ENVIRONMENTAL IMPACT ASSESSMENT REPORT

FOR

SHRIMP FARMING AND PRODUCTION PROJECT

Project Proponent;

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

Prepared by;

Guardians of Green Environmental Services Company Limited

February, 2024

DISCLAIMER

This EIA report has been prepared by Third Party, Guardians of Green Environmental Services, for the project of Farming and Production of Shrimp by Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) located at the Block No. 560 – Ahlae Dwain, 561-Kyaukse, 562 – Thadwelaungcha, Ahlae Dwain village tract, No. 1049,1050,1544, 1829, 1844, 2, 1846, 2463, 1848, 1823, 325/ 2562, Kyauk Phyu Township, Kyauk Phyu District, Rakhine State. The report preparation was done inside the framework of Myanmar Environmental Impact Assessment Procedure 2015.

The analysis works had been done based on the provided data of the proposed plan of the project from the client and observations of environmental parameters guided by Myanmar Government Environmental Authority, Environmental Conservation Department, hereinafter ECD.

The impact assessment and mitigation measures are prepared based on the facts and figures of detailed plan/ process of the project obtained from the client.

Moreover, this report has been prepared in line with the prevailing active Laws, Rules, Procedures, Guidelines, and Standards etc. of the Myanmar legal system in (September/ 2020) The drawings, sketches, maps and other illustrative figures in this report are for the demonstrative/ descriptive purposes only and not to be considered as approved boundary nor accepted territory nor recognized properties extend of any kind.

In case of dual or multiple meanings of the wordings, those wordings should be interpreted as relevant meaning to the concerned areas discussed in this report.

The individual/ personal, organizational and commercial data and information found in this report are included based on the concerned authority's requirement. The privacy and trade secrets concerned are to be addressed to the concerned authority ECD.

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LIST OF ABBREVIATIONS

%	: Percentage
GAqP	: Good Aquaculture Practices
µg/m^3	: Micro Gram per Cubic meter
BOD	: Biochemical Oxygen Demand
CO	: Carbon Monoxide
CO_2	: Carbon Dioxide
COD	: Chemical Oxygen Demand
CSR	: Corporate Social Responsibility
dB (A)	: Decibel unit
ECD	: Environmental Conservation Department
EMoP	: Environmental Monitoring Plan
EMP	: Environmental Management Plan
HSE	: Health, Safety and Environment
MONREC	: Ministry of Natural Resources and Environmental Conservation
NO_2	: Nitrogen Dioxide
ºC	: Degrees Celsius
pH	: Pond us Hydrogenium
PM	: Particulate Matter
ppm	: Part Per Million
PV	: Photovoltaic
SO_2	: Sulfur Dioxide
TSP	: Total Suspended Particulates
WHO	: World Health Organization

အစီရင်ခံစာ အကျဉ်းချုပ်

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) မှ အကောင်အထည်ဖော်ဆောင်ရွက်သွားမည့် ရေငန်ပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) အစီရင်ခံစာ ကို Guardians of Green Environmental Services မှ ပြင်ဆင်ရေးသားခဲ့ပါသည်။

၁။ နိဒါန်း

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) က အကောင်အထည်ဖော်ဆောင်ရွက်သွားမည့် ရေငန်ပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) အစီရင်ခံစာ (Scoping Report) ကို Guardians of Green Environmental Services မှ ပြင်ဆင်ရေးသားခဲ့ပါသည်။ ကုမ္ပဏီအနေဖြင့် ပုဇွန်သားဖောက်စခန်း၊ မွေးမြူရေး, ထုတ်လုပ်ရေး နှင့် ဖြန့်ဖြူးရေး လုပ်ငန်းကို ဆောင်ရွက်မည် ဖြစ်ပြီး နိုင်ငံတော် ဖွံ့ဖြိုးတိုးတက်ရေးအတွက် အထောက်အကူပြုစေရန် ရေငန်းပုဇွန် မွေးမြူရေး နှင့် ပတ်သတ်သော စီမံခန့်ခွဲမှုကို ဒေသခံများအား သင်တန်းပေးခြင်း၊ ရေငန်ပုဇွန် အရင်းအမြစ်များကို ထိန်းသိမ်းခြင်း အစရှိသည်တို့ ဖြစ်သည်။

မြန်မာနိုင်ငံသည် ဖွံ့ဖြိုးဆဲနိုင်ငံတစ်နိုင်ငံ ဖြစ်သည့်အလျောက် နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုသည် အရေးပါသော အခန်းကဏ္ဍ၌ ပါဝင်ပါသည်။ မြန်မာနိုင်ငံ၏ ဖွံ့ဖြိုးတိုးတက်ရေးအတွက် လိုအပ်သော နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှု၊ စက်ရုံ အလုပ်ရုံ စီမံကိန်းများနှင့် အလုပ်အကိုင် ရရှိမှုစသည့် နိုင်ငံတော် ဖွံ့ဖြိုးတိုးတက်ရေးစီမံကိန်းများကို အဓိက အားဖြည့်ပေးရန် ရည်ရွယ်ပါသည်။

MBPL အနေဖြင့် (၁၄) ဧက သားဖောက်စခန်းမှ တစ်ကြိမ်လျှင် အကောင်ရေ (၅) သန်းဖြင့် တစ်နှစ်လျှင် (၄) ကြိမ်နှုန်း စုစုပေါင်းသားပေါက်အကောင်ရေ (၂၀) သန်း ထုတ်လုပ်သွားနိုင်ရန် ရည်မှန်းထားပါသည်။ ပထမဆုံး အဆင့်အနေဖြင့်၊ ကျားပုဇွန် ကို အသားတိုးမွေးမြူပါမည်။ ရေငန်ပုဇွန် မွေးမြူရေး အနေဖြင့် ဧက (၇၀) တွင် တစ်နှစ်လျှင် နှစ်ကြိမ်နှုန်း၊ တစ်နှစ်လျှင် တန်ချိန် (၃၃၆) တန်ကို Semi-Intensive System ဖြင့် မွေးမြူပါမည်။

ရည်ရွယ်ချက်

ရေငန်ပုဇွန် မွေးမြူထုတ်လုပ်ရေး လုပ်ငန်း၏ ရည်ရွယ်ချက်မှာ

(က) ဒေသတွင်း ရေငန်ပုဇွန် မွေးမြူထုတ်လုပ်ရေး လုပ်ငန်းအတွက် စေျးကွက် တည်ငြိမ်မှုနှင့် တိုးတက်မှုရှိခြင်းအားဖြင့် ပြင်ပမျိုးစိတ်များ နိုင်ငံတွင်းတင်သွင်းမှုကို လျော့ချစေနိုင်ရန်

(ခ) ဒေသခံများအတွက် အလုပ်အကိုင် အခွင့်အလမ်းများ တိုးပွားစေနိုင်ရန်

(ဂ) ငါးနှင့် ပုဇွန် စားသုံးမှုကို တိုးမြှင့်စေနိုင်ရန်

(ဃ) ပုဇွန်သားပေါက်များကို မွေးမြူခြင်းအားဖြင့် ပင်လယ်၊ မြစ်ချောင်းများရှိ ရေနေသတ္တဝါများကို ထိန်းသိမ်းစေနိုင်ခြင်း

(c) GAqP နည်းစနစ်ကို ဆောင်ရွက်ခြင်းအားဖြင့် ဒီရေတောများ ကို ကာကွယ်ထိန်းသိမ်းရန်

(စ) ရေငန်ပုဇွန် မွေးမြူထုတ်လုပ်ရေး လုပ်ငန်းနှင့် ပတ်သတ်၍ အသိပညာများ တိုးပွားစေနိုင်ရန် တို့ဖြစ်သည်။

၂။ မူဝါဒ ၊ ဥပဒေနှင့် အဖွဲ့အစည်းဆိုင်ရာ မူဘောင်

ဤနယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်းအစီရင်ခံစာတွင် လက်ရှိ မြန်မာနိုင်ငံ၌ ကျင့်သုံးလျက် ရှိသော စီမံကိန်းနှင့် သက်ဆိုင်သည့် မူဝါဒများ၊ အမျိုးသားအဆင့် ဥပဒေများ၊ စီမံကိန်းနှင့် ဆက်နွယ်နေသော ပတ်ဝန်းကျင်နှင့် လူမှုရေး ကဏ္ဍများကိုပါ ဖော်ပြထားပါသည်။ ထို့အပြင် စီမံကိန်းနှင့် ဆက်စပ်နေသော နိုင်ငံတကာ လုပ်ထုံးလုပ်နည်းများနှင့် လမ်းညွှန်ချက်များကိုလည်း ထည့်သွင်း ဖော်ပြထားပါသည်။

၃။ စီမံကိန်းအကြောင်းအရာဖော်ပြချက်

ရခိုင်ပြည်နယ်၏ စီးပွားရေးလုပ်ငန်းများအနက် ရေလုပ်ငန်းသည် အဓိကနေရာမှ ပါဝင်လျက်ရှိသည်။ မိမိတို့ ကုမ္ပဏီ MBPL မှ ရခိုင်ဒေသ၏ မွေးမြူရေးလုပ်ငန်းတိုးတက်လာစေရန် ကျောက်ဖြူမြို့နယ် အလယ်ဒွိန်ကျေးရွာရှိ ဦးပိုင်အမှတ် ၁၀၄၉၊ ၁၀၅၀၊ ၁၅၄၄၊ ၁၈၂၉၂၂ ၁၈၄၆၆၊ ၂၄၆၃၃၊ ၁၈၄၈၊ ၁၈၂၃၊ ၃၂၅၊ ../ ၂၅၆၂၊ ကွင်းအမှတ် ၅၆၀- အလယ်ဒွိန်ကွင်း၊ ကွင်းအမှတ် ၅၆၁- ကျောက်ဆည်ကွင်း၊ ကွင်းအမှတ် ၅၆၂- သဒ္ဓါလောင်းချကွင်း၊ အလယ်ဒွိန်ကျေးရွာအုပ်စု ရှိ ဒေသခံပြည်သူများ အသုံးမပြုသော မြေလွတ်၊ မြေလပ်နှင့် မြေရိုင်းပေါ်တွင် အမေရိကန်ဒေါ်လာ (၅) သန်းရှိ ရေငန်ပုစွန်မွေးမြူရေးလုပ်ငန်းများကို ရင်းနှီးမြှုပ်နှံရန် စီမံချက်ချထားပါသည်။ စုစုပေါင်းမြေဧရိယာ (၅၅၀) ဧက အနက်မှ (၈၄) ဧကတွင် သားဖောက်စခန်း (၁၄) ဧက တစ်ခုနှင့် အသားတိုးစခန်း (၇၀) ဧကကို (၃) နှစ်အတွင်း ပြင်ဆင်တည်ဆောက်ပါမည်။ (၁၄) ဧက သားဖောက်စခန်းမှ တစ်ကြိမ်လျှင် အကောင်ရေ (၅) သန်းဖြင့် တစ်နှစ်လျှင် (၄) ကြိမ်နှုန်း စုစုပေါင်းသားပေါက်အကောင်ရေ (၂၀) သန်း ထုတ်လုပ်သွားနိုင်ရန် ရည်မှန်းထားပါသည်။

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) သည် တရုတ်နိုင်ငံရှိ YUN NAN BRIGHT PROSPECT INDUSTRIAL COMPANY LIMITED (ရင်းနှီးမြှုပ်နှံမှု ၇၀ ရာခိုင်နှုန်း) နှင့် DEVELOPERS ENTREPRENEURS LIAISON CONSTRUCTION ORGANIZER LIMITED (ရင်းနှီးမြှုပ်နှံမှု ၃၀ ရာခိုင်နှုန်း) တို့ ပူးပေါင်းလုပ်ဆောင်သော စီမံကိန်းတစ်ခု ဖြစ်ပါသည်။ ရေငန်ပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ စုစုပေါင်း ရင်းနှီးမြှုပ်နှံမှုပမာဏမှာ အမေရိကန်ဒေါ်လာ (၅) သန်း ဖြစ်ပါသည်။ လုပ်ငန်းတွင် စုစုပေါင်းဝန်ထမ်းဦးရေ (၁၀၄) ဦးအား (၄) နှစ်အတွင်း ခန့်အပ်သွားပါမည်။ (၈၀) ရာခိုင်နှုန်းအား ဒေသခံများကို ခန့်အပ်သွားပါမည်။

ရေသုံးစွဲမှု ပမာဏမှာ ရေချိုရေငန် ရေ ၃၃,၆၈၄,၀၀၀ တန် နှင့် ရေချို ၁၆၄,၄၂၄၇ တန် ဖြစ်သည်။ သုံးစွဲသော ရေများမှာ ရေဆိုးသန့်စင်ကန်၊ ရေစစ်ယူခြင်းနှင့် ထိန်းညှိသော ကန်များတွင် ဖြတ်သန်းပြီး စွန့်ထုတ်မည် ဖြစ်သည်။ လုပ်ငန်းလည်ပတ်စဉ်ကာလတွင် ရေဆိုးများမှာ၊ သားဖောက်ကန်ဆေးခြင်း၊ မွေးမြူကန်များမှ ရေလည်ပတ်ခြင်း တို့မှ ထွက်ရှိမည် ဖြစ်သည်။ ထွက်ရှိသော ရေဆိုးများမှာ၊ mixture of liquids, semi-solid and solid ပုံစံဖြင့် ထွက်ရှိပြီး တစ်ရက်လျှင် (၆၀၀) ကီလိုဂရမ် နှင့် ရေဆိုးပမာဏ 21,601.14 m^3/day ထွက်ရှိမည် ဖြစ်သည်။ ရေဆိုးများကို သက်ဆိုင်ရာ ရေမြောင်းများမှ တဆင့် ရေဆိုးသန့်စင်ကန်သို့

စွန့်ထုတ်မည် ဖြစ်သည်။ အနည်ချကန်နှင့် ရေဆိုးသန့်စင်ကန်မှ ထွက်ရှိသော သန့်စင်ပြီး ရေများကို Buffer zone အဖြစ်ထားရှိသော စိမ့်များ၊ ဒီရေတောများကို ဖြတ်သန်းစိမ့်ဝင် သန့်စင်စေပါမည်။ နောက်ဆုံး သန့်စင်ပြီးရေများကို NEQG Guideline ဖြင့် နှိုင်းယှဉ်ပါမည်။

မွေးမြူရေး လုပ်ငန်းကို Semi- Intensive System ဖြင့် မွေးမြူမည် ဖြစ်ပါသည်။ Semi- Intensive System မှာ သဘာဝနည်းနှင့် သိပ်ပွနည်းကျ ပေါင်းစပ်ထားသော စနစ်ဖြစ်သည်။ ကန်အကျယ်အဝန်းမှာ (၁) ဧကမှ (၂.၅) ဧက ကျယ်ဝန်းနိုင်ပြီး အနက်မှဦ (၅) ပေရှိသည်။ (၁)ဧကတွင် သားပေါက် 20 pieces/ m2 ရှိမည်ဖြစ်သည်။ ရေငန်ပုဇွန်မွေးမြူရေးကို သဘာဝပတ်ဝန်းကျင်နှင့် လိုက်လျောညီထွေ ရှိစေသော Good Aquaculture Practices – GAqP အတိုင်းလိုက်နာဆောင်ရွက် အကောင်အထည်ဖော်ဆောင်မည် ဖြစ်သည်။

၄။ စီမံကိန်း၏ ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေအနေ

စီမံကိန်း တည်ဆောက်မည့် ဧရိယာမှာ (၈၄) ဧက ဖြစ်ပြီး ပုဇွန်ကန် အဟောင်းများ (၇၀) ဧကနှင့် ဒီရေတော ဧက (၁၄) ပါဝင်သည်။ တည်ဆောက်မည့် အစီအစဉ် အရ ဒီရေတောများကို ထိခိုက်မှု မရှိနိုင်ပါ။ ပတ်ဝန်းကျင် အရည်အသွေး တိုင်းတာမှုများအရ PM10 and PM2.5 မှာ လမ်းညွှန်ချက် ထက် မြင့်မားနေသည်ကို တွေ့ရသည်။ ရေနမူနာများကို သံစစ်မြစ်၏ အပေါ်ဘက်နှင့် အောက်ဘက်တွင် ကောက်ယူခဲ့သည်။ အပင်မျိုးစိတ်ပေါင်း (၅၉)မျိုးနှင့် ငါးမျိုးစိတ်ပေါင်း (၁၀)မျိုးကို လေ့လာတွေ့ရှိခဲ့သည်။ လူမှုစီးပွားစစ်တမ်းကို အလယ်ဒွန်ရွာ၊ တောင်မော်ရွာနှင့် ကျောင်ဆည်ရွာတွင် ကောက်ယူလေ့လာခဲ့သည်။

၅။ ဖြစ်ပေါ်လာနိုင်သော ပတ်ဝန်းကျင်နှင့် လူမှုဆိုင်ရာ သက်ရောက်မှုများ

ဖြစ်နိုင်ချေရှိသော သက်ရောက်မှုများကို စီမံကိန်း၏မတူညီသော ကာလများပေါ်မူတည်၍ တည်ဆောက်သည့်ကာလ၊ လည်ပတ်သည့်ကာလ နှင့် ပုစွန်မွေးမြူရေးလုပ်ငန်း ပြီးဆုံးသည့် နောက်ပိုင်းကာလ ဟူ၍ သုံးပိုင်းခွဲခြားဖော်ပြထားပါသည်။ ဥပမာအားဖြင့် တည်ဆောက်သည့်ကာလနှင့် လည်ပတ်သည့်ကာလအတွင်း လေအရည်အသွေး၊ ရေအရည်အသွေး၊ မြေအရည်အသွေး နှင့် စွန့်ပစ်ပစ္စည်းထွက်ရှိမှုများ သက်ရောက်နိုင်ပါသည်။ လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ်ကင်းရှင်းရေးတွင်လည်း ကောင်းမွန်သော အရေးပေါ် တုန့်ပြန်မှုအစီအစဉ်မရှိလျှင် မီးဘေးအန္တရာယ်သက်ရောက်နိုင်ပါသည်။

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း အစီရင်ခံစာတွင် စီမံကိန်းလုပ်ဆောင်ချက်များ၊ ပတ်ဝန်းကျင် အနေအထားအစရှိသည့် အချက်အလက်များကို အခြေခံ၍ ဤနယ်ပယ်တိုင်းတာ သတ်မှတ်ခြင်း အစီရင်ခံစာတွင် ဖော်ပြထားရှိသော သဘာဝဝန်းကျင်နှင့် လူမှုစီးပွားဝန်းကျင် သက်ရောက်မှုများကို အသေးစိတ်လေ့လာသွားမည် ဖြစ်သည်။ ထို့အပြင် သက်ရောက်မှုများအားလုံး၏ အကျိုး၊ အပြစ် သော်လည်းကောင်း၊ ယာယီ၊ အမြဲတမ်းဖြစ်စေ သော်လည်းကောင်း တိုက်ရိုက်၊ သွယ်ဝိုက်၍ သော်လည်းကောင်း၊ ဆက်စပ်သက်ရောက်မှု သော်လည်းကောင်း တိကျစွာလေ့လာမည်။

စီမံကိန်းဝန်းကျင်တွင် အခြားသော လုပ်ငန်းများရှိပါက ပေါင်းစပ်သက်ရောက်မှုကို ထည့်သွင်းစဉ်းစား လေ့လာမည်ဖြစ်သည်။

လေ့လာဆန်းစစ်ရာတွင် ဆောက်လုပ်ရေးကာလ အတွက် အောက်ဖော်ပြပါ သက်ရောက်မှုများကို တွေ့ရှိရသည်။

1. မြေယာ အသုံးချမှု
2. တည်ဆောက်ခြင်း လုပ်ငန်းစဉ်များကြောင့် နီးစပ်ရာ ရေအရင်းအမြစ် အပေါ် ထိခိုက်ခြင်း
3. တည်ဆောက်ခြင်း လုပ်ငန်းစဉ်များကြောင့် လေထုညစ်ညမ်းမှု ဖြစ်ပေါ်ခြင်း
4. တည်ဆောက်ခြင်း လုပ်ငန်းစဉ်များကြောင့် အသံဆူညံခြင်း
5. သတ္တဝါများအပေါ် အနှောင့်အယှက် ဖြစ်စေခြင်း
6. လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရယ် ကင်းရှင်းခြင်းဆိုင်ရာ သက်ရောက်မှုများ

လေ့လာဆန်းစစ်ရာတွင် လုပ်ငန်းလည်ပတ်စဉ် ကာလ အတွက် အောက်ဖော်ပြပါ သက်ရောက်မှုများကို တွေ့ရှိရသည်။

1. ရေထုအရည်အသွေး ကျဆင်းခြင်း
2. သတ္တဝါများ အပေါ်ထိခိုက်ခြင်း
3. ဓာတုပစ္စည်းများ သုံးစွဲမှုမှ သက်ရောက်ခြင်း
4. Nutrients များ ဝင်ရောက်မှုမှ သက်ရောက်ခြင်း
5. အသံဆူညံမှုမှ သက်ရောက်ခြင်း
6. အရင်းအမြစ်များ သုံးစွဲခြင်း
7. အသက်မွေးဝမ်းကြောင်းဆိုင်ရာ အခြေအနေများ
8. လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရယ် ကင်းရှင်းခြင်းဆိုင်ရာ သက်ရောက်မှုများ

ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ပါးစေရေးအတွက် နည်းလမ်းများနှင့် လမ်းညွှန်ချက်များ

တည်ဆောက်သည့်ကာလ၊ လည်ပတ်သည့်ကာလ နှင့် ဖျက်သိမ်းသည့်ကာလများအတွင်း ပတ်ဝန်းကျင်ထိခိုက်မှုလျော့ပါးစေရေးအတွက် နည်းလမ်းများနှင့် လမ်းညွှန်ချက်များမှာ အောက်ပါအတိုင်းဖြစ်သည်။

