံမှု ကော်မတီသည် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ
ပုဒ်မ-၂၅ ပုဒ်မခွဲ (ဃ) အရ ဤအတည်ပြုမိန့်ကိုထုတ်ပေးလိုက်သည် -

- (၁) ရင်းနှီးမြှုပ်နှံသူအမည် MR. PENG, HAO
- (၂) နိုင်ငံသား CHINESE
- (၃) နေရပ်လိပ်စာ NO.11, 2ND FLOOR, UNIT 1, BUILDING 28, NO.330, SECTION 1, NORTH RING ROAD, JINNIU DISTRICT, CHENGDU CITY, SICHUAN PROVINCE, PEOPLE'S REPUBLIC OF CHINA
- (၄) ပင်မအဖွဲ့အစည်းအမည်နှင့်လိပ်စာ -
- (၅) ဖွဲ့စည်းရာအရပ် -
- (၆) ရင်းနှီးမြှုပ်နှံသည့်လုပ်ငန်းအမျိုးအစား CONTRACT MANUFACTURING PROCESS (CMP) စနစ်ဖြင့် ပြည်တွင်းမှ ရာဘာသစ် ကုန်ကြမ်းကို ရယူပြီး ရာဘာသား ထုတ်လုပ်၍ ပြည်ပသို့ ရာခိုင်နှုန်းပြည့် တင်ပို့ခြင်းလုပ်ငန်း
- (၇) ရင်းနှီးမြှုပ်နှံသည့်အရပ်ဒေသ(များ) မြေကွက်အမှတ် ၄၁၊ မြေတိုင်းရပ်ကွက် အမှတ်-၅၀၊ သာဓုကန် စက်မှုဇုန်၊ ရွှေပြည်သာမြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီး
- (၈) နိုင်ငံခြားမတည်ငွေရင်း ပမာဏ အမေရိကန်ဒေါ်လာ ၀.၉၂၂ သန်း
- (၉) နိုင်ငံခြားမတည်ငွေရင်းယူဆောင်လာရမည့်ကာလ အတည်ပြုမိန့် ရရှိသည့် နေ့မှ ၂ နှစ် အတွင်း
- (၁၀) စုစုပေါင်း မတည်ငွေရင်းပမာဏ(ကျပ်) အမေရိကန်ဒေါ်လာ ၀.၉၂၂ သန်းနှင့် ညီမျှသော မြန်မာကျပ်ငွေ
- (၁၁) တည်ဆောက်မှု/ ပြင်ဆင်မှုကာလ ၂ နှစ်နှင့်၆လ
- (၁၂) အတည်ပြုမိန့်သက်တမ်း ၃၅ နှစ်
- (၁၃) ရင်းနှီးမြှုပ်နှံမှုပုံစံ ရာခိုင်နှုန်းပြည့် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု
- (၁၄) မြန်မာနိုင်ငံတွင် ဖွဲ့စည်းမည့် ကုမ္ပဏီအမည် LP (MYANMAR) INDUSTRIAL MANUFACTURING COMPANY LIMITED



၂၀၁၈/၁၂/၃၀
ဥက္ကဋ္ဌ

ရန်ကုန်တိုင်းဒေသကြီးရင်းနှီးမြှုပ်နှံမှုကော်မတီ

Confidential



THE REPUBLIC OF THE UNION OF MYANMAR 509
YANGON REGION INVESTMENT COMMITTEE 30.8.2018

Plot No. 49, Seinlae May Street,
Kabar Aye Road Yankin Township, Yangon



Tel: 01- 658263

Our ref : YRIC-1/E-079/2018(509)

Fax: 01-658264

Date : 30 August 2018

Subject: Decision of the Yangon Region Investment Committee on the Endorsement for manufacturing and export of rubber wood sewn timber by using local rubber wood on contract manufacturing process on CMP basis under the name of LP (Myanmar) Industrial Manufacturing Company Limited

Reference: LP(Myanmar)Industrial Manufacturing Company Limited's letter dated 8th August 2018

1. The Yangon Region Investment Committee, at its meeting (11/2018) held on 10th August 2018, approved the Endorsement for manufacturing and export of rubber wood sewn timber by using local rubber wood on contract manufacturing process on CMP basis under the name of LP(Myanmar)Industrial Manufacturing Company Limited submitted by Mr. Peng,Hao (51%) and Mr. Huang,Zhiping (49%) from People's Republic of China as a wholly foreign owned investment in accordance with the Myanmar Investment Law and Rules.