- ပုဇွန်ကန်နှင့် ဒီရေတောများအကြား သင့်တော်လုံလောက်သော ကြားခံနယ်မြေထားရှိခြင်း၊ ရေလဲလှယ်မှုအကြိမ်ရေလျော့ချခြင်း၊ ရေထိန်းသိမ်းထားရှိမှုအချိန်၊ ပမာဏကို အနီးရှိရေထုပုံစံနှင့် အနီးစပ်ဆုံးအခြေအနေထားရှိခြင်း။
- ဒီရေတောများနှင့် ဒီရေတောတွင်းပေါက်ရောက် အပင်ငယ်များအား ဇီဝစစ်ကန်အဖြစ် ထားရှိခြင်းသည် ဒီရေတော Wetland များရှိသောဧရိယာအတွက် သင့်လျော်သော ကိရိယာဖြစ်ခြင်း။
- သင့်တော်၍လုံလောက်သော ရေဆိုးသန့်စင်သည့်စနစ် ထားရှိခြင်း၊ ရေဆိုးထွက်ရှိမှုတို့ကို စနစ်တကျ ထိန်းချုပ်ခြင်းဖြင့် ရေညစ်ညမ်းမှုကို လျော့ချနိုင်ပါသည်။
- မြေဆီလွှာပျက်ဆီးမှုကို ထိန်းချုပ်နိုင်ရန် ဆောက်လုပ်ရေးလုပ်ငန်းသုံးပစ္စည်းများကို ကောင်းစွာ ထားရှိရမည်။
- လေထုညစ်ညမ်းစေသည့် ဓာတ်ငွေ့များထွက်ရှိသည့် မီးစက်များနှင့် အခြားသော စက်များကို အသုံးမပြုလျှင် ပိတ်ထားရမည်။
- ဆောက်လုပ်ရေးလုပ်ငန်းသုံးစွန့်ပစ်ပစ္စည်းစီမံခန့်ခွဲမှုအစီအစဉ်ကို ကန်ထရိုက်တာဘက်မှ ကောင်းစွာလိုက်နာကျင့်သုံးရမည်။ ထို့အပြင် မြို့နယ်စည်ပင်သာယာရေးကော်မတီမှ ချမှတ်ထားသော စည်းမျဉ်းစည်းကမ်းများကိုလည်း စီမံကိန်းပိုင်ရှင်ဘက်မှ လိုက်နာရမည်။
- မီးသတ်ပစ္စည်းများကို စနစ်တကျ တပ်ဆင်ထားပြီး ဝန်ထမ်းများကိုလည်း သင်တန်းပေးထားရမည်။
- အန္တရာယ်ရှိမှုမှကာကွယ်ရန် ပုစွန်ကန်များကို ပုံမှန်စစ်ဆေးခြင်းများ ပြုလုပ်ပေးရမည်။

(၆) ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်

ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ် တွင် အောက်ဖော်ပြပါ အစီအစဉ်များ ပါရှိသည်။

1. ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်
2. ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည်ရှုမှု အစီအစဉ်
3. စွန့်ပစ်ပစ္စည်း အစိုင်အခဲနှင့် ရေဆိုးများ စီမံခန့်ခွဲမှု အစီအစဉ်
4. မီးဘေးအန္တရယ် ကာကွယ်မှု အစီအစဉ်
5. ရောဂါကာကွယ်ခြင်းနှင့် ထိန်းချုပ်မှု အစီအစဉ်
6. ကျန်းမာရေးနှင့် ဘေးအန္တရယ် ကာကွယ်မှု အစီအစဉ်
7. အရေးပေါ် ဘေးအန္တရယ် စီမံခန့်ခွဲမှုနှင့် တုန့်ပြန်မှု အစီအစဉ်
8. မကျေလည်မှုများ ဖြေရှင်းမည့် အစီအစဉ်
9. လူမှုစီးပွားတာဝန်သိတတ်မှု အစီအစဉ်

၇။ အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်း

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်လေ့လာခြင်း (EIA) စုံစမ်းစစ်ဆေးမှု၏ အစိတ်အပိုင်းတစ်ခုအဖြစ် စီမံကိန်းအဆိုပြုသူသည် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း (၂၀၁၅) အရ စီမံကိန်းတွင် ပါဝင်ပတ်သက်သူများနှင့် တွေ့ဆုံဆွေးနွေးပွဲ ကျင်းပဆောင်ရွက်ရမည်ဖြစ်ပါသည်။ အစိုးရဌာနများ၊ ဒေသခံပြည်သူလူထုနှင့် အဆိုပြုစီမံကိန်းကို စိတ်ပါဝင်စားသောသူများပါဝင်သော တွေ့ဆုံဆွေးနွေးပွဲကို ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာ ၉ ရက်နေ့တွင် အလယ်ဒွိန်ကျေးရွာအုပ်စု အုပ်ချုပ်ရေးမှူး အစည်းအဝေးခန်းမ၊ တောင်မော်ရွာ၊ ကျောက်ဖြူမြို့နယ်၊ ရခိုင်ပြည်နယ်နှင့် ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာ ၁၀ ရက်နေ့တွင် ကျောက်ဖြူမြို့နယ် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန အစည်းအဝေးခန်းမတို့တွင် covid-19 pandemic ကာလအတွင်း ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားဆိုင်ရာ အခြေပြု အချက်အလက်များ ကောက်ယူခြင်း၊ အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းဆိုင်ရာ ကိစ္စရပ်များ အတွက် လုပ်ငန်းလမ်းညွှန်ချက် (ပူးတွဲ) များအတိုင်း လိုက်နာ ဆောင်ရွက်ခဲ့ပါသည်။ အများပြည်သူနှင့် တိုင်ပင်ဆွေးနွေးခြင်းရလဒ်များကို အစီရင်ခံစာတွင် အသေးစိတ် ဖော်ပြထားပါသည်။

EXECUTIVE SUMMARY

This EIA report had prepared by Guardians of Green Environmental Services on behalf of Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) as the part of the Environmental and Social Impact Assessment (ESIA) process for Farming and Production of Shrimp. This company intends to conduct the marine shrimp hatchery, farming, production, and distribution and will also provide technical training to the local people about marine shrimp hatchery management and conservation of marine shrimp resources and that will benefit the country's economic development.

1. Outline of the Project and Project Proponent

Myanmar has developed a strategy for local community development and poverty reduction in recent days. Myanmar Bright Prospect International Logistics Co., Ltd. intends to increase the local income and job opportunities in the local region by developing marine shrimp hatchery and farming naturally in the Rakhine State. The products will be exported to the local regions and foreign. That will also be benefits for the country by getting foreign income.

MBPL will operate the marine shrimp hatchery process within the 14 acres of the Project site and intend to produce 5 million post larvae in one batch and 4 batches per year. Therefore 20 million marine shrimp post larvae can be produced in one year. For the first stage, the Black Tiger Shrimp (***Penaeus monodon***) indigenous species will be used for farms. The shrimp farming process will be carried out scientifically 2 times per year based on the Semi-Intensive System with a total area of 70 acres. MBPL intends to produce 336 tons of shrimp per year within the 70 acres of shrimp farms.

Objectives of the Project

The purposes of the Farming and Production of Shrimp are;

1. To reduce the importing of foreign species by providing the stability and development of the marine shrimp farming enterprises in the local region,
2. To create employment opportunities for the local people.
3. To increase the consumer's rates of fish and shrimp with full protein.
4. To conserve the fish, shrimp, and aquatic organisms which are naturally habitat in the ocean, rivers, and mangrove area by producing marine shrimp post larvae.
5. To ensure the sustainability of the mangrove area and prevent the natural disaster by following GAqP.
6. To provide the knowledge and training about marine shrimp hatchery and farming.

2. Overview of the Policy, Legal and Institutional Framework

In this scoping report, the relevant policies and national laws and legislations are expressed which are currently practiced in Myanmar, and environmental and social aspects that are related to the proposed project are reviewed. Moreover, the relevant international guidelines are also described. (Please find in Chapter 2.)

3. Project Description

The fisheries sector is one of the main sectors among the business sector in Rakhine State. The Myanmar Bright Prospect International Logistics Co., Ltd. planned to invest US$ 5 million for the improvement of aquaculture enterprises by conducting the marine shrimp farming in the vacant land area that is not used the local people as a business land located at the Block No. 560 – Ahlae Dwain, 561-Kyaukse, 562 – Thadwelaungcha, Ahlae Dwain village tract, No. 1049, 1050, 1544, 1829, 1844, 2, 1846, 2463, 1848, 1823, 325,./ 2562, Kyauk Phyu Township, Kyauk Phyu District, Rakhine State. Among the total land area of 550 acres, the total area of 84 acres, the marine shrimp hatchery process will operate within the 14 acre, and the shrimp farming will be carried out with a total area of 70 acres during 3 years. MBPL will operate the marine shrimp hatchery process within the 14 acres of the Project site and intend to produce 5 million offspring in one time and 4 times per year. Therefore 20 million marine shrimp offspring can be bred in one year.

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) is a Foreign Joint Venture Company of YUN NAN BRIGHT PROSPECT INDUSTRIAL COMPANY LIMITED of China (70%) and DEVELOPERS ENTREPRENEURS LIAISON CONSTRUCTION ORGANIZER LIMITED (30%). The total investment for shrimp farm is 5 Million USD. The total manpower that has already recruited for farm is 104 persons, 80% from local people.

The total water consumption for shrimp farming and associated facilities is 33,684,000 tons per year of estuarine water and 164.4247 tons of fresh water per year, the water will be circulated through the filtration and regulating reservoir, pond, treatment pond to existing water body. In operation period, wastewater effluents will be discharged from cleansing the hatchery tanks, water irrigation from culture and breeding pond. The wastewater may contain SPW and nutrients enriched water from the operation processes. Waste products will also be produced continuously during shrimp culture in a mixture of liquids, semi-solid and solid forms. the estimated daily waste production in the given scenario would be approximately 600 kilograms per day.

The assumed daily discharged effluent would be 21,601.14 m³/day. The discharged wastewater will be drained through the drainage channel and finally collected to the wastewater treatment pond where sedimentation processes happened and the overhead water will be discharged into secondary waster pond with secondary sedimentation processes and the residual overhead water will be discharged into final treatment pond and then discharged into the nearest waterbody through swamp and mangrove forest as an additional biofiltration process. The final discharged water will be tested and compared with the NEQG Guideline before discharging to the waterbody.

Processes and Technology

The proposed project will be used Semi- Intensive System by inviting the local and foreign technicians. Semi- Intensive System is a scientifically culture system. Pond size is from 1 acre to 2.5 acres and depth is 5 ft. Less than 20 pieces/ m^2 post larvae are stock for 1 acre. The marine shrimp farming will be conducted in accordance with the International Food Safety standards, Good Aquaculture Practices – GAqP which is developed by intending to perform the aquaculture process with an environmental friendly manner. (The detailed were described at Chapter 3)

4. Description of Surrounding Environments

The proposed project areas were 84 acres consists of old shrimp farm 70 acres and mangrove covered area 14 acres along with the swamps, marsh and bogs, water channels and mangrove area. According to the site plan there was no damage to the existing mangrove area. According to the data interpretation for ambient air quality, noise level, and water quality results were compared with National and Environmental Quality (Emission) guidelines and international guidelines and standards. According to the analysis the PM10 and PM2.5 of measurement points (1) and (2) were higher than the guideline. Water sample were collected at Thanzit River from up stream and downstream of the project and according to the results other than COD of the recorded sample all the parameters were within the guidelines. The noise emission measurements were recorded at project area and kyauk se village. All the paramenters were within the guidelines. A total of 59 flora species and 10 fauna species were recorded at the project area. For socioecomomic assessment, the study was conducted at done nearest village of the project area. The nearest village is Ale Dwein village which is 1.55 km far from the project area and following Taung Maw village, 1.6 km and Kyauk Se village 3.40 km far from the project area. (The detailed were described at Chapter 4)

5. Impact Assessment

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 phases and characteristics of the project site. The significance (quantification) of potential environmental impacts identified during the Basic Assessment has been determined using a ranking scale. Potential impact on the environment and mitigation measures are identified by their relevant significance in line with the requirements set out by international guidelines for Environmental Impact Assessment (IEMA, 2004)

Based on the project proposal data, information of the project nature, and township data of project site and onsite survey of surrounding environment of project site, potential impacts during construction phase of shrimp farming include:

1. Impact on Land use
2. Impact on nearest water body due to discharge of wastewater effluents from filling, excavating and earth working
3. Emit of dust, gases air pollutant, from construction processes. In addition, used of vehicles, air conditioners may also be the emission sources.
4. Impact of noise may cause due to transportation activities of vehicles and other earth works.
5. Impact on biodiversity

Impact of occupational health and safety on employee and worker due to cold and moist environment occur in the working areas and remoteness.

Based on the project proposal data, information of the project nature, and township data of project site and onsite survey of surrounding environment of project site, potential impacts during operation of shrimp farming may include:

1) Impact on Water quality
2) Impact on Biodiversity
3) Impact of chemical usage
4) Impact of disease
5) Nutrients input and output
6) Noise and Vibration
7) Resources Consumption
8) Living conditions and livelihood
9) Occupational Health and Safety

Proposed Mitigation Measures

Some proposed mitigation measures for Construction Phase, Operation Phase and Post Culture Phase are as follows;

- The presence of buffer zones, maintaining an acceptable balance between mangroves and shrimp pond area, improved pond design, reduction of water exchange, and an improved residence time of water, size and capacity to assimilate effluents of the water body, are examples of ways to mitigate the adverse effects.
- The use of mangroves and halophytes as biofilters of shrimp pond effluents offers an attractive tool for reducing the impact in those regions where mangrove wetlands and appropriate conditions for halophyte plantations exist.
- Healthy seed supply, good feed with the use of prophylactic agents (including probiotics), good water quality, and lower stocking densities are examples of actions suggested to control disease in shrimp farming.
- There should be appropriate wastewater management plan and sewage control plan to reduce water pollution.
- Construction materials storage area must be prepared properly to control soil contamination.
- Generators and other equipment which might generate an emission gas will have to be shut down, when not in use.
- There should be proper construction waste management plan by the contractor including reduce, reuse and recycle system. The project proponent will follow the guidelines of Township Development Committee (Township Municipal) to dispose the construction wastes.
- Installation of firefighting extinguishers and plan to mitigate the impact and training and awareness about fire hazard and action plans should be given to staff.

6. Environmental Management Plan

The Environmental Management Plan (EMP) prepared for the proposed project covers the anticipated impacts of the project, mitigation measures, management and monitoring plans during each of the phases:

- Construction Phase and
- Operation Phase

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) must manage the development of the proposed project by implementing this EMP, which is comprised the following parts:

i. Environmental Management Plan
ii. Environmental Monitoring Plan
iii. Waste and Wastewater Management Plan
iv. Disease Preventation and Outbreak Control Plan
v. Firefighting Plan
vi. Health and Safety Plan
vii. Disaster Management, Emergency Preparedness and Response Plan
viii. Grievance Redress Mechanism

ix. Corporate Social Responsibility Plan

7. Public Consultation and Disclosure

As a part of EIA investigation, the proponent has to undertake stakeholders' meeting to consult for public during the scoping process according to EIA procedure (2015). Meeting with key stakeholders of government sector, local community and other interested persons for this proposed project was held on 9th December 2021, at Aledwein village tract head's hall, Taung Maw village, Kyauk Phyu Township, Rakhine State and 10th December 2021, at Environmental Conservation Department's meeting hall in Kyauk Phyu Township by following the instruction during covid-19 pandemic. Public Participation results are showed in detail in the report.

1. INTRODUCTION

This EIA report had prepared by Guardians of Green Environmental Services on behalf of Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) as the part of the Environmental and Social Impact Assessment (ESIA) process for Farming and Production of Shrimp. This company intends to conduct the marine shrimp hatchery, farming, production, and distribution and will also provide technical training to the local people about marine shrimp hatchery management and conservation of marine shrimp resources and that will benefit the country's economic development.

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1.2. Objectives of the Project

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7. To reduce the importing of foreign species by providing the stability and development of the marine shrimp farming enterprises in the local region,
8. To create employment opportunities for the local people.
9. To increase the consumer's rates of fish and shrimp with full protein.
10. To conserve the fish, shrimp, and aquatic organisms which are naturally habitat in the ocean, rivers, and mangrove area by producing marine shrimp post larvae.
11. To ensure the sustainability of the mangrove area and prevent the natural disaster by following GAqP.
12. To provide the knowledge and training about marine shrimp hatchery and farming.

Short-term Objectives

- To develop aquaculture enterprise in the local region
- To distribute and share the knowledge and techniques of aquaculture practices
- To create job opportunities and increase the income of the local people

Long-term Objectives

- To improve the country aquaculture sector
- To get foreign income
- To improve aquaculture techniques within the country

1.3. Presentation of the Project Proponent

Project Proponent Description

Project	Farming and Production of Shrimp
Investor's name	U Ding Ying
Citizenship	Kachin- Myanmar
Name of Principle Organization	Developers Entrepreneurs Liaison Construction Organizer (DELCO) Limited
Organization Address	No. 150 B, New University Avenue Road, Bahan Township, Yangon
Type of Business	Farming and Production of Shrimp
Type of Land	Land for Animal Husbandry
Location of Project Site	Block No. 560 – Ahlae Dwain, 561-Kyaukse, 562 – Thadwelaungcha, Ahlae Dwain village tract, No. 1049,1050,1544, 1829, 1844, 2, 1846, 2463, 1848, 1823, 325, ../ 2562, Kyauk Phyu Township, Kyauk Phyu District, Rakhine State
Project Site Lease Year	30+10+10 Years
Contact	01 400534, 09 5147646
Email Address	ding.ying@delcoltd.com
Joint Venture, partner's name	Mr. Duan Zhi Kui
Citizenship	Incorporated in China
Parent Company name	YUN NAN BRIGHT PROSPECT INDUSTRIAL COMPANY LIMITED
Parent Company's Address	YUN NAN PROVINCE BAO SHAN CITY, LONG YANG DISTRICT, LAN CHENG STREET BAO YOU EAST ROAD, EXTENSION LINE (BAO SHAN FREIGHT STATION NO (2) OFFICE), CHINA
Applicant's name (On behalf of investor)	Daw Hsu Myat Shwe Sin
Citizenship	Myanmar

Name of Principle Organization	TOK Consultancy and Services Co., Ltd.
Address	No. 107 Thayettaw 5 Street, Kyimyindaing Township, Yanngon.
Contact	09 5051470, 09 795433813
Email Address	consultant@tok.servicesltd.com

Particulars of Company Incorporation

Authorized Capital	US$ 0.025 Million
Type of Share	Ordinary Share (US$ 1/ Per Share)
Number of Share	25000 Share
Parent Company's Paid-up Capital Amount	(1) MMK 500.00 Million (2) CNY 54.98 Million

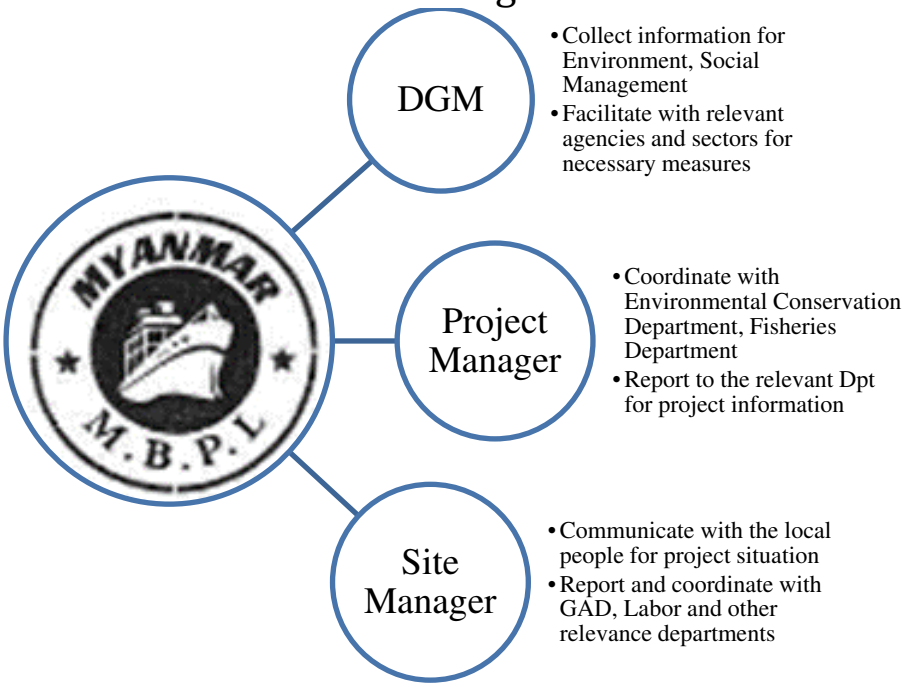
List of Shareholders

No.	Name of Shareholder	Citizenship	Share Percentage
1.	YUN NAN BRIGHT PROSPECT INDUSTRIAL COMPANY LIMITED	Incorporated in China	70%
2.	DEVELOPERS ENTREPRENEURS LIAISON CONSTRUCTION ORGANIZERS LIMITED	Incorporated in Myanmar	30%

The total investment of Myanmar Bright Prospect International Logistics Co., Ltd. is US $ 5 million.

Investment Types	**US $**
Project investment	2.14 millions
Land Rental Capitalized	0.0.6 million for 10 years
Machinery and Equipment	0.112 million
Buildings	2.653 millions
Office accessories and furniture	0.035 million
Total Investment	**5 millions**

Internal Communication Flow Diagram



1.4. Presentation of the Environmental and Social Expert

Daw Moh Moh Khaing (Team Leader)

Daw Moh Moh Khaing is a Consultant who holds Transitional Consultant Certificate No. 0072, described expertise are Biodiversity and Ecology and Marine Biology and Microbiology. She has Master of Research Degree in Microbiology and Master of Science Degree in Marine Science from University of Pathein, Myanmar, at 2013 and 2012. She also held the post graduate diploma in Aquaculture. She has more than eight years of consulting experiences in Environmental and Social Impact Assessment field, which include project management, assessment, monitoring and technical report writing. She also has an experience as Research Fellow in Conservation. She participated in this project as a lead consultant in which project management, recruitment personnel, planning and initiating, identify the methodologies, sampling area, impact prediction, Impact Assessment and Management, Risk assessment and Hazard Management, Environmental Quality Control, Compile and analyze the data and Develop Impact Mitigation Measures, Assessment, EMPs, EMoP, CSR and facilitation and stakeholder's engagement in this project.

Daw Yu Wai Yan Thein Tan (Director)

Daw Yu Wai Yan Thein Tan is a consultant, who holds Transitional Consultant Certificate No 0071; described expertise are Master of Engineering with specializing in Environmental Engineering and Management from Asian Institute of Technology in Thailand and Master of engineering with specializing in Chemical Engineering from Mandalay Technology University. She has seven years consulting experience in the environmental field including her master's degree research. She also served as an engineer at Mandalay City Development Committee for three years. She has input Air Pollution Control, Noise and Vibration Assessment, Solid Waste Management Wastewater Treatment, Environmental Quality Management, Hazardous Waste Technology and Management in this project.

Daw Khin May Lwin (Team Member)

Daw Khin May Lwin is a Consultant who holds Transitional Consultant Certificate No 102 and Area of Expertise Permitted are Ground water and Hydrology, Water Pollution Control and Waste Management. She has completed a Post Graduated Diploma on Pulp and paper technology from Deemed University, Dehradune, India and Bechlor of Science Degree on Industrial Chemistry from Yangon Arts and Science University. She has 32 years experiences in Forest Research Institute, Forest Department. Her responsibilities are concerning with overviewing project scope, Identification of Methodology, Impact Assessment and Management, Impact identification and mitigation measures, Water pollution control, Ground water and hydrology, Waste Management, develop EMP, EMoP.

U Thura Min (Team Member)

U Thura Min is a Consultant who holds Transitional Consultant Certificate No 0040 and Area of Expertise Permitted is Ecology and Biodiversity, Groundwater and Hydrology, Modelling for Water Quality. He has completed Bachelor of Science in Botany (B.Sc) and Diploma in GIS & RS Technology (Yangon University). He has 9 years experiences in ESIA profession.

His responsibilities are concerning with Identify flora surveying method, engage with biodiversity team, Impact identification, develop mitigation measures, GIS Mapping, Identify Land use and Land cover, Zoning.

Daw Thida Nyein (Consultant)

Daw Thida Nyein is a Consultant who holds Transitional Consultant Certificate No 0091 and Area of Expertise Permitted is Ecology and Biodiversity, Socio Economy. She has completed her Master of Research Degree and Master of Science Degree in Zoology at Dagon University. She has 9 years experiences in ESIA profession. Her responsibilities are concerning with Identify fauna surveying method, engage with biodiversity team, Impact identification, develop mitigation measures, ormulating assessment methodologies and questionnaires, analyzing and interpreting data, devising social impact strategies, identifying project impact zones (both direct and indirect), and determining survey areas. She assumes the responsibility of developing assessment methodologies and questionnaires, analyzing and interpreting data, devising social impact strategies, socioeconomic evaluation and assessment, identifying project impact zones (both direct and indirect), and determining survey areas specifically for this project.

Su Yin Htun (PhD) (Affiliate Consultant)

Daw Su Yin Htun is an affiliate consultant of GOG who received a PhD degree in Law from Mandalay University. She has a total of 15 paper presentation and 10 research publication concerning with Environmental Protection, Myanmar Laws on forest, biodiversity and ecosystem, Ethnicity and minority rights, Human rights. She is responsible for overviewing laws and regulation, legal analysis and technical report writing.

U Min Thu Hlaing (Technical Expert)

U Min Thu Hlaing is a Technical Expert who working with Guardians of Green Environmental Services since 2020. He has accomplished in BE (Mechanical) from Pathein Technological University. He has experiences in Project Management, Risk Assessment, Occupational Health and Safety, Wastewater Plan and Process water system. He is responsible for consulting in Risk Assessment, Occupational Health and Safety, Environmental Quality Monitoring, Environmental Quality Analysis, Project Design and Wastewater Treatment System, Hazard Management and Technical Report Writing.

U Aung Phyo Htet (Technical Expert)

U Aung Phyo Htet is a Technical Expert who working with Guardians of Green Environmental Services since 2020. He has accomplished in Bachelor of Science (Geology)- Pathein University with an accomplishment of Certificate of Participation in Soil Mechanics Course, Certificate of Geotechnical Instrumentation for Engineer Course and Certificate in Work Place Safety and Health Coordinator. He has experiences in Project Management, Occupational Health and Safety, Processing the Geotechnical Data and Interpretation of Geotechnical Instrumentation and Soil Investigation Report. He is responsible for consulting in Occupational Health and Safety, Environmental Quality Monitoring, Environmental Quality Analysis, Soil Conservation and Surface Hydrology.

U Aung Myo Hsan (Marine Biology Specialists)

U Aung Myo Hsan is a marine biologist who working with Guardians of Green Environmental Services since 2019. His expertise was ecology of marine phytoplankton, seagrasses, coral reef, aquaculture and etc. He got MSc degree with study on the ecology of marine dinoflagellates from Pathein University and conducted MRes degree with study on the ecology of phytoplankton form Thanlwin River mouth at Mawlamyine University. Now, he is a final year PhD candidate specialize on ecology of seagrasses from southern Rakhine coastal water. He has many experiences on his expertise for example, publications of phytoplankton, collaboration with INGOs. In BEAN, he is mainly responsible not only for researcher but also for report writing.

Su Myat Noe (Socioeconomic)

Daw Su Myat Noe is a Project Coordinator, member of socioeconomic team who received Bachelor of Economic, Diploma of Human Resources Management (IQN-UK). She has more than two years of experiences in Project Management, Coordination, Facilitation, Stakeholder engagement, Public consultation, Social survey.

The full address of the company conducting

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2. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

This section reviews the relevant policies, legislations and institutional framework of Myanmar relevant in the context of environmental and socioeconomic aspect of the project. The activities carried out under the project are subjected to these legal requirements.

2.1. Policy and Legal Framework for Project on Farming and Production of Shrimp in Kyauk Phyu Township, Kyauk Phyu District, Rakhine State, including existing applicable laws and rules, International Conventions, Treaties and Agreements, and national and international standards and guidelines

1. The Constitution of the Republic of the Union of Myanmar (2008)

- 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 the atmosphere in the Union.
- The Union shall permit citizens right of private property, right of inheritance, right of private initiative and patent in accord with the law.
- 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.
- 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.

3. Myanmar National Environmental Policy (2019)

Mission: To achieve a clean environment, with healthy and functioning ecosystems, that ensures inclusive development and wellbeing for all people in Myanmar.

Vision: To establish national environmental policy principles for guiding environmental protection and sustainable development and for mainstreaming environmental considerations into all policies, laws, regulations, plans, strategies, programs and projects in Myanmar.

4. National Land Use Policy (2016)

Objectives:

- To promote sustainable land use management and protection of cultural heritage areas, environment, and natural resources in the interest of all people in the country;
- To strengthen land tenure security for the livelihood's improvement and food security of all people in both urban and rural areas of the country;
- To recognize and protect customary land tenure rights and procedures of the ethnic nationalities;
- To develop transparent, fair, affordable and independent dispute resolution mechanisms in accordance with the rule of law;

- To promote people centered development in land resources and accountable land use administration in order to support the equitable economic development of the country;
- To develop a National Land Law in order to implement the above objectives of the National Land Use Policy.

5. Myanmar Climate Change Policy (2019)

Vision: To be a climate-resilient, low carbon society that is sustainable, prosperous and inclusive, for the wellbeing of present and future generations.

Purpose: To create and maximize opportunities for sustainable, low carbon, climate resilient development, ensuring benefits for all.

6. The Environmental Conservation Law (2012)

Purpose: To construct a healthy and clean environment 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 conservation.

- The project proponent has to pay the compensation for damages if the project will cause injuries to environment, under the sub-section (o) of section 7 of said law.
- The project proponent has to purify, emit, dispose and keep the polluted materials in line with the stipulated standards, under section 14 of said law
- The project proponent has to install or use the apparatus, which can control or help to reduce, manage, control or monitor the impacts on the environment, under section 15 of said law.
- The project proponent has to allow relevant governmental organization or department to inspect whether performing is conformity with the terms and condition included in prior permission, issued by the ministry, or not, under section 24 of said law.
- The project proponent has to comply with the terms and conditions included in prior permission, under section25 of said law.
- The project proponent has to abide by the stipulations included in the rules, regulation, by-law, order, notification and procedure issued by said law, under section 29.

7. The Environmental Conservation Rules (2014)

- The project proponent has to avoid emit, discharge, or dispose, direct to 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, under sub- rule (a) of rule 69.
- The project proponent has to avoid performing to damage to ecosystem and the environment generated by said ecosystem, under sub-rule (b) of rule 69.

8. Environmental Impact Assessment Procedure (2015)

- The project proponent has to be liable for all adverse impacts caused by doing or omitting 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.
- The project proponent has to support, after consultation with effected persons by project, relevant governmental organization, governmental 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 sub-paragraph (b) of paragraph 102.
- The project proponent has to implement fully 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.
- 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.
- 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.
- The project proponent has to continuously monitor all adverse impacts in the pre-construction phrase, construction phrase, operation phrase, suspension phrase, closure phrase and post-closure phrase, moreover has to implement the EMP with abiding the all conditions included in ECC, relevant laws & rules and this procedure, under paragraph 106.
- 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.
- The project proponent has to submit the monitoring report semiannually prescribed time by Ministry in line with the schedule of EMP, under paragraph 108.
- The project proponent has to prepare the monitoring report in accord with the rule 109.
- 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.

- 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.
- 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.
- The project proponent has to allow inspector to inspect the contractor and sub-contractor who implements on behalf of project, under paragraph 117.

9. National Environmental Quality (Emission) Guidelines (2015)

- The project proponent has to emit, discharge (or) dispose anything in line with the standards stipulated in said guideline.

10. The Myanmar Investment Law (2016)

Purpose: To ensure the appointing of employees, fulfilling the rights of employees, avoiding any injury to environment, social and cultural heritage, insure the prescribed insurance in line with the above law. This law focuses as follows,

- The project proponent has to register the land lease contract at the specific registration office, under sub-section (d) of section 51 of said law. (if the land lease contract is needed)
- The project proponent has to appoint the nationalities in the various levels of administrative, technical and expert work by the arrangement to develop their expertise, in line with the sub-section (b) of section51of said law.
- The project proponent has to appoint the nationalities only in normal work without expertise, in line with the sub-section (c) of section51of said law.
- The project proponent has to appoint either foreigner or nationality with the appointment agreement in accord with the law, in line with the sub-section (d) of section51of said law.
- The project proponent has to comply with the international best practices, existing laws, rules and procedures to not damage, pollute, and injure to environment, cultural heritage and social, in line with the sub-section (g) of section65of said law.
- The project proponent has to close the project after paying the compensation to the employees in accord with the existing laws if violates the appointment agreement or terminate, transfer or suspend the investment or reduce the number of employees, in line with the sub-section (i) of section65of said law.
- The project proponent has to pay the wages or salary to the employees in accord with the laws, rules, order and procedures in the suspension period, in line with the sub-section (j) of section65of said law.
- The project proponent has to pay the compensation or injured fees to the respected employees or their inheritors if injury in or loss of part of body or death caused by work, in line with the sub-section (k) of section 65of said law.

- The project proponent has to stipulate the foreign employees to respect the culture and custom and abide by the existing laws, rules, orders, directives, in line with the sub-section (l) of section65of said law.
- The project proponent has to abide by labor laws, in line with the sub-section (m) of section65of said law.
- The project proponent has to pay the compensation to the injured person for damages if damages of environment or socio-economy are occurred by misuse of project, in line with the sub-section (o) of section 65of said law.
- The project proponent has to allow to inspect in anywhere of project if Myanmar Investment Commission inform to inspect the project, in line with the sub-section (p) of section 65 of said law.
- The project proponent has to obtain the permission of MIC before EIA process and report this process to MIC, in line with the sub-section (q) of section 65 of said law.
- The project proponent has to insure the prescribed insurance by rules, under section 73 of said law.

11. Myanmar Investment Rules, 2017

Section 190, 202, 203, 206, 212, The Project Proponent commits:

- To comply with all terms and conditions in the permit and other applicable laws when the investment is carried out.
- To fully assist while negotiating with the Authority for settling the grievances of the local community that have been effected due to Investments.
- To appoint expert foreigner as senior manager, technical and operational expert or advisor according to subsection (a) of the section 51 of the Law.
- To obtain the permit or tax exemption or relief to insure the relevant insurance out of the following types of the insurance at any insurance business entitled to carry out insurance business within the Union based on the nature of the business: Property and Business Interruption Insurance; Engineering Insurance; Professional Liability Insurance; Bodily Injury Insurance; Marine Insurance; or Workmen Compensation Insurance; Life Insurance; Fire Insurance.
- An investor to whom section 65(q) of the law applies shall submit confirmation of its compliance with the applicable requirements of the Environmental Conservation Law, rules and environmental impact assessment procedures to undertake, obtain and implement an initial environmental examination, assessment, certificate and management plan as those requirements are met. The approval of Commission for continuation of the investment shall base on its compliance.

12. The Forest Law (1992)

Purpose: To ensure in carrying out the project with the permission of Ministry of Natural Resources and Environmental Conservation if the project land is forestland or forest covered land. This law focuses as follow;

- The project proponent has to obtain the permission of Ministry of Natural Resources and Environmental Conservation before starting the work if the project land is forest land or forest covered under sub- section (a) of section 12

13. The Electricity Law (2014)

Objective: To ensure the compliance with the conditions of permission for productions of electricity, abiding by any stipulation, implementing with the best practices and paying compensation in line with above law. This law focuses as follows;

- The project proponent will implement the project with the best practices to reduce the damages on the environment, health and socio-economy, also will pay compensation for the damages and will pay the fund for environmental conservation, under sub-section (b) of section 10 of said law.
- The project proponent has to take the certificate of electric safety, issued by the chief-inspector, before the commencement of power generation, under section 18 of said law. The project proponent has to be liable for damages to any person or enterprise by failure to abide by the quality standards or rules, regulation, by-law, order and directive issued under said law according to sub-section (a) of section 21 of said law
- The project proponent has to be liable for damages to any person or enterprise by negligence of project owner according to sub-section (a) of section22 of said law.
- The project owner has to comply with the permission for electric searching and generation, under sub-section (a) and (b) of section 26 of said law.
- The project proponent will inform promptly to chief-inspector and head officer of related office while occurring of accident in electricity generation, under section 27 of said law.
- The project proponent will comply with the standards, rules and procedure. Moreover, will allow the inspection by respected governmental department and organization if it is necessary, under section 40 of said law.
- The project proponent will pay the compensation to anyone who is injured or caused to death in electric shock or fire caused by the negligence or omitting of the project owner or representative of project owner, under section 68 of said law.

14. The Public Health Law (1972)

Purpose: To ensure the public health include not only employees but also resident people and cooperation with the authorized person or organization of health department. The project owner will cooperate with the authorized person or organization in line with the section 3 and 5 of said law.

Section 3 - The project proponent has to abide by any instruction or stipulation for public health.

Section 5 - The project proponent has to allow any inspection, anytime, anywhere if it is needed.

15. Prevention and Control of Communicable Disease Law (2011)

Purpose: To ensure the healthy work environment and prevention the

communicable diseases by the cooperation with the relevant health department.

- The project proponent has to build the housing in line with the health standards, distribute the healthful drinking water & using water and arrange to systematically discharge the garbage and sewage, under clause (9) of sub-section (a) of section 3 of said law.
- The project proponent has to abide by any instruction or stipulation by Department of health and Ministry of Health, under section 4 of said law.
- The project proponent has to inform promptly to the nearest health department or hospital if the following are occurred; (under section 9)
- Mass death of animals included in birds or chicken;
- Mass death of mouse;
- Suspense of occurring of communicable disease or occurring of communicable disease;
- Occurring of communicable disease, this must be informed.
- The project proponent has to allow any inspection, anytime, anywhere if it is need to inspect by health officer, under section 11 of said law.

16. The Myanmar Insurance Law (1993)

Purpose: The project can cause the damages to the environment and injuries to public so to ensure the needed insurances are insured at Myanma Insurance. This law focuses the following matters;

- If the project proponent uses the owned vehicles, the project owner has to insure the insurance for injured person under section 15 of said law.
- The project proponent has to insure the insurance to compensate for general damages because the project may cause the damages to the environment and injury to public under section 16 of said law.

17. Labor Organization Law (2011)

Purpose: To ensure protection the rights of the employees, having the good relationships between the employees and employer and enabling to form and carry out the labour organizations systematically and independently.

- The project owner promises to allow the labour organization, to negotiate and to 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 summit demands to the employer and claim in accord with the relevant law if the agreement cannot be reached under section 17 of said law.
- The project proponent promises to demand the re-appointment of worker who is dismissed by the employer, without the conformity with the labour laws under section 18 of said law.
- The project proponent promises to send the representatives to the Conciliation Body in settling a dispute between the employer and the worker under section 19 of said law.
- The project proponent promises the labour organization to participate and discuss in discussing with the government, the employer and the

complaining employees in respect of employee's rights or interest contained in the labour laws under section 20 of said law.

- The project proponent promises the labour organization to participate in solving the collective bargains of the employees in accord with the labour laws under section 21 of said law.
- The project proponent promises the labour organization to carry out the holding the meetings, going on strike and other collective activities in line with the procedure, regulation, by-law and directive of relevant Chief Labour Organization under section 22 of said law.

18. The Development of Employment and Skill Law (2013)

Purpose: To ensure the job security and to develop the employee's skill with the fund of project owner:

- The project proponent has to appoint employees with the contract in line with the provision of section 5 of said law.
- The project proponent has to carry out the training programs with the policy of Skill Development Body to develop the employment skill of employees who is appointed or will be appointed, under section 14 of said law.
- The project proponent has to monthly pay to the fund, which is fund for development of skill of employees, not less below 0.5 percentage of the total payment to the level of worker supervisor and the workers below such level, under sub-section (a) of section 30 of said law.
- The project proponent has to promise not to deduct from the payment of employees for above-mentioned fund, under sub-section (b) of section 30 of said law.

19. Minimum Wages Law (2013)

Purpose: To ensure the project owner pay the wages not less than prescribed wages and notify obviously this wage in work place, moreover to be inspected.

- The project proponent has to pay the wages in line with section 12 of said law.
- The project proponent has to notify the prescribed wages obviously in work place under sub-section (a) of section 13 of said law.
- The project proponent has to record correctly the lists, schedules, documents, and wages, report these to the relevant department, and give if these are asked while inspecting, in accord with the stipulations under sub-section (b) (c) (d) of section13 of said law.
- The project proponent has to allow to be inspected by the inspector, under sub-section (d) and (e) of section 13 and section 18 of said law.
- The project proponent has to allow holiday for medical treatment if the employee' health is not fit to work, under sub-section (f) of section 13 of said law.

- The project proponent has to allow holidays without deducting from the wages if one of parents or one of family dies, under sub-section (g) of section 13 of said law.

20. Payment of Wages Law (2016)

Purpose; To ensure the way of payment and avoiding delay payment to the employees. This law focuses as follows;

- The project proponent has to pay the wages in accord with the section 3 and 4 of said law under section 3 and 4 of said law.
- The project proponent has to submit with the agreements of employees & reasonable ground to department if it is difficult to pay because of force majeure included in natural disaster, under section 5 of said law.
- The project proponent has to abide by the provisions of section 7 to 13 in chapter (3) in respect of deduction from wages.
- The project proponent has to pay the overtime fees, prescribed by law, to the employees who work over working hours, under section 14 of said law.

21. The Leaves and Holidays Act (1951)

Purpose: The employees can take the leaves and get the holidays legally and to ensure the right to get the holidays and leaves. This law focuses the following matters;

- The project proponent has to allow the leaves and holidays in line with the law.

22. Social Security Law (2012)

Purpose: The project proponent has to create the social security for the employees because the project is the business under the Myanmar Citizen Investment Law. To ensure the social security for employees of the project, the project owner has to register to the social security offices and to pay the prescribed fund.

- The project proponent has to register to the respected social security office, under sub-section (a) of section 11 of said law
- The project proponent has to pay the social security fund for at least four types of social security included in sub-section (a) of section 15, under section 15 of said law.
- The project proponent has to pay the fund, which has to be paid myself, and together with the fund which has to be paid from their salary by the employees. Moreover, the project owner will pay the cost for paying the above-mentioned fund only myself under sub-section (b) of section 18 of said law.
- The project proponent has to pay the fund for accidence, under sub-section (b) of section 48 of said law. (but this fund is not related to workmen compensation so if it is needed compensation must be separately paid by the Workmen compensation Act)
- The project proponent has to make correctly and submit the list and record provided in section 75 to respected social security office, under section 75 of said law.

23. Conservation of Water Resources and Rivers Law (2006)

Purpose:

a. to conserve and protect the water resources and rivers system for beneficial utilization by the public;
b. to smooth and safety waterways navigation along rivers and creeks;
c. to contribute to the development of State economy through improving water resources and river system;
d. to protect environmental impact.

24. Vacant, Fallow, Virgin Land Management Rule (2012)

This rule dedicates to the process of application and approval of the unused land for various purposes.

25. 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.

- 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 under sub-section (e) of section 26 of said law.
- The project proponent has to arrange and display occupational safety and health instructions, warning signs, notices, posters, and signboards under sub-section (l) of section 26 of said law.
- 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 under sub-section (a) of section 30 of said law.
- 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 under sub-section (d) of section 30 of said law.
- 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 under sub-section (e) of section 30 of said law.

26. Animal Health and Development Law (1993)

Objectives:

- to carry out animal health and development work;
- to promote livestock development;
- to prevent outbreak of contagious disease in animals and to control the outbreak systematically when it occurs;
- to inspect imported animal, animal product and animal feed;
- to issue recommendation certificate concerning animal, animal product and animal feed for export;
- to protect animals by law from being ill-treated.