2. The terms and conditions of the "Endorsement" are stated in the following paragraphs:

- (a) The term of an Endorsed project shall be thirty-five (35) years commencing from the date of the issuance of the Endorsement by the Yangon Region Investment Committee.
- (b) The term of the Lease Agreement for land and buildings shall be fifteen (15) years and extendable for two times for ten (10) years commencing from the date of signing of the Lease Agreement between U Ye Aung (Lessor) and LP (Myanmar) Industrial Manufacturing Company Limited (Lessee).

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- 2 -

- (c) The annual rent for the land and buildings shall be US\$ 62220.00 (United States Dollar sixty-two thousand, two hundred and twenty only) calculated for the total land measuring 12913.519 square meters (3.191 acres) and annual lease rates are as follow:

	Year	Annual Lease rate US\$/sqm
(i)	1 st Year	4.818
(ii)	2 nd 2 Years	5.058
(iii)	3 rd 2 Years	5.311
(iv)	4 th 2 Years	5.577
(v)	5 th 2 Years	5.856
(vi)	6 th 2 Years	6.149
(vii)	7 th 2 Years	6.456
(viii)	8 th 2 Years	6.779

- (d) LP(Myanmar)Industrial Manufacturing Company Limited, which has obtained the Endorsement for enjoyment of exemptions and reliefs under sections 75, 77 and 78 of the Chapter XVIII of Myanmar Investment Law, may submit the application form.
- (e) LP(Myanmar)Industrial Manufacturing Company Limited shall use its best efforts to achieve a timely realization of the work stated in the Endorsement application.
- (f) LP(Myanmar)Industrial Manufacturing Company Limited shall obey and respect the responsibilities of investors under section 65 of Myanmar Investment Law and Chapter XX of Myanmar Investment Rules.
- (g) LP(Myanmar)Industrial Manufacturing Company Limited shall carry out prevention, mitigation and monitoring of significant environmental impacts according to the type of investment activities in accordance with the relevant laws, rules, regulations and procedures.

Confidential

Confidential

- 3 -

- (h) LP(Myanmar)Industrial Manufacturing Company Limited shall submit to the Myanmar Investment Commission any transfer of shares or transfer of the business to any person during the investment period in accordance with section 72 of Myanmar Investment Law and rule 191 of Myanmar Investment Rules.
 - (i) LP(Myanmar)Industrial Manufacturing Company Limited which has benefitted from the Endorsement or enjoyment of exemptions or reliefs shall submit an annual report in the prescribed form to the Myanmar Investment Commission within three (3) months at the financial year in accordance with rule 196 of Myanmar Investment Rules and shall publish a summary of the report on its website or the Myanmar Investment Commission's website.
 - (j) LP(Myanmar)Industrial Manufacturing Company Limited must, during the operation period under the Endorsement of the Yangon Region Investment Committee, submit its operating report quarterly in the prescribed form in accordance with rule 197 of Myanmar Investment Rules.
3. LP(Myanmar)Industrial Manufacturing Company Limited shall carry out in accordance with the stipulations of the relevant Union Ministries, governmental department and governmental organizations to obtain license, permit or registration as per section 65(d) of Myanmar Investment Law.
4. LP(Myanmar)Industrial Manufacturing Company Limited shall submit five (5) copies of all approvals, licences, permits and similar authorizations relevant to the initial implementation of the investment and the Lease Agreement for land and buildings to the Yangon Region Investment Committee.