27. Underground Water Act (1930)

In this Act, unless there is anything repugnant in the subject or context, -

(a) "underground water" means water obtained from below the surface of the ground by the sinking of tubes; and

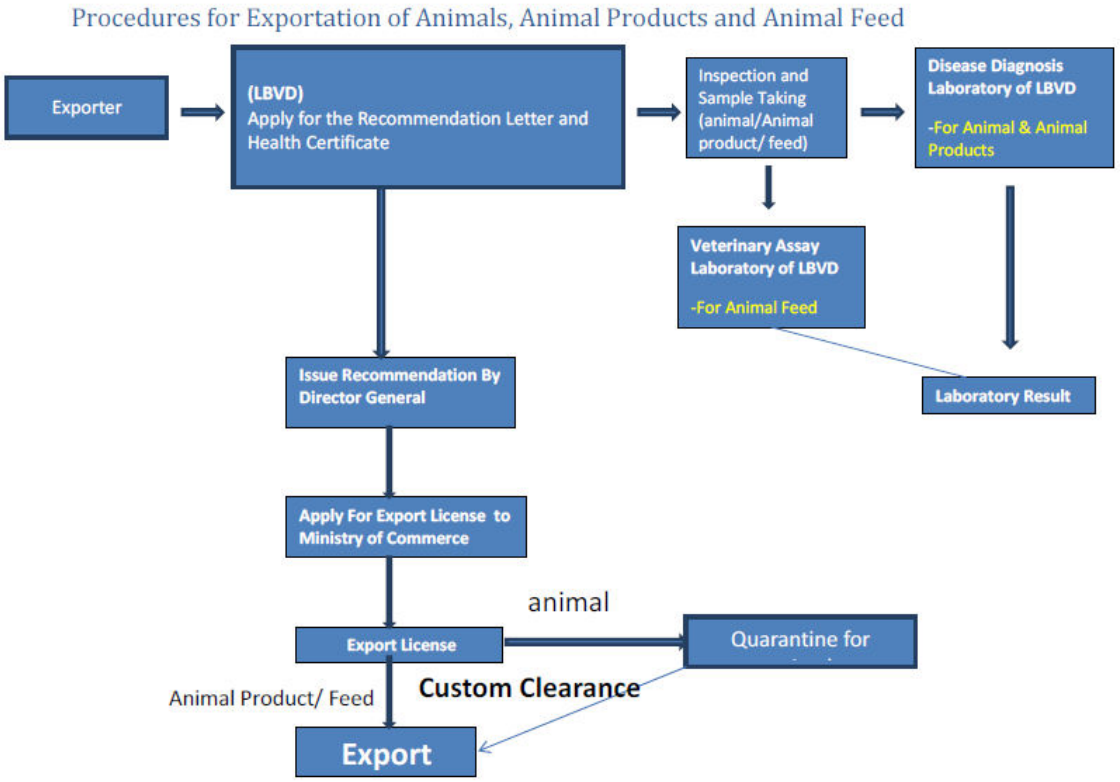
(b) "water officer" means such officer as the Governor may, by notification, prescribe in this behalf. Licence necessary for sinking of tubes.

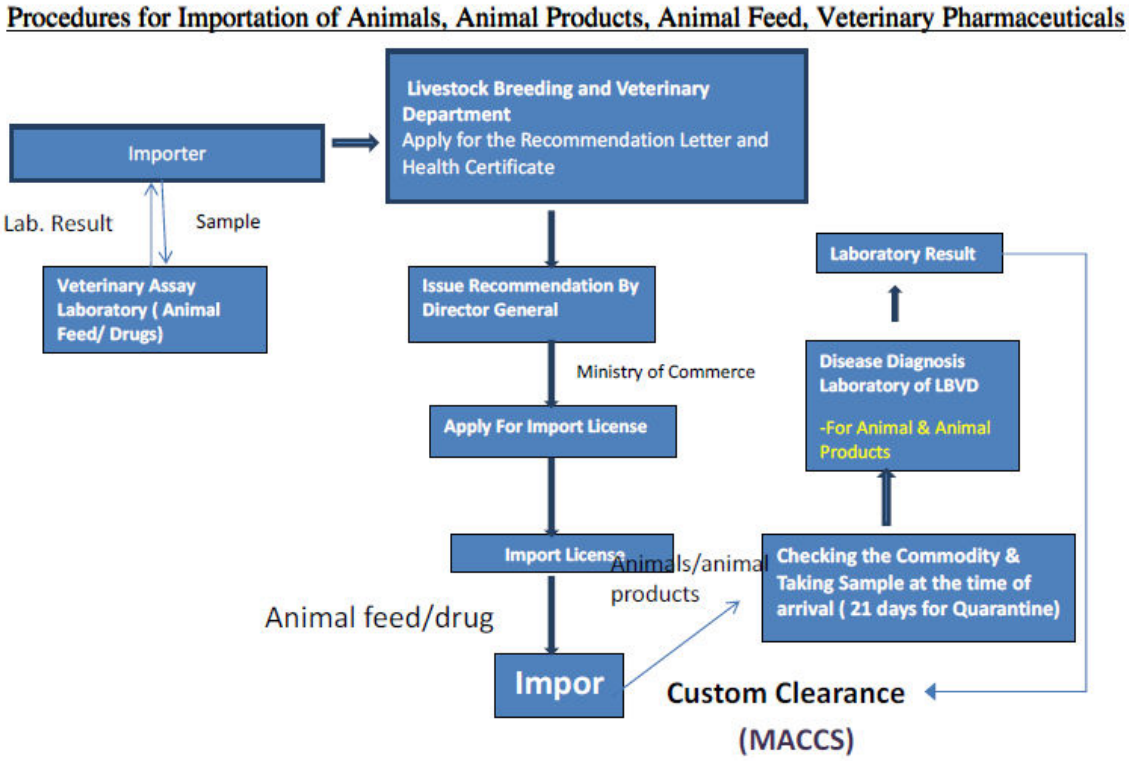
28. Natural Disaster Management Law (2013)

Purpose: to implement natural disaster management programs and to coordinate with national and international organizations in carrying out natural disaster management activities; to conserve and restore the environment affected by natural disaster and to provide health, education, social and livelihood programmes in order to bring about better living conditions for victims.

- The project proponent has to perform preparatory and preventive measures for natural disaster risks reduction before the natural disaster strikes under sub section (a)(i) of section 13 of said law.
- The project proponent has to undertake rehabilitation and reconstruction activities for improving better living standard after the natural disaster strikes and conservation of the environment that has been affected by natural disaster under sub section (a)(iii) of section 13 of said law.
- The project proponent has to carry out better improvement on early warning system of natural disaster under sub section (b) of section 14 of said law.
- The project proponent has to carry out together with the measures of natural disaster risk reduction in development plans of the State under sub section (d) of section 14 of said law.
- 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 under section 25 of said law.
- Whoever interferes, prevents, prohibits, assaults or coerces the department, organization or person assigned by this law to perform any natural disaster management shall, on conviction, be punished with imprisonment for a term not exceeding two years or with fine or with both under section 26 of said law.
- 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 under section 29 of said law.
- Whoever willful failure to comply with any of the directives of the department, organization or person assigned by this law to perform any natural disaster management shall, on conviction, be punished with imprisonment for a term not exceeding one year or with fine or with both under sub section (a) of section 30 of said law.

29. Procedure for Import & Export of Animals, Animal Products, Veterinary Medicine, Animal Feed and Veterinary Equipment/ Farm Equipment





30. The Conservation of Biodiversity and ProtectedArea Law (2018)

Objectives:

a. to implement biodiversity strategy and policy of the Country;
b. to implement the Government policy for conservation of Protected Areas policy
c. of the Country;
d. to carry out protection and conservation of wildlife, wild plants, ecosystems and
e. migratory animals in accordance with International Conventions agreed by the Countr y;
f. to regulate trade of wildlife and wild plants or their parts, derivatives or products
g. to protect geophysically unique areas, endangered wildlife and wild plants and
h. their natural habitats;
i. to contribute to natural scientific research and environmental education activities; (g) to protect wildlife and wild plants by establishing zoological and botanical gardens.

2.2. Commitment to follow International Guidelines

Besides National Laws and Regulations, Myanmar Bright Prospect International Logistics Co., Ltd. has made to follow international guidelines such as World Health Organization's Guidelines, World Bank Safeguards Policies and IFC Performance Standards which are referred for Environmental Management Plan of the Proposed Project.

- Environmental, Health, and Safety Guidelines for Aquaculture (2007)
- FAO, Good Aquaculture Practices – GAqP (2003)

3. PROJECT DESCRIPTION AND ALTERNATIVE SELECTION

3.1. Project Background

The fisheries sector is one of the main sectors among the business sector in Rakhine State. The local people are working in the fish, shrimp farming and marine shrimp farming by using traditional system. The local people who lived in the coastal area are cultured the Black Tiger Shrimp (***Penaeus monodon***) post larvae by making the ponds to trap ashore them along the Rakhine coastal area over 40 years ago. According to the record of Fishery Department on October 30, 2016, over 10,000 of local people are making over 150,000 acres of shrimp farming.

Scientific Classification of the Black Tiger Shrimp (***Penaeus monodon***)

Kingdom : Animalia

Phylum : Arthropoda

Subohylum: Crustacea

Class : Malacostraca

Order : Decapoda

Suborder : Dendrobranchiata

Family : Penaeidae

Genus : ***Penaeus***

Species : ***P. monodon***

Most of the local people are only working at inshore fishery and marine shrimp farming by using traditional system because of the lack of advanced technology and knowledge. The Myanmar Bright Prospect International Logistics Co., Ltd. planned to invest US$ 5 million for the improvement of aquaculture enterprises by conducting the marine shrimp farming in the vacant land area that is not used by the local people as a business land. MBPL will operate the marine shrimp hatchery process within the 14 acres of the Project site and intend to produce 5 million post larvae in one batch and 4 batches per year. Therefore 20 million marine shrimp post larvae can be produced in one year. For the first stage, the Black Tiger Shrimp (Penaeus monodon) indigenous species will be used for farms. The shrimp farming process will be carried out scientifically 2 times per year based on the Semi-Intensive System with a total area

of 70 acres. MBPL intends to produce 336 tons of shrimp per year within the 70 acres of shrimp farms.

Figure 4. 1 Current condition of site

3.2. Project Location, Overview Map and Site Layout map

The project site is located at the Block No. 560 – Ahlae Dwain, 561-Kyaukse, 562 – Thadwelaungcha, Ahlae Dwain village tract, No. 1049,1050,1544, 1829, 1844, 2, 1846, 2463, 1848, 1823, 325,/ 2562, Kyauk Phyu Township, Kyauk Phyu District, Rakhine State. The total area of 84 acres, the marine shrimp hatchery process will operate within the 14 acre, and the shrimp farming process will be carried out scientifically 2 times per year based on the Semi-Intensive System with a total area of 70 acres. The proposed project areas were 84 acres consists of old shrimp farm 70 acres and mangrove covered area 14 acres along with the swamps, marsh and bogs, water channels and mangrove area.

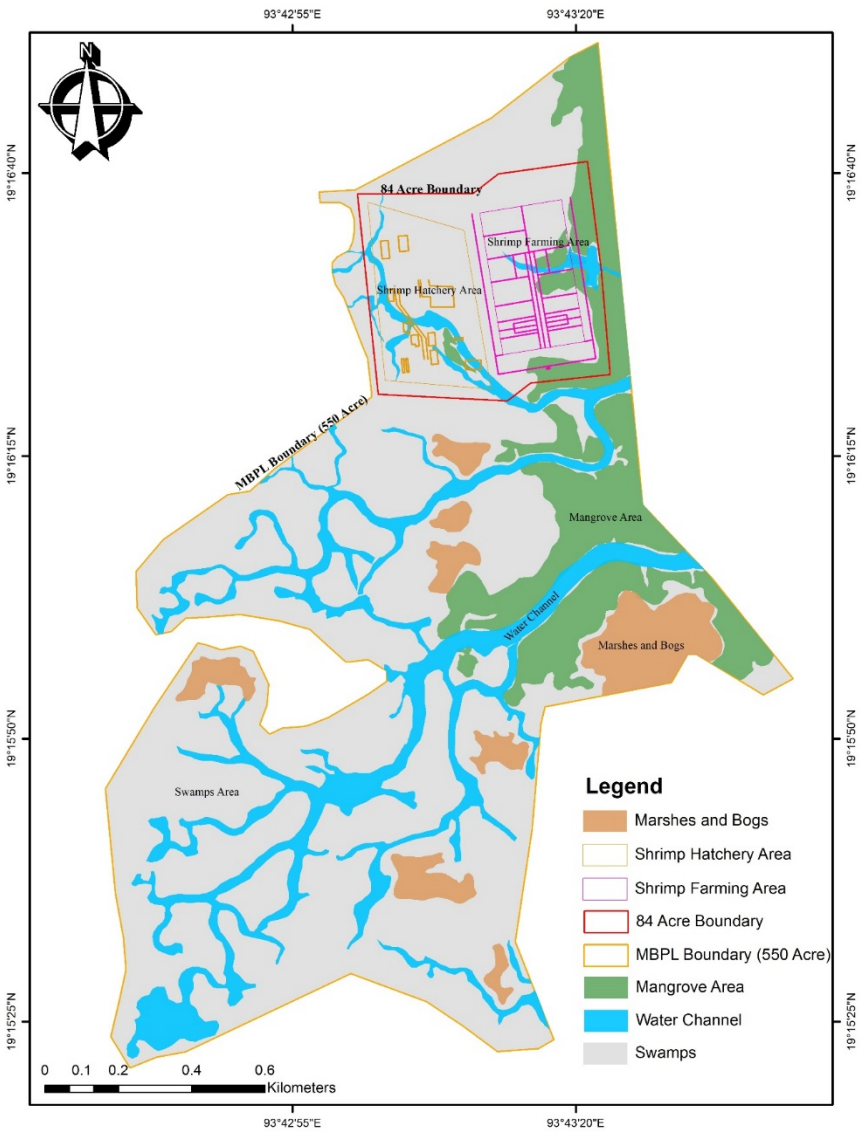


Figure 4. 2 Location of the project site

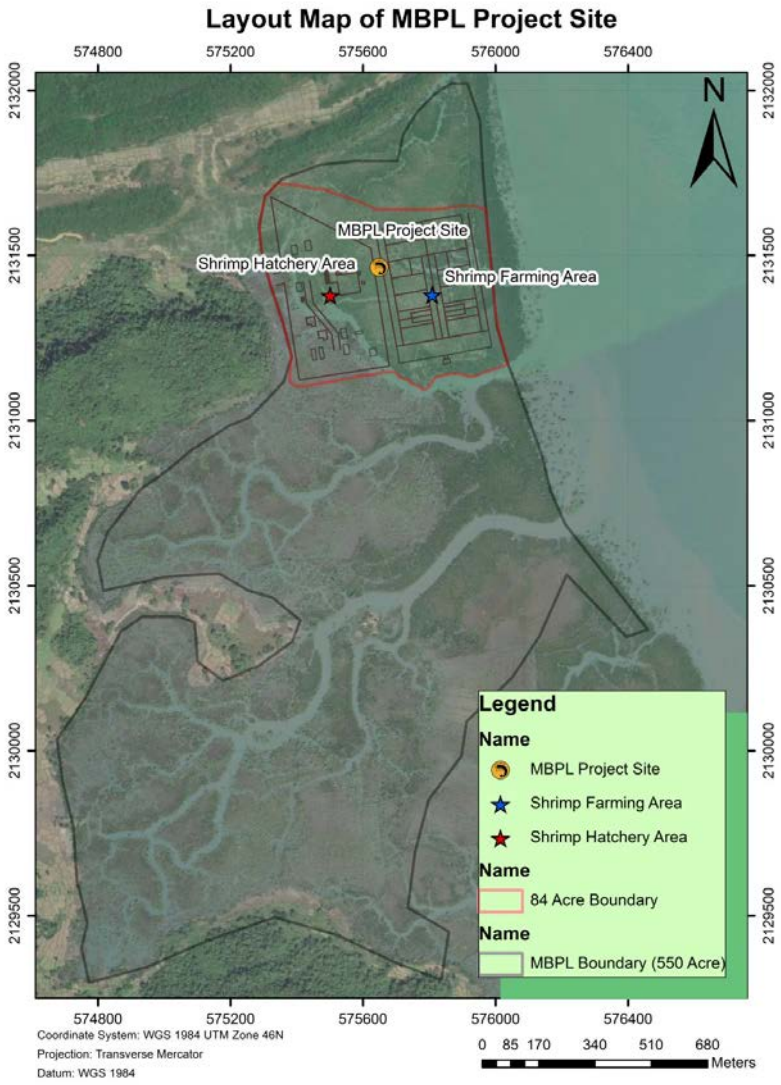


Figure 4. 3 Layout Map of MBPL Project Site

3.3. Project Development and Implementation Time Schedules

	1st Year												2nd Year												3rd Year											
	Month												Month												Month											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Construction Period																																				
Road Development																																				
Housing																																				
Hatchery																																				
Shrimp Ponds																																				
Wastewater Treatment Pond																																				
Operating Period	30+10+10 (Years)																																			

3.4. Description of the project

3.4.1. Project Size

The total area of project site is 84 acre (33.7ha) with the need for shrimp hatchery will be built many tanks and buildings. The needed tanks and buildings for shrimp hatchery are described as following;

Tanks
- Reservior
- Maturation tank
- Hatching tank
- Larvae rearing tank
- Post larvae rearing tank
- Water Treatment tank
- Phytoplankton tank

Buildings
- Generator Room
- Air Cooling Room
- Material Storage Room
- Food Storage Room
- Laboratory Room
- Phytoplankton Culture Room
- Water Pipes
- Air Pipes

Size and Number of buildings

Sr No.	Description	No. of Building	Dimension (Hectare)	Dimension (sq ft)	Total Dimension (sq ft)
1	ရေလှောင်ကန်	1	5.00	538,195.52	538,195.52
2	အသားတိုးကန်	4	2.50	269,097.76	1,076,391.04
3	အသားတိုးကန်	2	2.00	215,278.21	430,556.42
4	အသားတိုးကန်	2	1.75	188,368.43	376,736.86
5	အသားတိုးကန်	2	1.50	161,458.66	322,917.31
6	တဆင့်ပြောင်းကန်	2	1.00	107,639.10	215,278.21
7	ပြုစုကန်	4	0.25	26,909.78	107,639.10
8	ပင်မသားဖောက်အဆောက်အဦး	1		12,000.000	12,000.000
9	မီးစက်ခန်း	1		396.000	396.000

10	ပင်လယ်ရေတင်စက်	1		396.000	396.000
11	၅-တန်ဆန့်အအေးခန်း	1		475.000	475.000
12	ရေချိုတွင်း(10' Dia;)	1		800.000	800.000
13	ရိပ်သာ	2		800.000	1,600.000
14	အိမ်ယာ	2		1,000.000	2,000.000
15	လုံခြုံရေးတဲ	1		100.000	100.000
16	ဆီသိုလှောင်ရုံ	4		120.000	480.000
17	ပင်လယ်ရေစစ်ကန်(10' အနက်)	1		64.000	64.000
18	၂၅ တန်ဆန့်ပိုးသတ်ကန်	8		356.508	2,852.062
19	ရေငန်ယူသောနေရာ	1		396.000	396.000
20	ရေချို/ရေငန်လှောင်ကန်				
21	ရေငန်လှောင်ကန်(၁၁'-၄" အနက်)	2		2,028.000	4,056.000
22	ရေချိုလှောင်ကန်(၁၁'-၄" အနက်)	1		1,035.684	1,035.684
23	လေပေးခန်း	1		267.674	267.674
24	ရေစစ်ခန်း	1		365.010	365.010
25	ရေငန်ရေစင်	1		200.000	200.000
26	ရေချိုရေစင်	1		100.000	100.000
27	သိုလှောင်ရုံ	1		80.000	80.000
28	Water Treatment Pond	1	5.6	602778.96	602,778.96
29	Trans formal / Cable Set-up (500 KVA)	1		396.000	396.000
Total		51			3,698,552.85

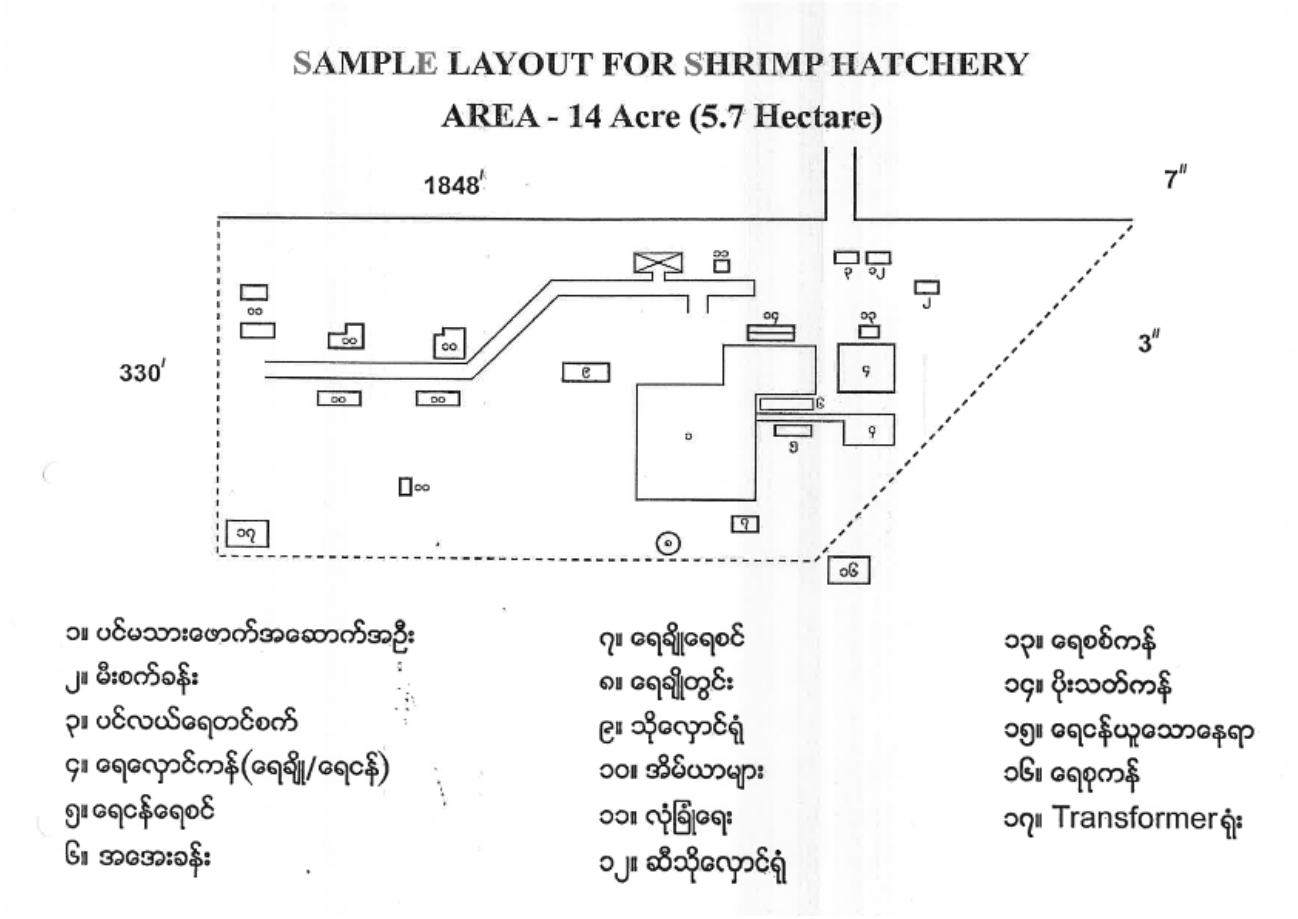


Figure 4. 4 Sample Layout for Shrimp Hatchery

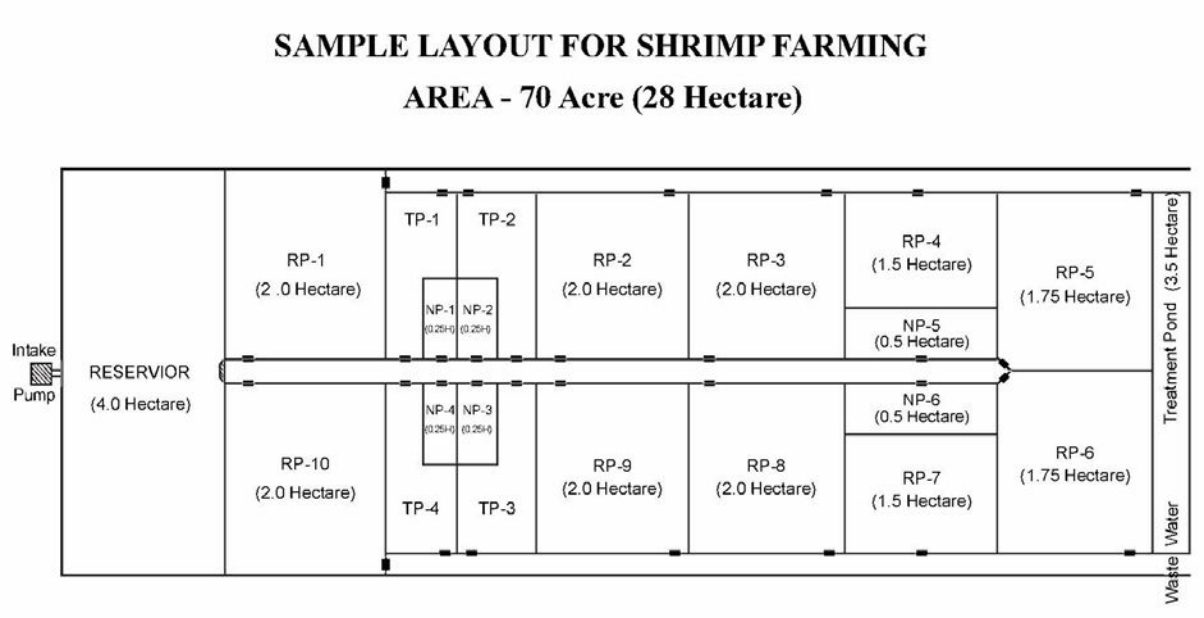


Figure 4. 5 Sample Layout for Shrimp Farming

3.5. Transportation

Only inland route will be used for the transportation of materials in both construction and operation phase of shrimp farming.