(Phyto Min Thein)

Chairman 

LP(Myanmar)Industrial Manufacturing Company Limited

cc: 1. Ministry of Home Affairs

Confidential

Confidential

- 4 -

2. Ministry of Office of the Union Government
3. Ministry of Agriculture, Livestock and Irrigation
4. Ministry of Natural Resources and Environmental Conservation
5. Ministry of Labour, Immigration and Population
6. Ministry of Industry
7. Ministry of Commerce
8. Ministry of Planning and Finance
9. Office of the Myanmar Investment Commission
10. Chairman, CMP Enterprises Supervision Committee
11. Director General, Department of Agriculture, Perennial Crop Division
12. Director General, Department of Environmental Conservation
13. Director General, Directorate of Labour
14. Director General, Department of Immigration
15. Director General, Directorate of Industrial Supervision and Inspection
16. Director General, Department of Trade
17. Director General, Directorate of Investment and Company Administration
18. Director General, National Archives Department
19. Director General, Customs Department
20. Director General, Internal Revenue Department
21. Monitoring and Supervision Division , Directorate of Investment and Company Administration

Confidential

APPENDIX B

Consultant Registration Certificate



REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

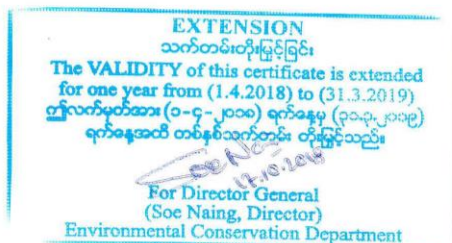


No. 10048 Date

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the person under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို လူပုဂ္ဂိုလ်အားထုတ်ပေးလိုက်သည်။)

- | | |
|---|---|
| (a) Name of Consultant
(အကြံပေးပုဂ္ဂိုလ်အမည်) | U Lin Htet Sein |
| (b) Citizenship
(နိုင်ငံသား) | Myanmar |
| (c) Identity Card / Passport Number
(မှတ်ပုံတင်/နိုင်ငံကူးလက်မှတ် အမှတ်) | 7/ Tha Ka Na (N) 101377 |
| (d) Address
(ဆက်သွယ်ရန်လိပ်စာ) | No.54, Room No.704, Waizayantar Tower,
Waizayantar Road, Thingangyun Township,
Yangon.
lin.tbs@gmail.com , 09 421137569 |
| (e) Organization
(အဖွဲ့အစည်း) | Total Business Solution Co., Ltd. |
| (f) Type of Consultancy
(အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား) | Person |
| (g) Duration of validity
(သက်တမ်းကုန်ဆုံးရက်) | 31 March 2018 |



Handwritten signature in purple ink.

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Geology and Soil

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended
for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား (၁-၁-၂၀၂၁) ရက်နေ့မှ (၃၀-၆-၂၀၂၁)
ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended
for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား (၁-၇-၂၀၂၁) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၁)
ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended
for nine months from (1.4.2019) to (31.12.2019)
ဤလက်မှတ်အား (၁-၄-၂၀၁၉) ရက်နေ့မှ (၃၁-၁၂-၂၀၁၉)
ရက်နေ့အထိ (၉)လ သက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department

EXTENSION
သက်တမ်းတိုးမြှင့်ခြင်း
The VALIDITY of this certificate is extended
for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၀)
ရက်နေ့အထိ တစ်နှစ် သက်တမ်းတိုးမြှင့်သည်။
Soe Naing
For Director General
(Soe Naing, Director)
Environmental Conservation Department



THE REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
Environmental Conservation Department



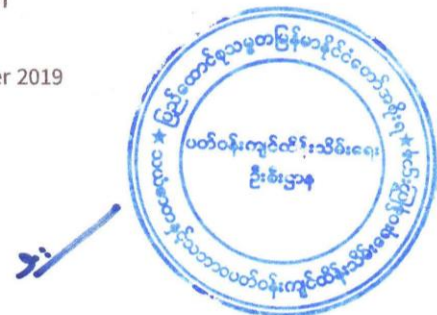
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
(ကြားကာလအကြံပေးလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 10068 Date 24 MAY 2019

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၆၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို ထုတ်ပေးလိုက်သည်။)

- | | |
|--|--|
| (a) Name of Organization
(အဖွဲ့အစည်းအမည်) | Myanwei Consulting Co., Ltd. |
| (b) Name of the representative in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်) | U Nyan Lynn Aung |
| (c) Citizenship of the representative in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား) | Myanmar |
| (d) Identity Card /Passport Number of the representative person in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်) | 12/Sakhana(N)056196 |
| (e) Address of organization
(ဆက်သွယ်ရန်လိပ်စာ) | No. 28, Myay nu street, Sanchaung Township,
Yangon, Myanmar.
Mobile phone: 09440251888
E mail: ceo@myanweiconsulting.com |
| (f) Type of Consultancy
(အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား) | Organization |
| (g) Duration of validity
(သက်တမ်းကုန်ဆုံးရက်) | 31 December 2019 |



Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Facilitation of meeting,
2. Land use,
3. Legal analysis,
4. Geology and soil,
5. Occupational Safety and Health,
6. Public Health



EXTENSION

သက်တမ်းတိုးမြှင့်ခြင်း

The VALIDITY of this certificate is extended
for one year from (1.1.2020) to (31.12.2020)
ဤလက်မှတ်အား (၁-၁-၂၀၂၀) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၀)
ရက်နေ့အထိ တစ်နှစ်သက်တမ်းတိုးမြှင့်သည်။

Soe Naing
For Director General
(Soe Naing, Director)

Environmental Conservation Department

EXTENSION

သက်တမ်းတိုးမြှင့်ခြင်း

The VALIDITY of this certificate is extended
for six month from (1.1.2021) to (30.6.2021)
ဤလက်မှတ်အား (၁-၁-၂၀၂၁) ရက်နေ့မှ (၃၀-၆-၂၀၂၁)
ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။

Soe Naing
For Director General
(Soe Naing, Director)

Environmental Conservation Department

EXTENSION

သက်တမ်းတိုးမြှင့်ခြင်း

The VALIDITY of this certificate is extended
for six months from (1.7.2021) to (31.12.2021)
ဤလက်မှတ်အား (၁-၇-၂၀၂၁) ရက်နေ့မှ (၃၁-၁၂-၂၀၂၁)
ရက်နေ့အထိ (၆)လ သက်တမ်းတိုးမြှင့်သည်။

Soe Naing
For Director General
(Soe Naing, Director)

Environmental Conservation Department

APPENDIX C

Environmental Monitoring Quality Result

Noise result



Plot No. (36/38), Room No.9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar. Office: (+95)9775405118, 9792528677, 9449251888; Website: www.myanweiconsulting.com

Project Name:	LP (Myanmar) Industrial Manufacturing Company Limited
Project Location:	Land Plot No.(41), Myay Taing Block No.50, TarDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region
Sampling Date:	3 December, 2021
Sampling Time:	11:00 am To 2:00 pm
Sampling Condition:	
Sampling By:	Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°59'42.15"N and 96° 4'56.54"E

Noise Quality Measurement

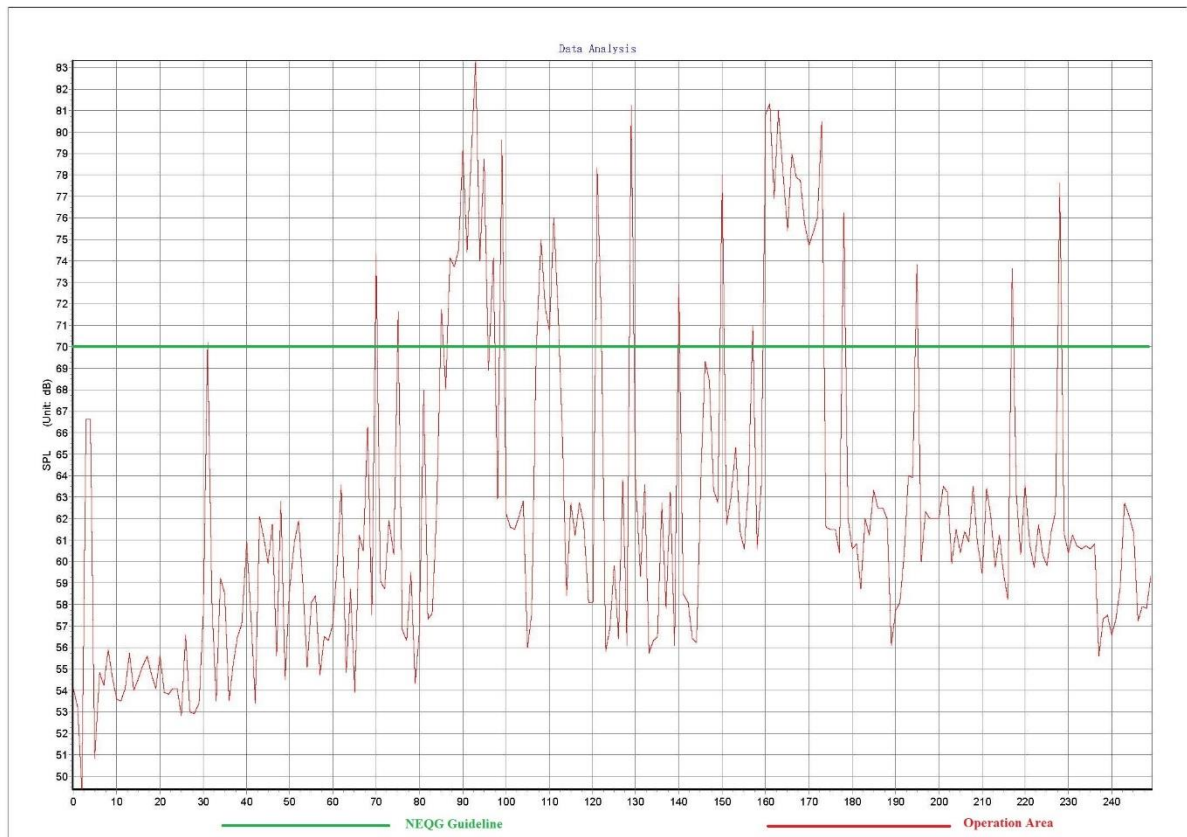
No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	79.58 dB	70 dBA	Slightly Above