Figure 4. 6 Transportation Route

3.6. Resources Consumption

3.6.1. Water Consumption

The total water consumption for shrimp farming and associated facilities is 33,684,000 tons per year of estuarine water and 164.4247 tons of fresh water per year, the water will be circulated through the filtration and regulating reservoir, pond, treatment pond to existing water body. Water exchange offers an economically efficient method to maintain good water quality. The recommended amount of daily water exchange is 10 to 30 percent. The rate should increase throughout the cycle as the amount of feed input increases. Firstly, water would be settled in sedimentation pond and stored in reservoir after filtering used for hatching process. For Grow out farm, the property of water quality in rearing pond is very important for the growing

shrimp's regular health. Therefore, the following water quality management plans will be implemented;

- Test the water quality properties
- Exchange the water in rearing pond
- Apply the water shaking equipment (using paddle wheel for water circulation)

Main source of water is from ThanSit River, the water will be temporarily stored in the reservoir before releasing to the hatchery the water will be regulated according to the suitable layout for the shrimp. The water quality needed for shrimp hatching process is;

- Temperature – 27- 32 ˚C
- Salinity – 28- 32 ppt
- pH – 7.5 – 8.5
- DO - >5 ppm

The estimated water consumption for the total shrimp farm area is;

Using the lower end of the range (5% exchange rate):

- Exchange = 432,022.72 m^3 * 0.05 = 21,601.14 m^3/day

Using the higher end of the range (10% exchange rate):

- Exchange = 432,022.72 m^3 * 0.10 = 43,202.27 m^3/day

Therefore, the daily discharged effluent would be 21,601.14 m^3/day.

3.6.2. Electricity Consumption

The project location is Ale Dwein village, Kyauk Phyu Township and it is about 4 km far from SaNe Town which connected with National Grid Line. Therefore, the main source of electricity supply is from 66kV SS ZinChaung-SaNe line. Shrimp hatchery and shrimp farming process, 500kVA transformer will be used. It is needed to supply for hatching process, lighting for operation process both day and night, water pumping process, water supplying and water exchanging to fertilized pond, nursery ponds (both larvae and juvenile) and breeding pond during the breeding process to get suitable normal water condition because of weather condition and water quality changing during day time and night time.

For the production of 1 ton of shrimp, 5MW/ Hr will be calculated to use.

- Hatching stage (1MW/ Hr)
- Breeding stage (3MW/ Hr)
- Production and cold storage (1MW/ Hr)

3.6.3. Raw Materials

MBPL will operate the marine shrimp hatchery process within the 14 acres of the Project site and intend to produce 5 million post larvae in one batch and 4 batches per year.

Calculation for shrimp hatchery

Production System	- Galveston System or Clear Water System
Main tanks	- 10 tons size maturation tanks 8 tanks
	- 10 tons size larvae rearing tanks (larvae) 12 tanks
	- 25 tons size post larvae rearing tanks 8 tanks
Utilized shrimp	- Male (30)
	- Female (60)
Larvae Stacking	- 165/ Litre
Post Larvae Stacking	- 50/ Litre
Total stock of larvae	- 20,000,000
Survival rate (Larvae to Post Larvae 1)	- 50%
Total amount of PL 1	- 10,000,000
Survival rate (PL 1 to grow- out size PL 12)	- 50%
Total number of Post Larvae	- 5,000,000

The shrimp farming process will be carried out scientifically 2 batches per year based on the Semi-Intensive System with a total area of 70 acres.

Calculation for shrimp farming

Production System	- Semi-Intensive System
Pond size	- 1 Ac
Stacking density	- 80,000/ Ac
Depth of pond	- 4 – 5 ft
Survival rate	- 75%
Weight of shrimp (1pcs)	- 40 g
Total number of shrimp	- 60,000
Total net weight	- 2.4 ton

Feed Ingredients

Main ingredients are Fish meal, Soybean meal, Wheat flour, Squid visceral meal, Fish oil, Lecithin, Cholesterol, Vitamins and Minerals.

Composition

Code	1802	1803	1804	1805	1806
Moisture (%), max	10	10	10	10	10
Crude Protein (%), min	36	36	36	36	36
Crude fat (%), min	5	5	5	5	5
Crude fiber (%), max	4	4	4	4	4
Ash (%), max	15	15	15	15	15
Shape	Pellet	Pellet	Pellet	Pellet	Pellet

Size (mm)	Ø1.2L1.2-1.6	Ø1.4L2-4	Ø1.7L3-5	Ø2.0L3-5	Ø2.3L4-6
Packing (kg)	10	20	20	20	20

Recommended Feeding Guide

Code	1802	1803	1804	1805	1806
Shrimp body Weight	1-3 g	3-6 g	6-15 g	15-25 g	25g ↑
Days of Culture	11-25	26-50	51-80	81-100	100 ↑
Amount of feed per day % of Biomass	15-8	8-5	5-3	3-2	2 ↓
% feed in trays	-	5-6	7-8	9-10	9-10
Daily feeding frequency	3-4	3-4	3-4	2-3	2-3
Feeding time and Distribution	6AM (30%)	6AM (30%)	6AM (35%)	6AM (40%)	6AM (40%)
	11AM (20%)	11AM (20%)	11AM (20%)	11AM (20%)	11AM (20%)
	5PM (40%)	5PM (30%)	5PM (30%)	5PM (40%)	5PM (40%)
	9PM (10%)	9PM (20%)	9PM (15%)		
Monitoring time (hrs)		1.5-2	1-1.5	1	1

Note: The data given above should be adjusted as per the weather, water temperature, water quality and appetite of shrimp.

3.6.4. List of machineries and equipment and Laboratory Equipment to be imported

The machines and equipment used for the proposed project are brought from local and if high quality and advance technology machines are needed, will be imported from foreign.

Table: 4. 1- List of machineries and equipment and laboratory equipment

No.	Particular	Model No.	A/U	Qty
1.	Ceiling type air con (HP 1.5/v, HP 2V)		Unit	2
2.	Backhoe	WZ40-28 (2500kg)	Unit	1
3.	200kva generator set 160kw silent diesel generator	NPC160KW (6CTA8.3-G2)	Unit	1
4.	Three Phase 30/40K Full Automatic, 3 Phase AC Voltage regulator, 220 Volt Voltage Regulator	TNS-6KVA up to 90KVA	Unit	1
5.	Water Pump		Unit	10
6.	Engine	Honda (WB-30)	Unit	2
7.	Industrial Flake ice making machine	GMIF5T-R4A	Set	1
8.	CVFI Freezer cold storage room	VCR	Set	1
9.	Pipes, section steel and others: - Copper tube - PVC tubes for defrost water system - Profiled steel, Elbow tee, reducer, cap, etc.,		Lot	1

	- Paddle Wheel			
10.	Refractometer (Salinometer)	KR-9000	Set	4
11.	High Power Microscope (40X- 1600X)	XWJ-500	Set	2
12.	Dissecting Microscope	XSZ-107BN	Set	2
13.	Chemical Balance	JA-P (310g)	Pcs	2

3.6.5. Human Resources

The total manpower that has already recruited for farm is 104 persons, 80% from local people.

No.	Designation/ Rank	Citizen	Foreign	Total
1.	Chief Technician	1	-	1
2.	Assistant Technician	1	-	1
3.	Operation Manager	1	-	1
4.	Operation Assistant Manager	1	-	1
5.	Accountant	2	-	2
6.	Office Staff	2	-	2
7.	Water Quality Control Officer	2	-	2
8.	Sale & Marketing & Logistic	1	-	1
9.	Supervisor	4	-	4
10.	Skill Worker	38	-	38
11.	Cleaner & Security	5	-	5
12.	Driver	1	-	1
13.	Technician	-	1	1
	Total	**59**	**1**	**60**

3.7. Waste Generation and Management

In operation period, wastewater effluents will be discharged from cleansing the hatchery tanks, water irrigation from culture and breeding pond. The wastewater may contain SPW and nutrients enriched water from the operation processes. Waste products will also be produced continuously during shrimp culture in a mixture of liquids, semi-solid and solid forms. Some of these waste materials are removed in the discharge; however, some settles out on the pond bottom and becomes semisolid and solid waste. In order to reduce the waste generation, the floating pellets will be used with continuous monitoring.

For the total shrimp farming 70 acre the assuming a waste production rate of 25%:

Daily waste production = 2,400 kg * 0.25 = 600 kg/day

Therefore, the estimated daily waste production in the given scenario would be approximately 600 kilograms per day.

Moreover, sewage generated from the existing infrastructures will be discharged into septic sewer system while storm water from the project area will be channeled into the existing drainage system. An assumed total waste from staff and office waste are 12600 kg/year.

The MBPL will follow the Waste Management Principles in line with the Environmental Assessment Procedures (2015) and any existing laws and regulations issued in the Union of

Myanmar such as limiting the types of waste, categories, amounts of waste (liquid, solid, emissions) generated, methods and system of collection, storage, handling, transport, treatment, disposal and recycling or final disposal of wastes. In line with ECD procedure MBPL is responsible for the generation of wastes, storage, and management of these wastes.

The Waste Management Plan will attempt to minimize waste production by applying the principles of ***Reducing*** the use of materials, ***Reusing*** materials whenever possible, ***Recycling*** materials and ***Recovering*** value from used materials.

Prevention: Waste prevention at source. Departments must plan activities to avoid the generation of waste.

Minimization: Reduce the amount of waste produced.

Reuse: Reuse materials where ever possible.

Recycle: Transfer waste to approved recycling plants to minimize environmental impact.

Disposal: Sending of waste to landfill is a ***last resort***. Hazardous waste will be disposed of and treated by authorized disposal contractors and facilities.

During the construction period, the wastes from the construction site are classified into three categories: construction waste, domestic wastes, and wastewater such as septic tank sludge. Construction wastes during construction phases such as woods, drywall, masonry, metals, plastics, the cardboard will be collected by MBPL and transport to the Kyauk Phyu Municipal Department.

The following figure has shown the types of material and their content.

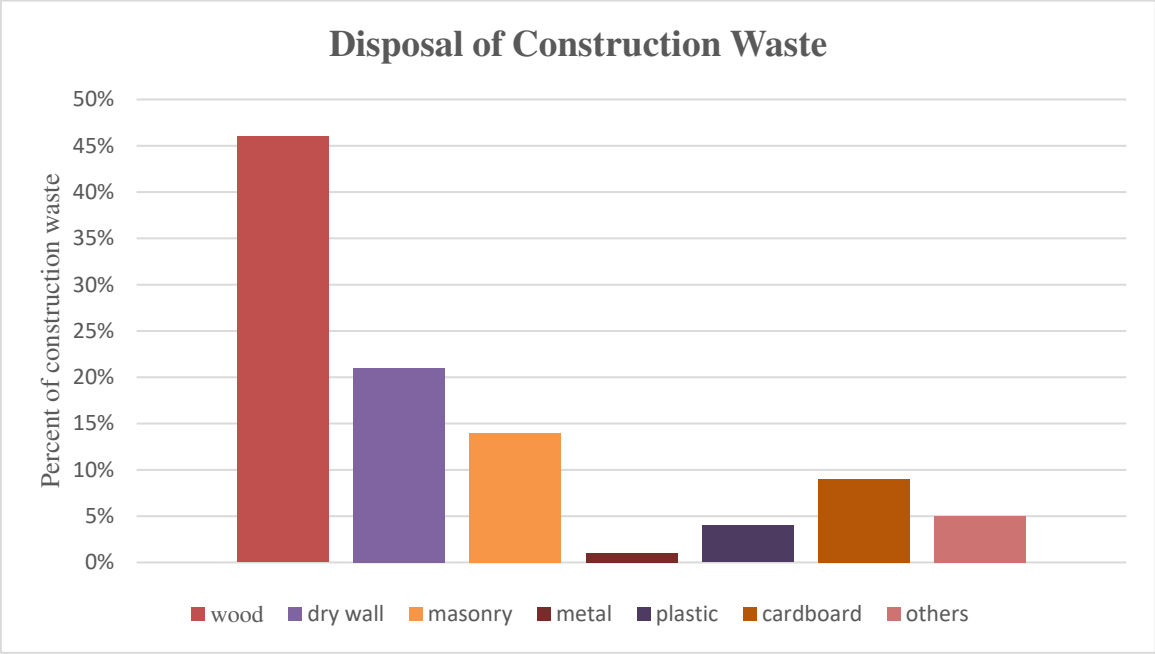


Figure: 4. 1- Type of Construction Waste

In domestic wastes, there are generally plastics, papers, food, and cans. The domestic wastes are collected by MBPL twice a week and solid wastes from the construction site and

from indoor rooms such as meeting rooms, office rooms, and toilets are stored in small plastic bins (4'×11/2'×3'). And this is a temporary location for waste storage in the project site.

3.7.1. Waste Collection and Storage

In the classification of wastes, kitchen waste, paper and shrimp pond waste (SPW) are the components of organic waste and the rest of waste is inorganic waste. In general, most of the waste categories are sorted into the correct trash bins. Thus, training for separation skills for the employee will be practiced. Firstly, the daily waste from the housing and office are collected and wrapped in a small plastic bag and directly dumped in garbage bins which are placed at outside of the building.

3.7.2. Wastewater Generation and Management

The assumed daily discharged effluent would be 21,601.14 m³/day. The discharged wastewater will be drained through the drainage channel and finally collected to the wastewater treatment pond where sedimentation processes happened and the overhead water will be discharged into secondary waster pond with secondary sedimentation processes and the residual overhead water will be discharged into final treatment pond and then discharged into the nearest waterbody through swamp and mangrove forest as an additional biofiltration process. The final discharged water will be tested and compared with the NEQG Guideline before discharging to the waterbody.

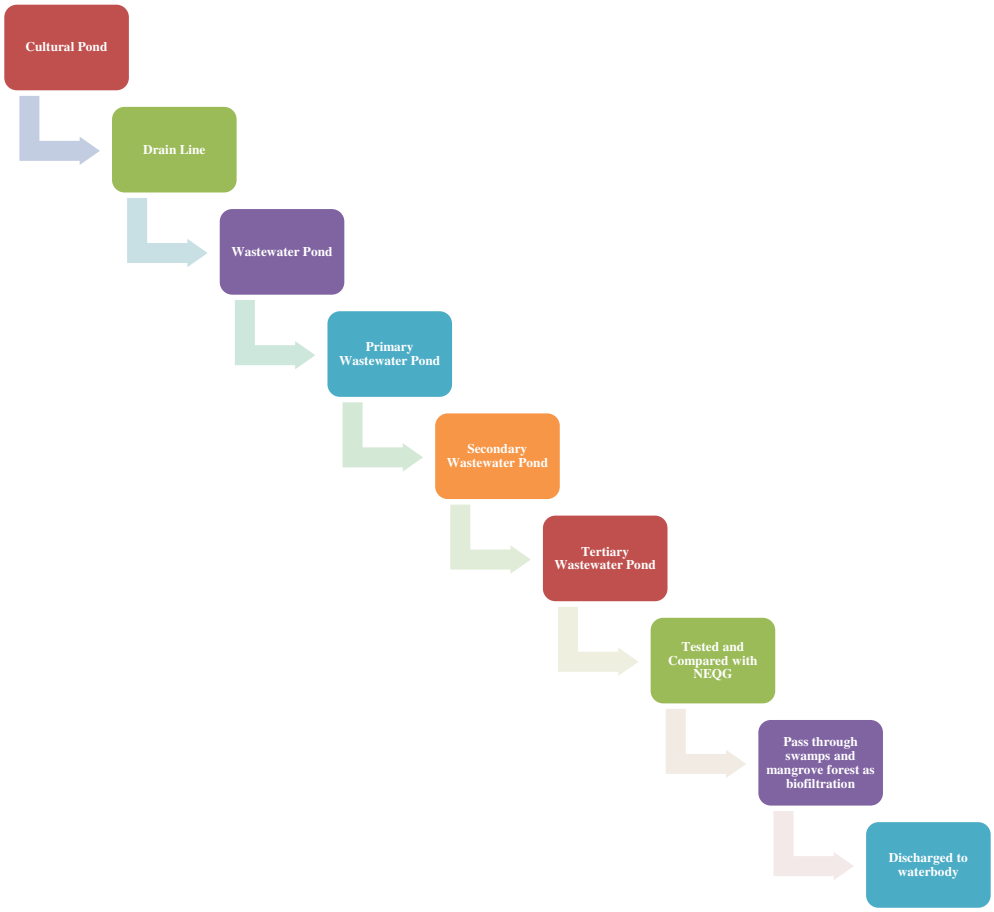


Figure: 4. 2- Wastewater Treatment System

3.7.3. Shrimp Pond Wastes (SPW) management during cultural operation

Three of the most useful approaches to shrimp pond wastes management are 'remain', 'remove' and re-suspend'. The 'remain' management technique refers to accumulation of SPW within the pond where it may produce least negative effects to shrimp population. In this approach, SPW is usually concentrated in the middle of culture pond in order to create larger clean space for the shrimp to inhabit around the edges. Different aeration equipment is commonly used to create circular currents that sweep SPW into the middle of pond where it is deposited. Chemicals such as oxidants may be used to allow aerobic decomposition on the surface layer so that the negative effects of SPW on pond water quality can be reduced.

The 'remove' management technique implies removal of SPW from grow out ponds during the culture period complete removal of SPW is not commonly practiced since it may cause a plankton crash due to low level of nutrient availability in pond ecosystem. Only partial removal of SPW is practiced in lined ponds in order to allow nutrient lease from SPW to water. However, ponds with high nutrient availability and high waste loading rate usually have continuous deposition of SPW at a high rate. In this case, SPW that deposited in the middle of the pond is usually removed completely as new SPW keeps moving inward so nutrients are available for maintaining plankton growth. Different devices are being used to remove SPW from pond during the culture operation. Some farms effectively use the central drain system with additional pipe structure affixed to the central drainpipe. The additional pipe sweeps the waste deposited in the middle of pond bottom in a circular motion and discharges into the drainage canal.

3.7.3.1. Mitigation Measure for Shrimp Pond Wastes during operation

The following should be observed as a general guideline for SPW management. Although these are mainly for the farm operators and owners to follow it still needs assistance of related government agencies.

1. All production farms (regardless of size or production capacity) should have area for disposing waste before planning any production activities.
2. Waste disposal area should be adjusted after every crop in line with waste production level, local environmental conditions and government requirements.
3. Farms that use 'remain' management approaches should have additional management systems to lower SPW volume and improve quality of SPW while in operation.
4. Farms that use 'remove' management approaches should have a proper waste management system before disposing out of farm environment.
5. Use of chemicals and drugs to manage SPW should be avoided where possible.

6. Shrimp pond wastes are predominantly organic in nature, compost piles or bins where shrimp pond waste can be mixed with other organic matter like plant trimmings and allowed to decompose and able to apply as fertilizer.

3.8. Process

Products are stored with cold storage system and distributed both local and foreign market and transported with water route and land route from project site plot.