National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)	Guideline value
	Daytime	Nighttime
	7:00 – 22:00 (10:00 – 22:00 for Public holidays)	22:00 – 07:00 (22:00 – 10:00 for Public holidays)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70


LIN HTET SEIN
 DIRECTOR
 MYANWEI ENVIRONMENTAL SOLUTIONS
 COMPANY LIMITED.

Monitoring Garph



Air Quality Result



Plot No. (36,38), Room No.9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar.
Office: (+95)9775405118, 979262677, 9448251688; Website: www.myanweiconsulting.com

Project Name:	LP (Myanmar) Industrial Manufacturing Company Limited
Project Location:	Land Plot No. (41), Myay Taing Block No.50, TarDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region
Sampling Date:	3 December, 2021
Sampling Time:	9:00 am to 5:00 pm
Sampling Condition:	
Sampling By:	Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
OCEANUS-AQM-09	PM, NO ₂ , SO ₂ , O ₃ and CO Detector	0-999.9 (µg/M ³)	Operation Area

National Environmental Quality (Emission) Guideline

Parameter	Averaging period	Guideline value	Unit
PM 10 ^a	1-year	20	(µg/M ³)
	24-hour	50	
PM 2.5 ^a	1-year	10	(µg/M ³)
	24-hour	25	
NO ₂ ^a	1-year	40	(µg/M ³)
	1-hour	200	
SO ₂ ^a	24-hour	20	(µg/M ³)
	10-min	500	
CO ^b	15-min	100	(µg/M ³)
	30-min	60	
	1-hour	30	
	8-hour	10	
O ₃	8 hr	100	(µg/M ³)

a. Values from air quality guidelines-global update 2005: particulate matter, ozone, nitrogen dioxide and sulfur dioxide.

b. Values from air quality guidelines for Europe, 2nd edition.

Monitoring Result

Parameters	Observed value	Guideline value	Unit	Organization	Period
PM ₁₀	52.025	50	µg/m ³	NEQG	24 hrs
PM _{2.5}	48.66	25	µg/m ³	NEQG	24 hrs
SO ₂	823.1	500	µg/m ³	NEQG	10 minutes
NO ₂	20.7	200	µg/m ³	NEQG	1 hr
O ₃	2.2	100	µg/m ³	NEQG	8 hrs
CO	0.4	-	µg/m ³	-	



LIN HTET SEIN
DIRECTOR
MYANWEI ENVIRONMENTAL SOLUTIONS
COMPANY LIMITED.

Light Results



Plot No. (36.38), Room No.9A, 9th floor, Grand Myay Nu Condominium, Myay Nu Street, Sanchaung Township, Yangon Region, The Republic of the Union of Myanmar. Office: (+95)9775406118, 9792526677, 9449261888; Website: www.myanweiconsulting.com

Project Name:	LP (Myanmar) Industrial Manufacturing Company Limited
Project Location:	Land Plot No.(41), Myay Taing Block No.50, TarDuKan Industrial Zone, Shwe Pyi Tar Township, Yangon Region
Sampling Date:	3 December, 2021
Sampling Time:	11:00 am To 2:00 pm
Sampling Condition:	
Sampling By:	Myanwei Environmental Solutions Company Limited.

Instrument	Type	Sampling Rate	Location
Digital Sound Level Meter	GM 1356 USB	30 -130 dB	16°59'42.15"N and 96° 4'56.54"E

Noise Quality Measurement

No	Place	Unit	Result	Standard	Remark
1	Operation Area	dBA	79.58 dB	70 dBA	Slightly Above

National Environmental Quality (Emission) Guideline

Receptor	One Hour Laeq (dBA)	Guideline value
	Daytime	Nighttime
	7:00 – 22:00 (10:00 – 22:00 for Public holidays)	22:00 – 07:00 (22:00 – 10:00 for Public holidays)
Residential, Institutional, Educational	55	45
Industrial, Commercial	70	70


LIN HTET SEIN
 DIRECTOR
 MYANWEI ENVIRONMENTAL SOLUTIONS
 COMPANY LIMITED.

APPENDIX D
Certificate of Incorporation



ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်
Certificate of Incorporation

LP (MYANMAR) INDUSTRIAL MANUFACTURING COMPANY LIMITED
Company Registration No. 100243199

မြန်မာနိုင်ငံကုမ္ပဏီများအက်ဥပဒေ ၁၉၁၄ ခုနှစ် အရ
LP (MYANMAR) INDUSTRIAL MANUFACTURING COMPANY LIMITED
အား ၂၀၁၈ ခုနှစ် ဧပြီလ ၉ ရက်နေ့တွင်
အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ
အဖြစ် ဖွဲ့စည်းမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that
LP (MYANMAR) INDUSTRIAL MANUFACTURING COMPANY LIMITED
was incorporated under the Myanmar Companies Act 1914 on 9 April
2018 as a Private Company Limited by Shares.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ
Registrar of Companies

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

Directorate of Investment and Company Administration



Former Registration No.43FC/2018-2019(YGN).

APPENDIX E
Generator Licence

စီမံကိန်း၊ ဘဏ္ဍာရေး နှင့် စက်မှုဝန်ကြီးဌာန
ရန်ကုန်တိုင်းဒေသကြီး စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
လျှပ်စစ်စစ်ဆေးရေး
အမှတ် - ၁၉၂၊ ကမ္ဘာအေးဘုရားလမ်း၊ ဗဟန်းမြို့နယ်၊ ရန်ကုန်မြို့

စာအမှတ် ၊ ၁၅၁၅(၇)ရက-လဆရ/၂၁/၂၀၂၀(၆၁၀၀)

ရက်စွဲ ၊ ၂၀၂၀ ပြည့်နှစ် စက်တင်ဘာ လ ၃၀ ရက်

အကြောင်းအရာ။ ရန်ကုန်တိုင်းဒေသကြီး၊ ရွှေပြည်သာမြို့နယ်၊ သာဓုကန်စက်မှုဇုန်၊ မြလမ်း၊
အမှတ်(၄၁) ရှိ LP (Myanmar) Industrial Manufacturing Co.,Ltd ၏
သစ်ပါးလွှာလုပ်ငန်း အတွက် တပ်ဆင်ပြီးဖြစ်သော ၄၀၀/၂၃၀ ဗို့၊ ၃၅၀ ကီလိုဝပ်
ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက်(တစ်)လုံးဖြင့် လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်း နှင့်
အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ် ထုတ်ပေးခြင်း

ရည်ညွှန်းချက်။ ဒေါ်ထက်ထက်စိုး (LP (Myanmar) Industrial Manufacturing Co.,Ltd) ၏
လျှောက်ထားချက်အရ