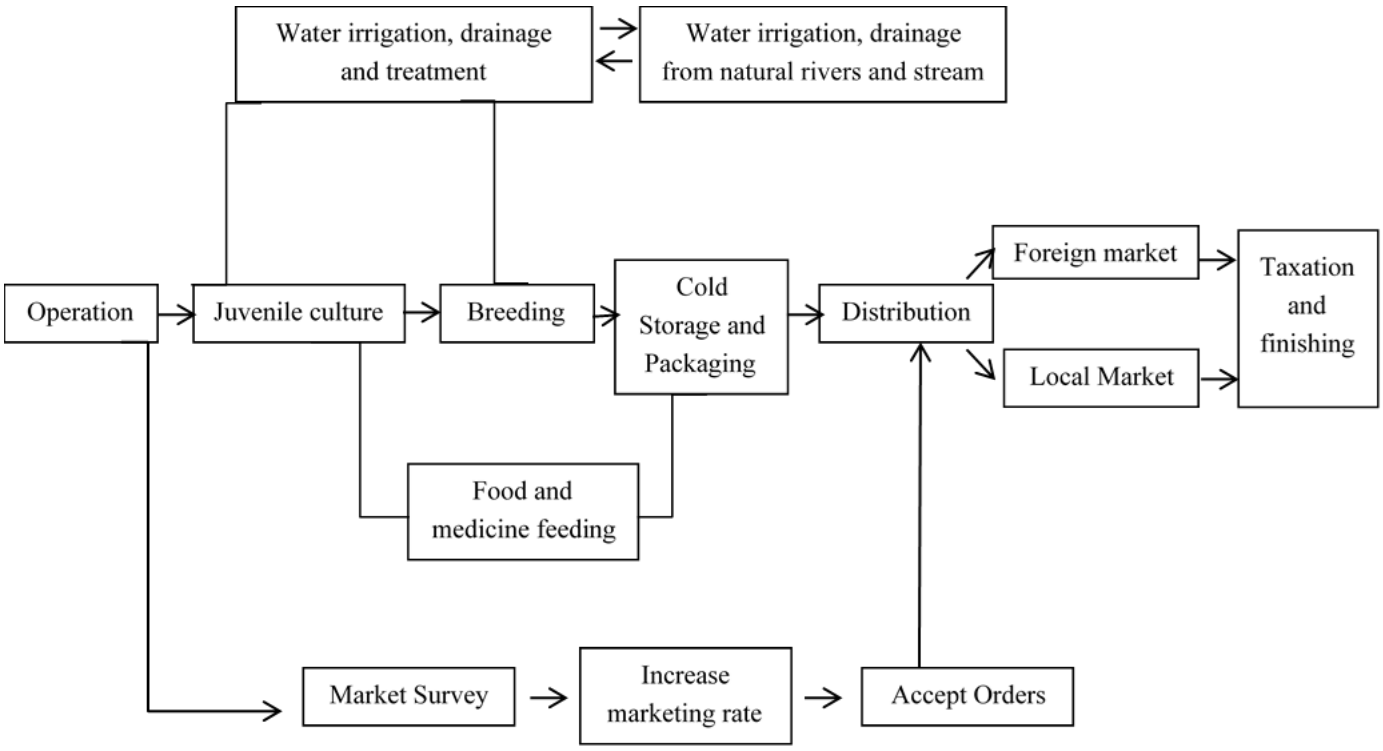


Figure: 4. 3- Process Flow Chart

3.9. Technology

There are various shrimp breeding systems based on juvenile rate, technology and natural ecosystem. They are

- Trap and Hold System
- Extensive System
- Extensive Plus Systems
- Semi- Intensive Systems

The proposed project will be used Semi- Intensive System by inviting the local and foreign technicians.

Semi- Intensive System is a scientifically culture system. Pond size is from 1 acre to 2.5 acres and depth is 5 ft. Less than 20 pieces/ m^2 post larvae are stock for 1 acre. Paddle wheels are placed around the ponds to maintain temperature and oxygen and to accumulation the waste. 4 to 6 metric tons per acre are produced in a year.

The marine shrimp farming will be conducted in accordance with the International Food Safety standards, Good Aquaculture Practices – GAqP which is developed by intending to perform the aquaculture process with an environmental friendly manner.

In conducting the Good Aquaculture Practices, the following standards must be obeyed:

(1) Food Safety
(2) Animal Health and Welfare
(3) Environmental Integrity
(4) Improvement of Social-economic Aspects

Figure: 4. 4- Good Aquaculture Practices- GAqP

3.10. Fire Fighting Facilities

For fire hazard, the water storage tank will be built and fire extinguishers and fire alarms system will be placed at the specific place i.e. security gate, exit of office, store. Other preparedness for firefighting plans are regular cleaning of waste, make small ponds near fuel storage tanks, arrange firefighting training for workers.

3.11. Comparison and Selection of Alternatives

According to the requirement of EIA procedure clause 63, alternatives of the project have to be examined together with "**No Action Alternatives**". The comparisons between proposed alternatives are described below.

3.11.1. Description of the selected Alternative(s) by Project phase

According to the requirement of EIA procedure clause 63, alternatives of the project have to be examined together with "**No Action Alternatives**". The comparisons between proposed alternatives are described below.

3.11.1.1. Comparison and Selection of the preferred Alternatives

Alternative 1: Without Project or No Action Alternatives

It means that the proposed project would not be implemented. Without any development activities, the situation remains unchanged because this alternative does not involve any preconstruction, construction, operation and post culture activities and as a result, there will be no impacts on the environment. Social impacts related to the project are not expected and no financial costs associated with implementation of this proposed project would be necessary. However, this kind of situation will not be able to accommodate the increasing demand along with the economic growth in Myanmar. People will not be able to benefit from the expected increases in jobs or the secondary socioeconomic benefits accrued from the project implementation as follows:

- If there is no project, the market price of shrimp will fluctuate as most of the farm owners are not willing to raise large amount of shrimp due to the unpleasant weather
- There will be less traffic movement
- If there is no foreign investment in Myanmar, there will be deficit in foreign currency.
- No job opportunities would have created for local people if the project had not existed.
- If there are no more project implementations in Kyauk Phyu Township, the community will not be able to experience in development of this area.

Alternative 2: With Project or Action Alternative

It means that the proposed project will be implemented as a plan. The major benefits of the proposed project play a significant role in improvement of economic and potential of employment opportunities. However, the environmental and social impacts are predicted to be localized and reversible with implementation of appropriate mitigation measures and by undertaking regular compliance environmental monitoring plan. No adverse irreversible environmental or social impacts are anticipated.

It means that the proposed project will be implemented as a plan. The major benefits of the proposed project play a significant role in improvement of economic and potential of employment opportunities. However, the environmental and social impacts are predicted to be localized and reversible with implementation of appropriate mitigation measures and by undertaking regular compliance environmental monitoring plan. No adverse irreversible environmental or social impacts are anticipated.

i. Location

The land use in which project allocated was area of old shrimp farm ran by local people and paddy field which were affected by salt water intrusion. Therefore, the project area and surrounding area were already established and no adverse impacts are expected to the economics of the local people. In order to reduce the adverse impact on existing mangrove forest the pond installation will be constructed on the old shrimp pond and old salt farm area. Hence, there was little or no impact on the mangrove forest. The mangrove replantation will be implemented according to the advice from ECD and Forestry Department.

ii. Transportation Route

There are two potential approaches to access the project area: one involves utilizing waterways, while the other employs an inland route. Opting for the waterway route would necessitate the construction of a jetty, which could have adverse effects on the existing mangrove forest and wetlands. Thus, to mitigate these impacts, the developers have willingly chosen to use the already established intervillage road via Sanel-Taung Maw.

iii. Site selection

The proposed project was chosen based on several factors. Firstly, the site is situated in an estuarine area, surrounded by small creeks, which provides abundant water resources and the potential to reduce energy requirements. Furthermore, the waterbody is already enriched with nutrients, making it an ideal location for a semi-intensive culture system that can partially reduce food input and waste generation. Additionally, the outer boundary of the site comprises swamps, wetlands, and mangrove forests, which offer advantages in terms of biofiltration and reducing the severe impacts of storm surges.

iv. Technology

There are three types of aquaculture system for shrimp farming in general. They are

- Extensive
- semi-intensive and
- intensive system.

The classification is based mainly on pond facilities, stocking density, food supply, water management, yield, technical knowhow and skill and other major inputs. Extensive culture is solely relied on the nutrients and food input from natural waterbody and disadvantages are production rate, variable size and large area to manage. The semi-intensive culture use densities higher than extensive systems and partially rely on natural nutrient input and use supplementary feeding. Intensive culture uses very high densities of culture organism and is totally dependent on artificial, formulated feeds. Both systems use small pond compartments of up to one ha in size for ease of management.

Although semi-intensive and intensive culture systems are therefore more labor-intensive than extensive systems which need little attention, and are costlier to set up and operate, for the commercial production semi-intensive and intensive system are applied in the worldwide. Moreover, semi-intensive use less area than extensive system which can be conserved the mangrove and less labor-intensive and artificial than intensive system.

	Extensive	Semi-intensive	Intensive
Pond size (ha)	1-10	1-2	0.1-1
Stocking	Natural + artificial	Artificial	Artificial
Stocking density (seed/m²)	1-3	3-10	10-50
Seed source	Wild + Hatchery	Hatchery + wild	Hatchery
Annual production	0.6-1.5 t/ha/yr	2-6 t/ha/yr	7-15 t/ha/yr
Feed source	Natural	Natural + Formulated	Formulated
Fertilisers	Yes	Yes	Yes
Water exchange	Tidal + pumping <5% daily	Pumping <25% daily	Pumping >30% daily
Aeration	No	Yes	Yes
Diversity of crops	Majority monoculture, some polyculture with fish	Monoculture	Monoculture
Disease problems	Rare	Moderate to frequent	Frequent
Employment	<7 persons/ha	1-3 persons/ha	1 person/ha

v. Pond Design and Construction

There is no standard design for a shrimp rearing pond. An ideal shrimp farm is a complex establishment consisting of: (a) various size ponds for nursery and grow-out, (b) water control structures including embankments, supply and drainage canals and sluice gates, and (c) support facilities such as roads, bridges, living quarters, workshops and warehouses, etc. Rectangular or square pond are appropriate for shrimp culture.

The breadth of a pond depends largely on the purpose and the operational system employed. The following are the various sizes recommended:

Nursery pond	- 500 to 1,000 m2	
Grow-out pond	- intensive	0.25 to 1.0 ha
	- semi-intensive	0.5 to 2.0 ha
	- extensive	1.0 to 10 ha

The semi-intensive culture is more suitable because of less area to operate than the extensive culture and lower stocking density than the intensive pond. Hence, partially reliable to nutrients input form the water intake meanwhile reduce the food input and waste generation.

In order to reduce the waste production and wastewater discharged to the environment the following factors will imply for the shrimp production project.

- To implement efficient feeding practices to minimize excess feed and nutrient discharge into the water, floating pellets will be used as a feeding mechanism and to prevent overfeeding will implement continuous monitoring system.
- The stocking density will be optimized to reduce waste generation.

- Sedimentation ponds will install to capture solid waste and suspended particles from shrimp farm effluents before discharge into the estuarine area.
- The project area was mostly composed of swamp and wetlands, therefore these areas will be used as a biological filters to treat shrimp farm effluents. These systems use plants and microorganisms to naturally filter and break down organic matter and nutrients in the wastewater before it reaches the estuarine area.
- Implement regular water quality monitoring programs to assess the impact of shrimp farm effluents on the estuarine area.
- The buffer zone is essential for the shrimp pond culture to prevent the potential environmental impacts to nearest waterbody. The most suggested buffer area is 100 meters for shrimp pond culture, therefore the MBPL will set up the buffer area as 200 meters.

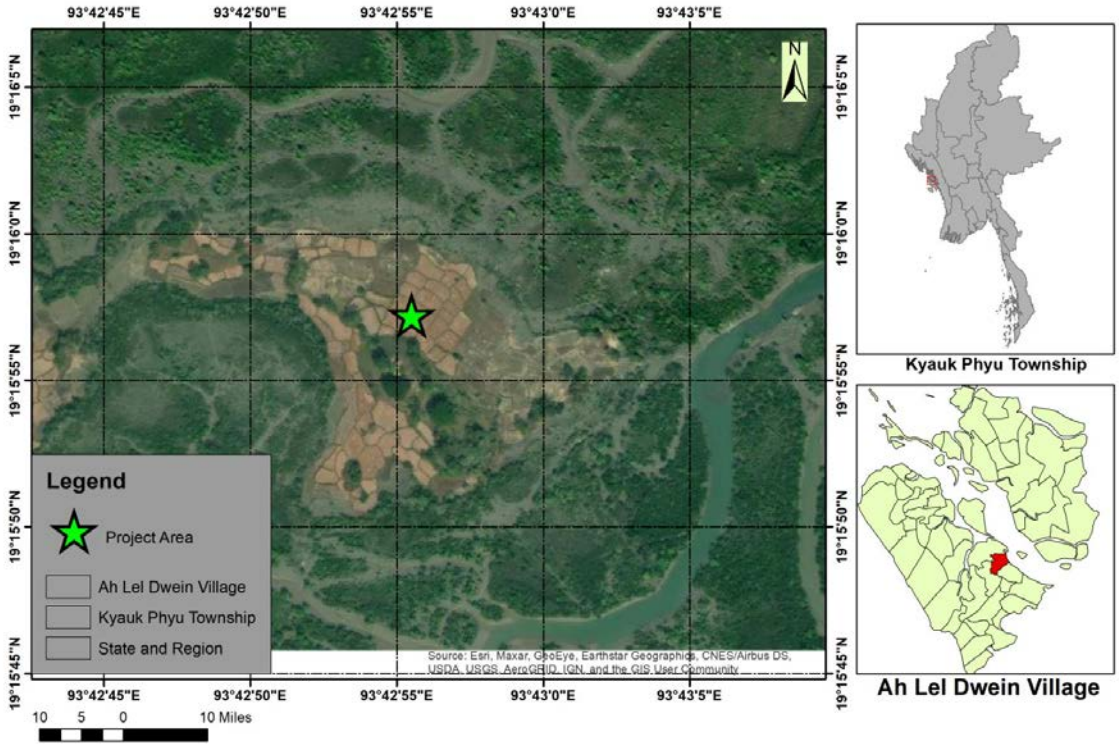
As a conclusion, this proposed project is operating in Kyauk Phyu Township and the development of this proposed project not only will support in building up of National Economy but also will create job opportunities of local people.

4. DESCRIPTION OF THE SURROUNDING ENVIRONMENT

4.1. Study Area

Kyauk Phyu Township is located at between North Latitude19˚23'and 93˚23', East Longitude 93˚23'and 93˚53'. It has the length of 54 miles from east to west and 90 miles from south to north. Total area of Kyauk Phyu Township is 678.35 sq miles and includes Kyauk Phyu and SaNe town. Kyauk Phyu Township shares borders with Ann Township in the east, Yan Byae Township in the south, Myay Pone Township in the north and Bay of Bengal in the west.

Figure: 5. 1- Location of Project Site



4.2. Study limits

Therefore, the scope of the study area for the proposed project is roughly defined to be the area within 1 km radius from the center of the project. The scoping process was prepared by site surveying, meeting with project proponent and studying literature reviews of similar previous projects. The habitat type of the project area is surrounded by secondary mangrove forest, water body, old shrimp farming pond and paddy fields affected by saltwater intrusion. For socioecomomic assessment, the study will be done nearest village of the project area. The nearest village is Ale Dwein village which is 1.55 km far from the project area and following Taung Maw village, 1.6 km and Kyauk Se village 3.40 km far from the project area. To study the estuarine water body, the study will focus on the nearest water body, Thanzin River, and its associated tributary area. The proposed study area adequately encompasses the necessary measures and investigations, providing sufficient coverage for addressing potential

environmental and socio-economic impacts during the project's construction and operation. The scope of the study for the propose project is described in the following figure.

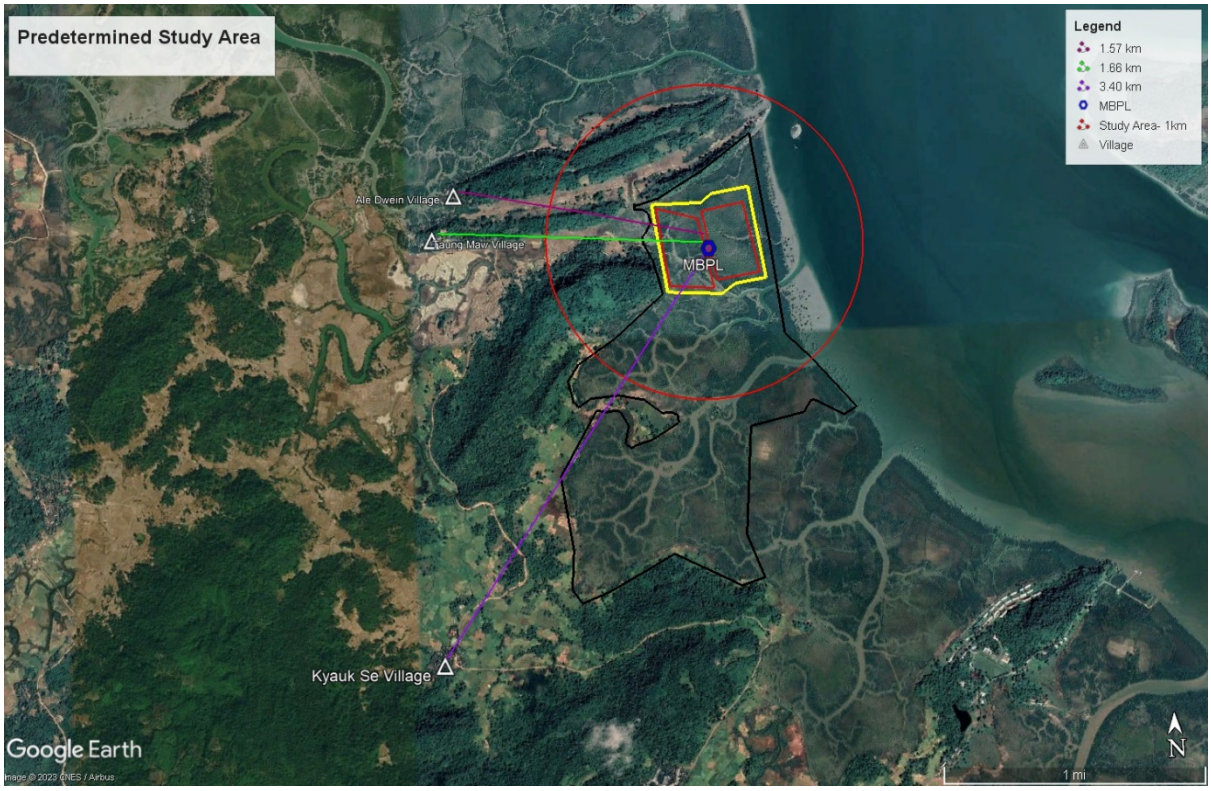


Figure: 5. 2- Scope of Study Area

Moreover, based on the nature of impacts, potential and magnitude, the anticipated impacts can be categorized as positive impacts, negative impacts and cumulative impacts.

4.3. Physical Environment

4.3.1. Land Use

The proposed project areas were 84 acres consists of old shrimp farm 70 acres and mangrove covered area 14 acres along with the swamps, marsh and bogs, water channels and mangrove area. According to the site plan there was no damage to the existing mangrove area.

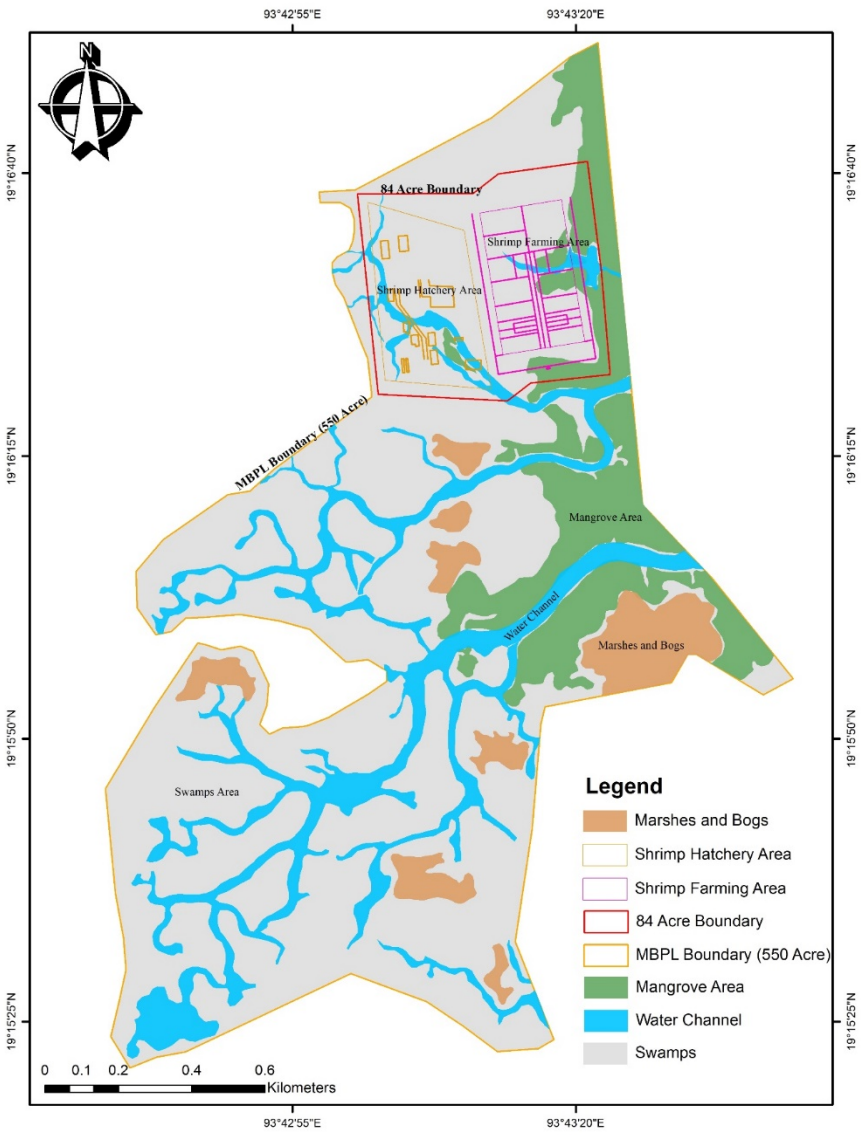


Figure: 5. 3- Land use map of Project Area

Information on existing land use of the study area had established using the data based on the township data published by General Administration Department, Ministry Union Government Office.

Table: 5. 1- Land Use in Kyauk Phyu Township

No.	Type of Land Use	Area (acre)
1.	Net Agriculture land	52,495
	a) Farmland	45,790
	b) Yar/ Taung Ya	-
	c) Cultivated Land	128
	d) Garden Land	5,451
	e) Dhani	1,126
2.	Fellow land	10,278
	a) Farmland	10,278

No.	Type of Land Use	Area (acre)
	b) Yar	-
	c) Cultivated Land	-
	d) Garden Land	-
	e) Dhani	-
3.	Grazing land	204
4.	Industrial land	679
5.	Urban land	384
6.	Village land	1,390
7.	Other land	70,989
8.	Reserved and Protected Public Forest Area	16,876
9.	Wild forest land	201,771
10.	Wild land	52,154
11.	Bare land	26,924
	Total	434,144

Source: Township Information of GAD Office (2020)

4.3.2. Topography and Soil

Kyauk Phyu Township is located in the northern extremity of Yan Byae Kyun and it consists of two parts; beach and island. It is continuous with the sea water level. Topography is not flat plain and very hilly and found volcano and limestone hill and surrounded with sea and has 71 archipelagos. Kyauk Phyu is situated 12 feet above the sea level.

4.3.3. Climate

Kyauk Phyu Township has hot and humid climate characterized by three distinct seasons, namely summer, rainy and winter seasons. The highest temperature of KyaukPhyu Township is about 36ºC and the lowest temperature is about 14ºC. The following are raining days, rainfall and temperature of 2016 to 2019 obtained from Township data of KyaukPhyu township is shown in below table.

Township	Year	Temperature		Rainfall	
		Summer (˚C)	Winter (˚C)	Raining day	Total Rainfall (inch)
		Highest	Lowest		
Kyauk Phyu	2016	33.7	13.0	127	193.98
	2017	36.2	15.5	139	229.25
	2018	35.8	13.8	134	210.65
	2019 (September)	36.0	14.0	104	177.60

Source: Township Information of GAD Office (2020)

4.3.4. Air Quality

The air quality impact assessment will be conducted for air quality parameters including particulates (PM_{10}, $PM_{2.5}$), total suspended particulates (TSP), SO_x and NO_x). The air quality impact assessment will consider air emissions in accordance with National Emission Quality

Guideline standards. Current baseline level of air quality of the proposed project area is not known. The detailed study needs to proceed and the evaluated information will be discussed in EIA report.

4.3.4.1. Methodology of Study (Ambient Air Quality)

After reconnaissance of the project area and observing the topographical features and review of the available meteorological data and local conditions, the sampling sites were chosen which will be the representative of the local areas under study. Ambient air quality measurement was carried out within the project area at 19.265428 N, 93.715185 E at Dec 7th 2021 and residential area around the project site at 19.277328 N, 93.701042 E at Dec 8th 2021.

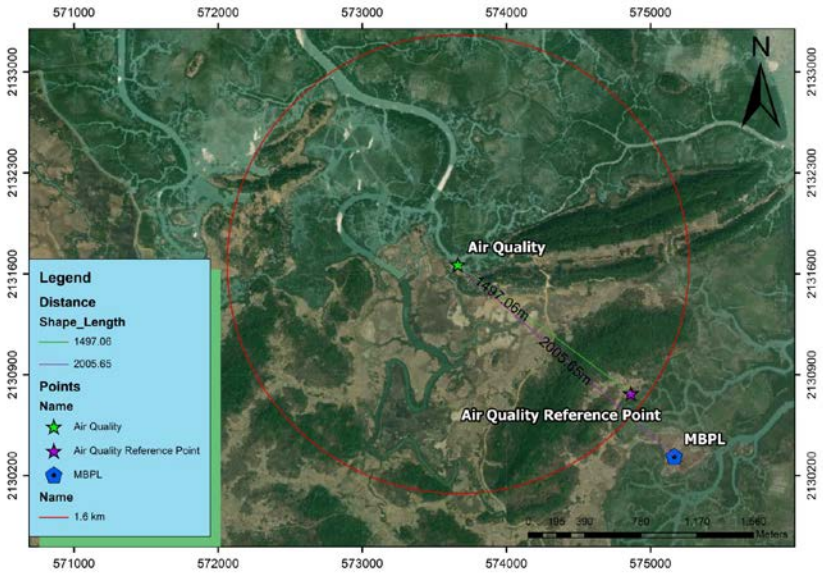


Figure: 5. 4- Air Quality Measurement Point

The locations air quality measurement point is shown in figure.

Table: 5. 2- Guideline for Ambient Air Quality (NEQ (E) G)

Parameters	Average Period	Guideline Value (µg/m3)
Dichloromethane	24-hour	3,000
Nitrogen dioxide	1-year 1-hour	40 200
Ozone	8-hour daily maximum	100
Particulate matter PM10a	1-year 24-hour	20 50
Particulate matter PM2.5b	1-year 24-hour	10 25

Sulphur dioxide	24-hour 10-minute	20 500

a PM10 = Particulate matter 10 micrometers or less in diameter

b PM2.5 = Particulate matter 2.5 micrometers or less in diameter

Figure 5. 1 Baseline Air Quality Measurement at Point 1

4.3.4.2. Ambient Air Quality Measurement Results

The results of ambient air quality measurement are compared with National Environmental Quality (Emission) Guideline.

Table 5. 1 Ambient Air and Noise Quality Measurement Results

Sr. No.	Parameters	Results		Unit	Measuring Avg. Period	NEQ (E) G	
		AMP-1	AMP-2			Guideline Value	Avg. Period
1.	Nitrogen Dioxide	16.638	38.0324	µg/m3	24 hours	*200µg/m3	1 hour
2.	Sulphur Dioxide	0	0.45	µg/m3	24 hours	*20µg/m3	24 hours
3.	Particulate matter PM10	145.4	89.09	µg/m3	24 hours	*50µg/m3	24 hours

4.	Particulate matter PM2.5	89.8	93.25	µg/m3	24 hours	*25µg/m3	24 hours
5.	Ozone	23.31	25.70	ppb	24 hours	NG	-
6.	Carbon Monoxide	0.22	0.66	ppm	24 hours	NG	-
7.	Nitrogen Dioxide	23.68	9.68	ppb	24 hours	NG	-
8.	Volatile Organic Compound	0	2.63	ppb	24 hours	NG	-
9.	Relative Humidity	62.36	68.82	%	24 hours	NG	-
10.	Temperature	27.28	25.05	˚C	24 hours	NG	-

4.3.5. Water Quality

Objectives of the sampling and analysis of water quality is to understand the existing water quality at the selected locations and to monitor the impacts before the operation. The field surveys for environmental quality monitoring and sampling were done during 11 December 2021 at Than Zit River for surface water quality and ground water at Taungmo and Kyauk Se village.

All locations water quality sampling results are attached in appendix and compared with National Environmental Quality (Emission) Guidelines and WHO drinking water guideline. Generally, most of the lab results of parameters analyzed is within the national water quality standard.

The results of the observed parameters are compared with National Environmental Quality (Emission) Guideline.

Table 5. 2 Comparison of Lab Results and National Emission Quality (Emission) Guideline

Item	Unit	Water			National Environmental Quality (Emission) Guideline
		Downstream	Upstream	Project Area	
Biological Oxygen Demand (BOD)	mg/l	10	18	20	30
Chemical Oxygen	mg/l	320	512	640	125

Demand (COD)					
Total Nitrogen	mg/l	<1	<1	<1	10
Total Phosphorus	mg/l	<0.01	<0.01	<0.01	2
Oil and Grease	mg/l	<5	<5	<5	10
Total suspended solid (TSS)	mg/l	16	14	22	50

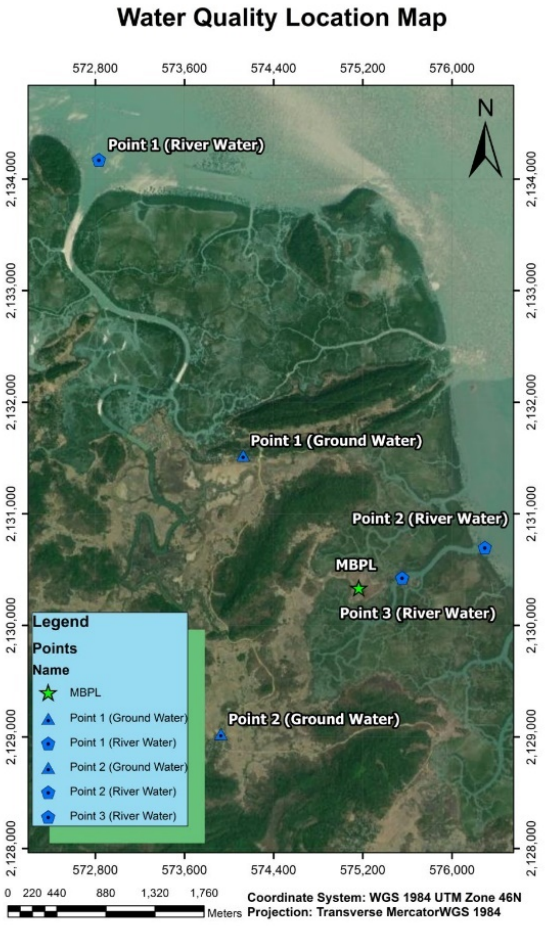


Figure 5. 2 Water Quality Measurement Point

4.3.6. Noise

There will be significant noise due to the construction activities compared to the current condition but short term in period. Current baseline level of noise and vibration are not known. The further study needs to proceed in field study and the detailed and evaluated information will be discussed in EIA report.

4.3.6.1. Methodology of Noise Measurement

The measurements were done for the noise source (within the project site) at 19.265965 N, 93.719805 E and also done for receptor (nearest village) at 19.252943 N, 93.703721 E at Dec 8th 2021.

- ❖ Always use tripod stand at above the ground level of 1 to 1.5 m from the ground.
- ❖ The monitoring was carried out 24 hr of the prescribed Day time (07.00 am to 22.00 pm) and Night time (22.00 pm to 07.00 am).

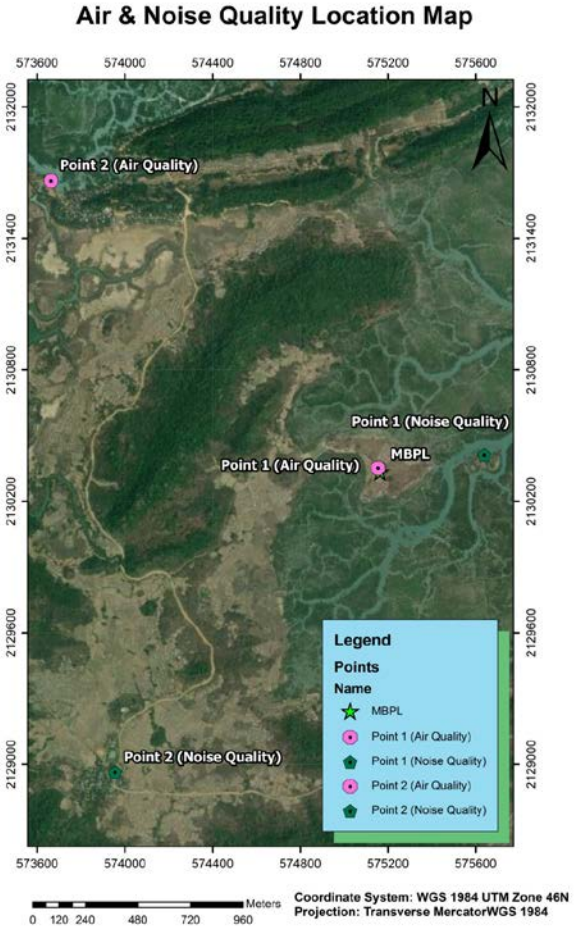


Figure 5. 3 Noise Quality Measurement Point

Receptor	**One Hour L_{Aeq}, dB (A)[a]**	
	Day time 07:00 ~ 22:00 (10:00 ~ 22:00 for Public holidays)	**Night time 22:00 ~ 07:00 (22:00 ~ 10:00 for Public holidays)**
Residential, Institutional, Educational	55	45

Industrial, Commercial	70	70

Location	**One Hour L_{Aeq}, dB (A)[a]**	
	Day time 07:00 ~ 22:00	**Night time 22:00 ~ 07:00**
Project Area	42.66	40.33
Kyauk Se Village	45.7	43.8

Noise Measurement at Project Area

Noise Measurement at Kyauk Se Village

4.3.7. Regional Geology

As a country, Burma slopes downward in elevation from the north to the south, and is naturally divided into "Upper Burma" and "Lower Burma". The terrain is made up of central lowlands ringed by steep, rugged highlands. As a whole, Burma can be divided into five physiographic regions: the northern mountains; the western ranges; the eastern plateau; the central basin and lowlands, and finally the coastal plains. Technically, Kuauk Phyu is situated in the western range region traverses the entire western side of Burma, from the northern mountains to the southern tip of the Rakhine (Arakan) Peninsula.

4.3.8. Structural Geology

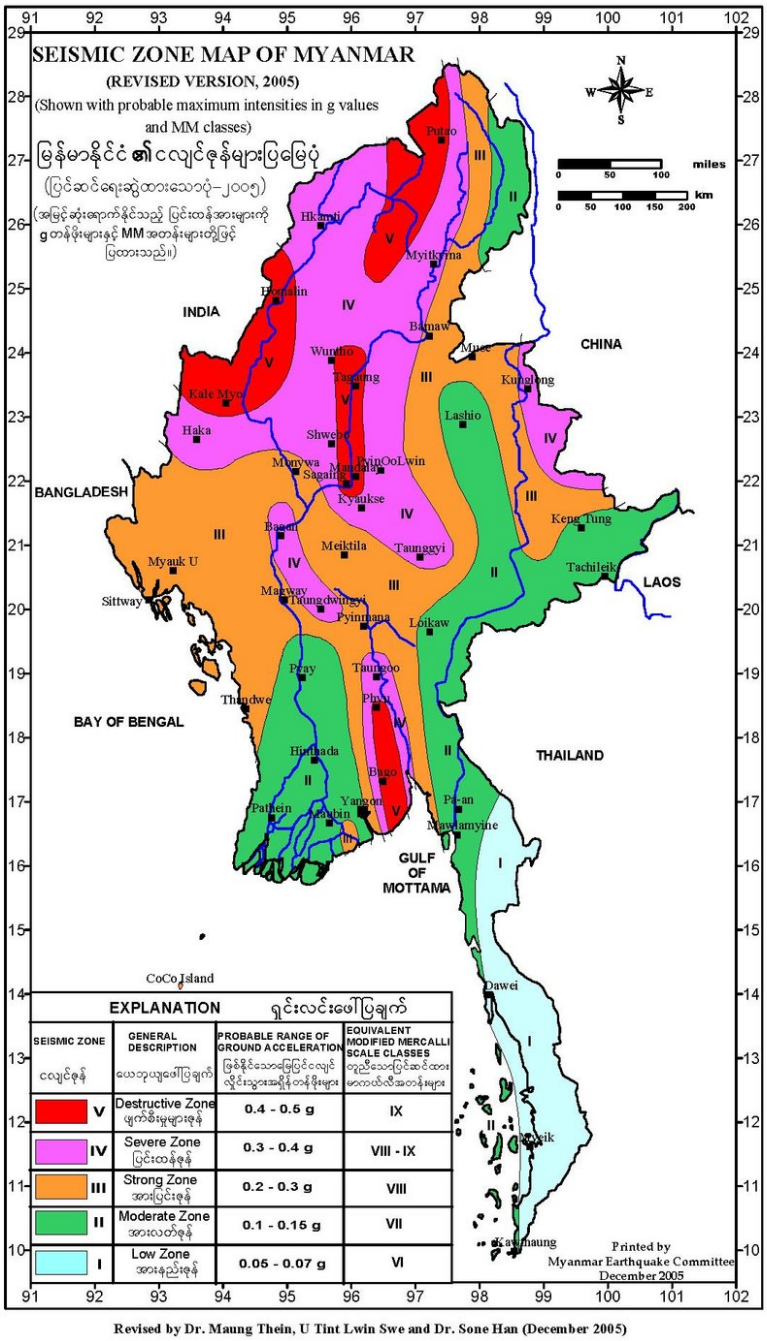
The structural geology of Myanmar is not complex. One of the major active faults is Sagaing Fault. It controls the structural geology. It passes through just east of Bago and enters western Gulf of Martaban.

4.3.9. Economic Geology

As to economic geology, Burma is rich in certain minerals, including metal ores, petroleum, and natural gas.

4.3.10. Earthquake Intensity of Myanmar

The origin and occurrence of earthquakes occurred in Myanmar including Rakhine State and other parts of the country can be interpreted as below. Earthquake intensity in the area can be seen in following figure.



Source: Dr. Maung Then, U Thin Lwin and Dr. Sone Han_2015

Figure 5. 4 Seismic Zone Map of Myanmar

4.4. Biological Environment

There are two proposed protected area in Kyauk Phyu area, they are southern part of Myanaung island[1] which is 37 miles far from project area and Kyauk Phyu Mangrove forest area[2] which is 15 miles far from the project area. Although the proposed project area 87 acres and 550 acres of MBPL did not involved in these proposed protected areas.

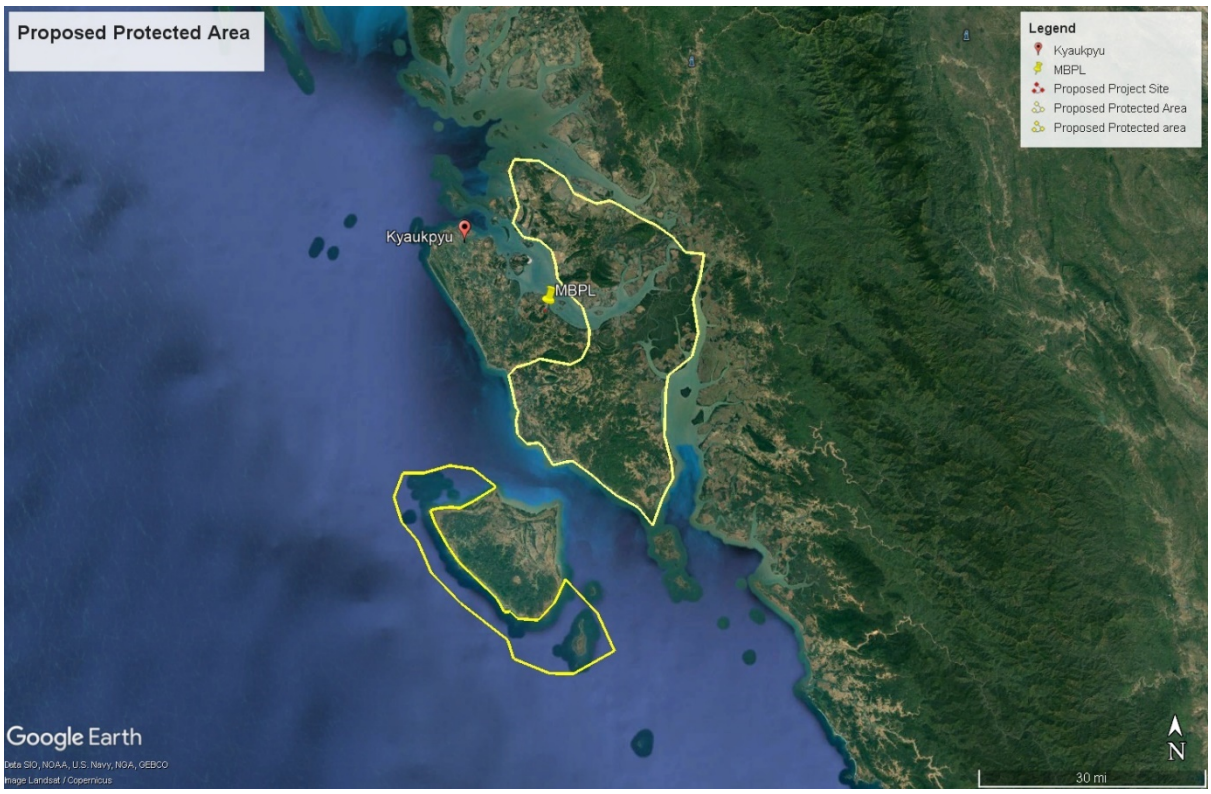


Figure: 5. 5- Proposed Protected Area in Kyauk Phyu

[1] Recommended citation: Zöckler, C. Aung, P.P., Grindley M., Aung Ch. & Momberg, F. 2018. Coastal Wetlands in Myanmar –a directory of important sites for biodiversity. ArcCona Ecological Consultants, Cambridge, UK.

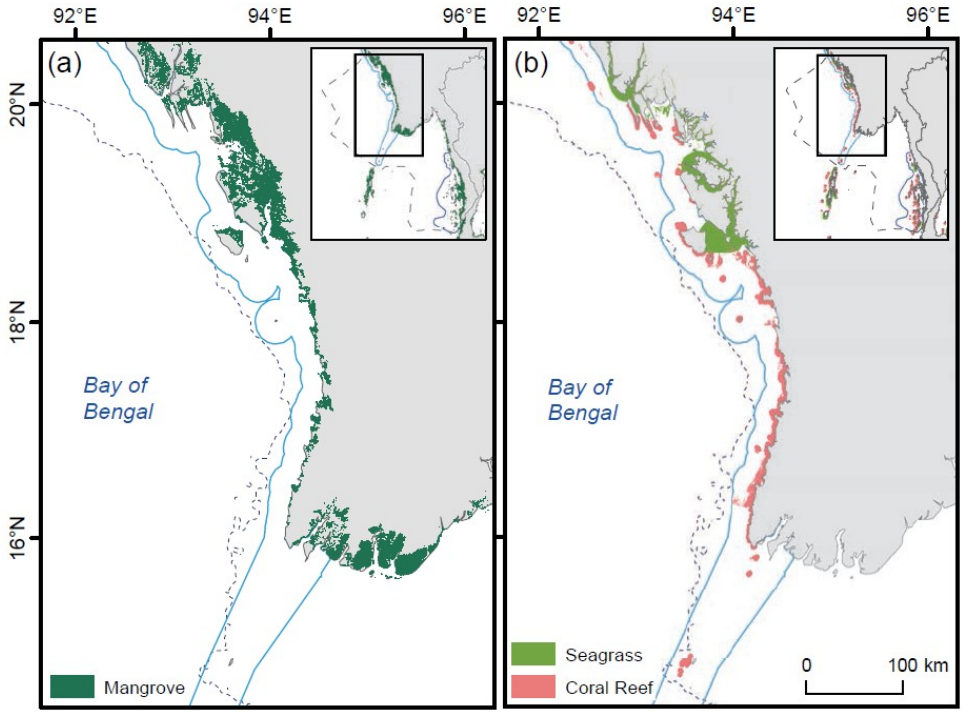


Figure: 5. 6- [3]Marine and coastal habitats within the Rakhine marine biodiversity corridor. (a) Distribution of mangroves (dark green polygon), (b) coral reefs (pink polygon) and seagrass (pale green polygon), within the Rakhine marine biodiversity corridor (empty blue polygon). Parts (a) and (b) continental shelf (200 m depth, dashed line). Inset maps show complete Myanmar marine habitat distribution, EEZ (broken line), 2016.