အထက်အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ ရန်ကုန်တိုင်းဒေသကြီး၊ ရွှေပြည်သာမြို့နယ်၊
သာဓုကန်စက်မှုဇုန်၊ မြလမ်း၊ အမှတ်(၄၁) ရှိ LP (Myanmar) Industrial Manufacturing Co.,Ltd ၏
သစ်ပါးလွှာလုပ်ငန်း အတွက် တပ်ဆင်ပြီးဖြစ်သော ၄၀၀/၂၃၀ ဗို့၊ ၃၅၀ ကီလိုဝပ် ဒီဇယ်အင်ဂျင်
လျှပ်ထုတ်စက်(တစ်)လုံးဖြင့် လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်
လက်မှတ်ကို ၂၀၂၀ ပြည့်နှစ် စက်တင်ဘာ လ (၄) ရက်နေ့မှစတင်၍ ထုတ်ပေးလိုက်သည်။

တိုင်းဒေသကြီးဦးစီးဌာနမှူး (ရက်စွဲ)

ခိုင်မြင့် - ဒုတိယညွှန်ကြားရေးမှူး

ရန်ကုန်တိုင်းဒေသကြီး လျှပ်စစ်စစ်ဆေးရေးမှူး

Mr Peng Han

သစ်ပါးလွှာလုပ်ငန်း(LP (Myanmar) Industrial Manufacturing Co.,Ltd)

အမှတ်(၄၁)မြလမ်း၊

သာဓုကန်စက်မှုဇုန်၊ရွှေပြည်သာမြို့နယ်။

မိတ္တူ -

- ရုံးလက်ခံ၊

- မျှောစာတွဲ။

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
စီမံကိန်း၊ ဘဏ္ဍာရေး နှင့် စက်မှုဝန်ကြီးဌာန
စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန

လျှပ်စစ်စစ်ဆေးရေး

လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ်

ခွင့်ပြုမိန့် အမှတ်စဉ် - YD-G (N)

၅၁၁/၂၀၂၀

၁။ ၂၀၁၄ ခုနှစ် လျှပ်စစ်ဥပဒေပုဒ်မ ၃၂ (င) နှင့် တည်ဆဲလျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံး လုပ်နည်းများအရ LP (Myanmar) Industrial Manufacturing Co.,Ltd ၏ သစ်ပါးလွှာလုပ်ငန်း အတွက် တပ်ဆင်ပြီး ဖြစ်သော ဒီဇယ်အင်ဂျင် လျှပ်ထုတ်စက် အား အောက်ဖော်ပြပါ နယ်မြေဒေသ အတွင်း မှတ်ပုံတင် လက်မှတ်တွင်ပါရှိသော စည်းကမ်းချက်များနှင့်အညီ ၂၀၂၀ စက်တင်ဘာ လ (၄) ရက်နေ့မှစတင်၍ လျှပ်စစ်ဓာတ်အား ထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းဆိုင်ရာ မှတ်ပုံတင်လက်မှတ်ကို ထုတ်ပေးလိုက်သည်-

(က) ခွင့်ပြုသည့်နယ်မြေဒေသ - အမှတ်(၄၁)မြို့လမ်း၊သာဓုကန်စက်မှုဇုန်၊

မြို့နယ် - ရွှေပြည်သာမြို့နယ်၊

တိုင်း - ရန်ကုန်တိုင်းဒေသကြီး

(ခ) အများဆုံးထုတ်လုပ်သည့် - 350 kW

ဓာတ်အားပမာဏ

(ဂ) သတ်မှတ်ဗို့အား - 400/230 V

(ဃ) လျှပ်ထုတ်စက်အမျိုးအစား - GF-350(Standfor)

(င) လျှပ်ထုတ်စက်နံပါတ် - 1809641

(စ) အင်ဂျင်အမျိုးအစား - YC6MJ480L-D20

(ဆ) အင်ဂျင်မြင်းကောင်ရေ - 321 kW

(ဇ) အင်ဂျင်နံပါတ် - MJL67J00655

၂။ ဓာတ်အားထုတ်လုပ်ခြင်း နှင့် အသုံးပြုခြင်းတို့အတွက် အသုံးပြုသော လျှပ်စစ်ပစ္စည်း ကိရိယာ တည်ဆောက်မှုဆိုင်ရာ နည်းစနစ်များသည် လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများပါ ပြဋ္ဌာန်းချက်များ အရဖြစ်ရမည့်အပြင် စစ်ဆေးရေးမှူး ၏ စစ်ဆေးစမ်းသပ်ခြင်းကို ခံယူရပါမည်။

၃။ လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းပါ ပြဋ္ဌာန်းချက်များကို တိကျစွာ လိုက်နာဆောင်ရွက်ရမည်။

၄။ လျှပ်စစ်ဥပဒေဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများနှင့် ဤလက်မှတ်တွင်ပါရှိသော အကြောင်းအရာများ ကို လိုက်နာခြင်း မရှိပါက ထုတ်ပေးထားသော လက်မှတ်ကို ပြန်လည် ရုတ်သိမ်းမည်။

၅။ ဤမှတ်ပုံတင်လက်မှတ် သက်တမ်းသည် ခွင့်ပြုသည့်နေ့မှစတင်၍ (၄) နှစ် အချိန်ကာလအတွင်းသာ အကျိုးသက်ရောက် စေရမည်။

စတင်ခွင့်ပြုသည့်နေ့ - ၄ . ၉ . ၂၀၂၀

ကုန်ဆုံးသည့်နေ့ - ၃ . ၉ . ၂၀၂၄

လျှပ်စစ်စစ်ဆေးရေးမှူးချုပ် (ရန်ကုန်တိုင်းဒေသကြီး) လျှပ်စစ်စစ်ဆေးရေးမှူး

APPENDIX F

Industrial Licence



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
စီမံကိန်း၊ ဘဏ္ဍာရေးနှင့်စက်မှုဝန်ကြီးဌာန
စက်မှုကြီးကြပ်ရေးနှင့်စစ်ဆေးရေးဦးစီးဌာန
ပုဂ္ဂလိကစက်မှုလုပ်ငန်းမှတ်ပုံတင်လက်မှတ်

စက်မှုမှတ်ပုံတင်အမှတ် ရက်/ကြီး/၅၉၄၉ ရက်စွဲ ၂၃ . ၁၀ . ၂၀၂၀
လုပ်ငန်းအရွယ်အစား အကြီးစား ပြည်ထောင်စုနယ်မြေ/တိုင်းဒေသကြီး/ပြည်နယ် ရန်ကုန်
အောက်ပါလုပ်ငန်းသည် ပုဂ္ဂလိကစက်မှုလုပ်ငန်း ဥပဒေ ပုဒ်မ ၇ ပုဒ်မခွဲ (ဂ) အရ မှတ်ပုံတင်ပြီး
ဖြစ်ပါသည်။ LP (Myanmar) Industrial Manufacturing Co., Ltd. CMP စနစ်ဖြင့် ရာဘာသားထုတ်
၁။ လုပ်ငန်းအမည် လုပ်ခြင်းလုပ်ငန်း
၂။ လုပ်ငန်းအမျိုးအမည် နေထိုင်ရေးလုပ်ငန်း
၃။ အဓိကကုန်ချောပစ္စည်းအမျိုးအမည် Rubber Wood Sewn Timber
၄။ တည်နေရာလိပ်စာ မြေကွက်အမှတ်(၄၁)၊ မြလမ်း၊ မြေတိုင်းရပ်ကွက်အမှတ်(၅၀)၊ သာဓုကန်စက်မှုဇုန်၊
ရွှေပြည်သာမြို့နယ်၊ မြောက်ပိုင်းခရိုင်
၅။ ပိုင်ဆိုင်မှုအမျိုးအစား ကုမ္ပဏီပိုင်
၆။ လုပ်ငန်းရှင်အမည် Mr. Peng Hao (Director)
၇။ ကိုင်ဆောင်သည့်မှတ်ပုံတင်အမှတ် PP No. E-43396673
၈။ ရင်းနှီးမြှုပ်နှံမှုတန်ဖိုး(ကျပ်) US\$ ၀. ၂၆၂ သန်း တည်ထောင်သည့်ခုနှစ် ၂၀၂၀
၉။ အသုံးပြုသည့်အားအမျိုးအစား ထရန်စဖော်မာ/လျှပ်ထုတ်စက် မြင်းကောင်ရေ ၃၁၅ KVA/
၁၀။ အလုပ်သမားဦးရေ ၇၀ ဦး ၃၅၀ KVA
၁၁။ မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးသည့်နေ့ရက် ၃၁. ၁၀. ၂၀၂၀



အေးအေးဝင်း
ညွှန်ကြားရေးမှူးချုပ်