[3] Birch, F. C. H., Pikesley, S. K., Bicknell, A. W. J., Callow, M., Doherty, P. D., Exeter, O., Godley, B. J., Kerry, C. R. K., Metcalfe, K., Turner, R. A., Witt, M. J. (2016) Myanmar Marine Biodiversity Atlas. University of Exeter, UK. 79p.

4.4.1. Flora

4.4.1.1. OBSERVATION PERIOD AND THE STUDY AREAS

This flora survey was conducted from 7th December 2021 to 9th December 2021. The present study was conducted at the proposed project area, which is situated at Aleldawin Village Tract, in Kyauk Phyu Township and Rakhine Region, Myanmar.

Random Transecting

To get representative checklists of the plant species, plant collection was also carried out by random transect lines along the patches of project site. List of all species found within the Survey trail in the project area.

No.	Scientific Name	Common Name	Family Name	Habits	IUCN
1	Abutilon indicum	Bauk-khwe	Malvaceae	S	NA
2	Alternanthera brasiliana	Pa-zun-sa-yaing	Amaranthaceae	H	NA
3	Anacardium occidentale L.	Thiho	Anacardiaceae	T	NA
4	Annona squamosa L:	Awza	Annonaceae	ST	NA
5	Areca catechu L.	Kun-thi	Areacaceae	T	NA
6	Artocarpus heterophyllus Lam.	Pein-ne	Moraceae	T	NA

No.	Scientific Name	Common Name	Family Name	Habits	IUCN
7	Bauhinia acuminata L.	Pha-lan	Caesalpiniaceae	T	LC
8	Bombax ceiba L.	Let-pan	Bombacaceae	T	NA
9	Caesalpinia pulcherrima (L.) Sw.	Seinban-gale	Fabaceae	S	NA
10	Carica papaya L.	Thin-baw	Caricaceae	ST	NA
11	Cassia fistula L.	Ngu	Fabaceae	T	NA
12	Chromolaena odorata (L.)	Bi-zet	Asteraceae	S	NA
13	Commelina diffusa Burm. f.	Wet-kyut	Commelinaceae	H	LC
14	Croton oblongifolius Roxb.	Tha-yin-gyi	Euphorbiaceae	ST	NA
15	Cynodon dactylon (L.) Pers.	Myay-sa-myet	Poaceae	G	NA
16	D. longispathus Kurz	Wanet	Graminae	G	NA
17	D.Indica Spreng D.malabarica L. Merr.	Myet cho	Graminae	G	NA
18	Dactyloctenium aegyptium	Myet-lay-khwa	Poaceae	G	NA
19	Delonix regia	Sein-pan	Fabaceae	T	LC
20	Eclipta alba (L.) Hassk.	Kyeik-hman	Asteraceae	H	DD
21	Eichhornia crassipes	Bae-da	Pontederiaceae	AH	NA
22	Eleusine indica Gaertn.	Sin-ngo-myet	Poaceae	G	LC
23	Emblica officinalis Gaertn.	Zee-phyu	Euphorbiaceae	T	NA
24	Eucalyptus camaldulensis Dehnh.	Eu-ka-lit	Myrtaceae	ST	NA
25	Ficus altissima Blume	Nyaung	Moraceae	T	NA
26	Ficus obtusifolia Roxb.	Nyaung-gyat	Moraceae	T	NA
27	Heliotropium indicum L.	Sin-hna-maung	Boraginaceae	H	NA
28	Mimosa pudica L.	Hti-ka-yone	Mimosaceae	H	LC
29	Monochoria vaginalis (Presl) Kunth	Beda, Kadauk-sat	Pontederiaceae	Aquatic	NA
30	Morinda citrifolia L.	Yeyo	Rubiaceae	ST	LC
31	Moringa oleifera Lam.	Dantalon	Moringaceae	T	NA
32	Murraya koenigii (L.) Spreng.	Pyin-daw-thein	Rutaceae	ST	NA
33	Murraya paniculata (L.) Jack	Yu-za-na	Rutaceae	ST	NA
34	Musa sp.	Phi-gyan-nget-pyaw	Musaceae	T	NA
35	Oroxylum indicum (L.) Kurz	Kyaung-sha	Bignoniaceae	T	NA
36	Phyllanthus emblica L.	Zi-phyu	Euphorbiaceae	ST	NA

No.	Scientific Name	Common Name	Family Name	Habits	IUCN
37	Phyllanthus urinaria	Myay-zi-phyu	Euphorbiaceae	H	NA
38	Physalis minima L.	Bauk-thi-pin	Solanaceae	H	NA
39	Polyalthia longifolia L:	Thin-baw-te	Annonaceae	H	NA
40	Polygonum flaccidum Meissn	Kywe-hna-khaung-gyte	Polygonaceae	H	LC
41	Psidium guajava L.	Malaka	Myrtaceae	ST	NA
42	Pterocarpus macrocarpus Kurz	Padauk	Fabaceae	T	NA
43	Ricinus communis	Kyet-su	Euphorbiaceae	S	NA
44	Saccharum spontaneum L.	Kaing	Poaceae	G	LC
45	Samanea saman (Jacq.) Merr.	Kokko	Mimosaceae	T	NA
46	Senna siamea (Lam.) Irwin & Barneby	Mazali	Fabaceae	T	NA
47	Sida acuta Burm f.	Ta-byet-se-ywet-shae	Malvaceae	S	NA
48	Solanum torvum Swartz	Kha-yan-ka-zawt	Solanaceae	S	NA
49	Thyrsostachys regia Bennet	Htiyo-wa	Graminae	G	NA
50	Trewia nudiflora L.	Sit Ka Tone	Euphorbiaceae	T	NA
51	Urea lobata L.	Kat-se-nae-gyi	Malvaceae	S	NA
52	Vitex pinnata	Kyet-yoe	Verbenaceae	ST	NA
53	Zea mays L.	Pyaung-bu	Poaceae	G	NA
54	Zizyphus jujuba Lam.	Zi	Rhamnaceae	ST	NA
55	Sterculia foetida L	Latkok	Sterculiaceae	T	NA
56	Plumeria rubra L.	Tayoke saka	Apocynaceae	ST	NA
57	Pithecellobium dulce (Roxb) Benth.	Tayoke magyi	Mimosaceae	T	NA
58	Sonneratia apetala	Katbalar	Sonneratiaceae	T	NA
59	Sonneratia caseolaris	Lamu	Sonneratiaceae	T	NA

Relative frequency of herb species

The relative frequency of a species refers to the percentage occurrence of its individuals and shows the frequency of different species growing in the study area. The species which fall in high frequency class can be considered as the most common species in the study area. According to Curtis (1959), the relative frequency is determined by the following formula.

$$\text{Relative frequency of herb species} = \frac{\text{No. of sample plot occurs}}{\text{Total no. of all species occur}} \times 100$$

Relative Frequency

Relative frequency is the frequency of one species compared to the total frequency of all herbs species. According to the results, *Abutilon indicum* (L.) Sweet, *Echinochloa crus-galli* (L.) P. Beauv, *Mimosa pudica* L. And *Alternanthera sessilis* (L.) R. Br are high relative frequency value (0.83%), followed by *Andrapogan brevifolius* L. *D.Indica Spreng D.malabarica* L. Merr, *Desmodium pulchellum* Benth are (0.67%),equally and *Chromolaena odorata* (L.) R. M. King & H. Robinson and *Cynodon dactylon* (L.) Pers are (0.50%). Therefore these species occur everywhere in the study area. The lower frequency of some species, such as *Eclipta alba* (L.) Hassk, *Eragrostella bifaria* Wt, *Hyptis suaveolens* (L.) Poit, *Physalis minima* L, *Sesbania grandiflora* (L.) Poir. are demarcated as rare species in the area

Herbs			
No	Scientific Name	Frequency	Relative Frequency
1	*Abutilon indicum* (L.) Sweet.	0.83	9.62
2	*Alternanthera sessilis* (L.) R. Br.	0.83	9.62
3	*Andrapogan brevifolius* L.	0.67	7.69
4	*Arundinella birmanica* Hook. f.	0.17	1.92
5	*Chromolaena odorata* (L.) R. M. King & H. Robinson	0.50	5.77
6	*Colocasia affinis* Schott	0.17	1.92
7	*Cynodon dactylon* (L.) Pers.	0.50	5.77
8	*Cyperus rotundus* L.	0.17	1.92
9	*D.Indica Spreng D.malabarica* L. Merr.	0.67	7.69
10	*Dactyloctenium aegyptium* (L.) Willd.	0.33	3.85
11	*Desmodium diffusum* DC.	0.17	1.92
12	*Desmodium pulchellum* Benth.	0.67	7.69
13	*Echinochloa crus-galli* (L.) P. Beauv.	0.83	9.62
14	*Eclipta alba* (L.) Hassk.	0.17	1.92
15	*Eragrostella bifaria* Wt.	0.17	1.92
16	*Hyptis suaveolens* (L.) Poit	0.17	1.92
17	*Ludwigia octovalvis* (Jacq.) Raven	0.33	3.85
18	*Mimosa pudica* L.	0.83	9.62
19	*Physalis minima* L.	0.17	1.92
20	*Sesbania grandiflora* (L.) Poir.	0.17	1.92
21	*Ziziphus rugosa* Lam.	0.17	1.92

Relative Density of herb species

The density of a species refers to the numerical representation of its individual and the availability of space in a unit area. The density index shows not only the richness of the texa but also the relative distribution of the individuals. According to Curtis (1959), the density index is determined by the following formula.

$$\text{Relative Density of herb species} = \frac{\text{No. of Individual species}}{\text{Total no. of all individual Species}} \times 100$$

Relative Density

Among the sample plots species density per hectare varied and the highest relative density was observed *Alternanthera sessilis, Echinochloa crus-galli, Mimosa pudica, Andrapogan brevifolius, Cynodon dactylon, Abutilon indicum, Dactyloctenium aegyptium, Cyperus rotundus and Arundinella birmanica.* This shows that these nine species are abundant in this area.

No	Scientific Name	Density	Relative Density
1	*Alternanthera sessilis* (L.) R. Br.	192.3	14.35
2	*Echinochloa crus-galli* (L.) P. Beauv.	137.7	10.27
3	*Mimosa pudica* L.	135.3	10.10
4	*Andrapogan brevifolius* L.	130	9.70
5	*Cynodon dactylon* (L.) Pers.	129.5	9.66
6	*Abutilon indicum* (L.) Sweet.	126.5	9.44
7	*D.Indica Spreng D.malabarica* L. Merr.	108.2	8.07
8	*Dactyloctenium aegyptium* (L.) Willd.	72.3	5.40
9	*Cyperus rotundus* L.	52.3	3.90
10	*Arundinella birmanica* Hook. f.	43.3	3.23
11	*Chromolaena odorata* (L.) R. M. King & H. Robinson	42.3	3.16
12	*Desmodium pulchellum* Benth.	37.5	2.80
13	*Physalis minima* L.	30	2.24
14	*Hyptis suaveolens* (L.) Poit	26.7	1.99
15	*Eragrostella bifaria* Wt.	24.7	1.84
16	*Ludwigia octovalvis* (Jacq.) Raven	22.5	1.68
17	*Colocasia affinis* Schott	20	1.49
18	*Desmodium diffusum* DC.	8.3	0.62
19	*Eclipta alba* (L.) Hassk.	0.3	0.02
20	*Sesbania grandiflora* (L.) Poir.	0.3	0.02
21	*Ziziphus rugosa* Lam.	0.3	0.02

Species	Relative Density (%)
Alternanthera sessilis	14.35
Echinochloa crus-galli	10.27
Mimosa pudica	10.10
Andrapogan brevifolius	9.70
Cynodon dactylon	9.66

Abutilon indicum	9.44
D.Indica Spreng D.malabarica	8.07
Dactyloctenium aegyptium	5.40
Cyperus rotundus	3.90
Arundinella birmanica	3.23

Ceriops decandra

Bruguiera paviflora

Bruguiera gymnorhiza

Rhizophora apiculata

Rhizophora mucronata

Lumnitzera littorea

Avicennia marina

Sonneratia alba

Xylacarpus granatum

Cerbera odollam

Excoecaria agallocha

Tilipariti tiliaceum

Caesalpinia crista

Derris trifoliata

Thespesia populnea

4.4.2. Fauna

According to the township data of Kyauk Phyu 2020, the wild animals commonly seen in the township are wild boar, jackal, barking deer, wild cat, tortoise, monkey, and birds etc.

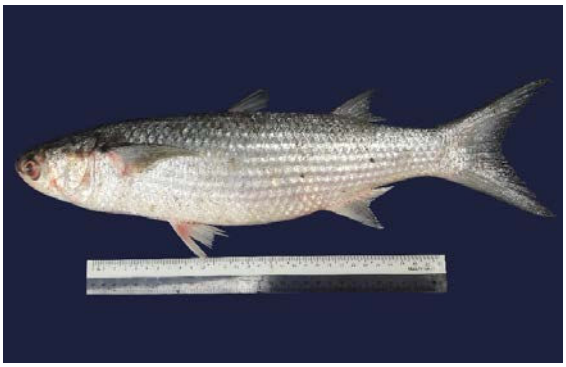
Phylum	Class	Order	Family	Sr.no.	Genus & Species	Common name	Local name	IUCN Red List Status
Chortata	Actinopterygii	Mugiliformes	Mugilidae	1	*Moolgarda cunnesius*	Longarm mullet	Ka-ba-luu	NE
				2	*Mugil cephalus*	Flathead grey mullet	Ka-ba-lu	LC
		Perciformes	Ambasidae	3	*Ambassis gymnocephalus*	Bald glassy	Kyaun-ma-sarr	LC
			Leiognathidae	4	*Leiognathus equulus*	Commonpony		LC
				5	*Gazza minuta*	Toothpony	Nga-din-gar	LC
				6	*Photopectoralis bindus*	Orangefin ponyfisnh	Nga-din-gar	NE
			Carangidae	7	*Alepes djedaba*	Shrimp scad	Pann-zinn	NE
			Gerreidae	8	*Gerres filamentosus*	Whipfin silver-biddy	Nga-siooe	LC
			Carangidae	9	*Alectis indica*	Indian threadfish	Ngar-da-ma	LC
		Clupeiformes		10	*Dussumieria acuta*	Rainbow sardine	Nga-kyawl-nyo	NE

NE=Not Evaluated, LC= Least Concern,DD=Data deficient

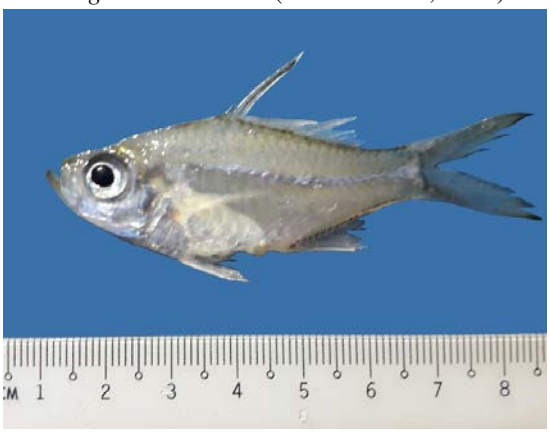
Table 1: Classification system and IUCN Red list status of fishes.

Plate I

Moolgarda cunnesius (Valenciennes, 1836)



Mugil cephalus (Valenciennes, 1836)



Ambassis gymnocephalus (Lacepede, 1820)

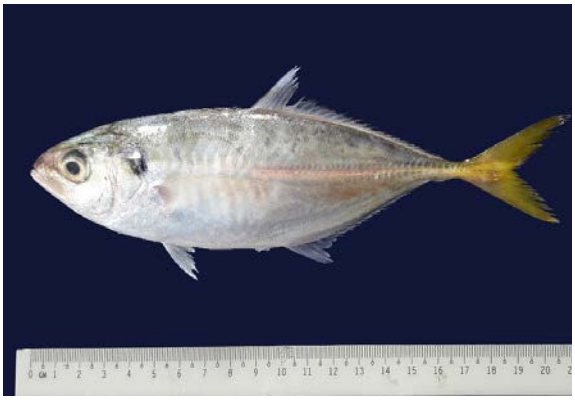
Pampus Argenteus

Plate II

Gerres filamentosus (Cuvier, 1829)

Leiognathus equulus (Forsskal, 1775)

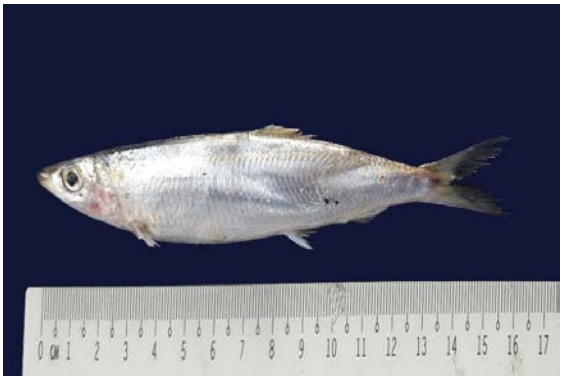
Gazza minuta (Bloch, 1795)



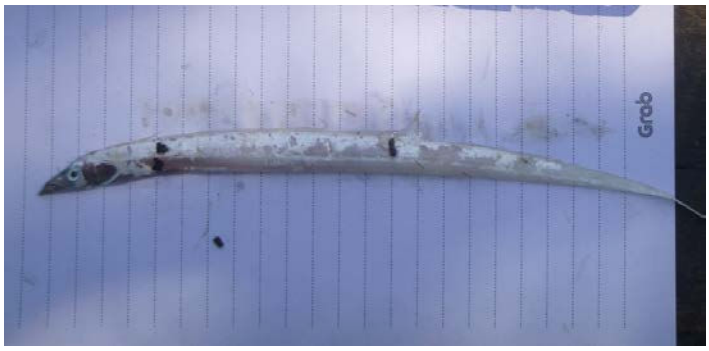
***Alepes djedaba* (Forsskal, 1775)**

Plate III

Photopectoralis bindus (Valenciennes, 1835)



Dussumieria acuta Valenciennes, 1847



Lepidopus caudatus

Figure: 5. 7- Fishes of study area.

4.5. Socio-Economic Environment

Baseline data of Kyauk Phyu Township collected from Government of Administrative Department published in 2020 to define of socio-economic profile and cultural resources of the study area. Administrative structure of project area of Kyauk Phyu Township has 15 wards, 54 of village tracts and 256 villages.

4.5.1. Secondary data

4.5.1.1. Population and Communities

The demographic structure of study area including number of households, population, number of literates and illiterates, status of birth rate, mortality rate and migrate rate are shown in the following tables.

Table 5. 3 Population data (2019 Sept)

No	Content	Above 18 years old			Below 18 years old			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	Urban	9,104	10,261	19,365	3,076	2,869	5,945	12,180	13,130	25,310
2.	Rural	40,367	39,521	79,888	27,588	34,976	62,564	67,955	74,497	142,452
Total		49,471	49,782	99,253	30,664	37,845	68,509	80,135	87,627	167,762

Table 5. 4 Rate of Population ratio (2019 Sept)

No.	Township	Previous Year Population	Current Year Population	Increased Population	Increase Rate (%)	Male/ female Ratio		
						Male	Female	Ratio
1.	KyaukPhyu	162,886	163,261	375	0.22	78,108	85,153	1:1.1

4.5.1.2. Occupational Status

Kyauk Phyu Township is located in Rakhine State and is an economically developed township. Main local products are fish, shrimp, dried fish and salt and exported to Yangon. The people of the township do agriculture and fishing as their main business. The occupational status of workable personal and unemployment status is shown in below table.

Table 5. 5 Occupational Status (2019 Sept)

No.	Township	Number of Workable Persons	Current Employed Persons	Unemployment Persons	Percentage of Unemployment Persons
1.	Kyauk Phyu	100,067	95,989	4,078	4.24

4.5.1.3. Education

In higher education sector, 1 Education Collage, 1 Mechanical Institute, and 1 Mechanical High School are located in the study township. In basic education sector, there are 17 high schools, 38 sub high schools, 20 middle schools, 29 sub middle schools, 121 primary schools and 10 kinder gardens in the township. In addition, there are 5 monastic education centers in the township. And the township also has 122 libraries for public.

4.5.1.4. Health Facility

The 200-bedded Kyauk Phyu District Public Hospital, the 16-bedded Sane Public Hospital, and the 16-beded Public Zin Chaung Hospital are the nearest hospitals in and around site area of Kyauk Phyu Township. Moreover, 34 numbers of local healthcare clinics respectively.

4.5.1.5. Ethnic, Culture and Heritage

The ethnic composition of residing in the study area is also shown in the following table. Most of the people who live in the townships are Bamar, followed by Kayin and Shan people. Religion status can be seen in below table according to the township data of Kyauk Phyu Townships. Moreover, there are no cultural heritage buildings around the project site area.

Table 5. 6 Race of Kyauk Phyu Township (2019 Sept)

No.	Race	Number of Occupant	Township Population	% of Township Population
1.	Kachin	-	-	-
2.	Kayah	-	-	-
3.	Kayin	18	167,762	0.001%
4.	Chin	870	167,762	0.518%
5.	Mon	-	-	-
6.	Burma	253	167,762	0.150%
7.	Rakhine	160,377	167,762	95.597%
8.	Shan	-	-	-
9.	Other	6,244	167,762	3.729%
Total		167,762	167,762	100%

Table 5. 7 Religion Status (2019 Sept)

No.	Township	Buddhism	Christianity	Hinduism	Islam	Other	Total
1.	Kyauk Phyu	155,109	886	312	6,954	-	163,261

For socioecomomic assessment, the study was conducted at done nearest village of the project area. The nearest village is Ale Dwein village which is 1.55 km far from the project area and following Taung Maw village, 1.6 km and Kyauk Se village 3.40 km far from the project area.

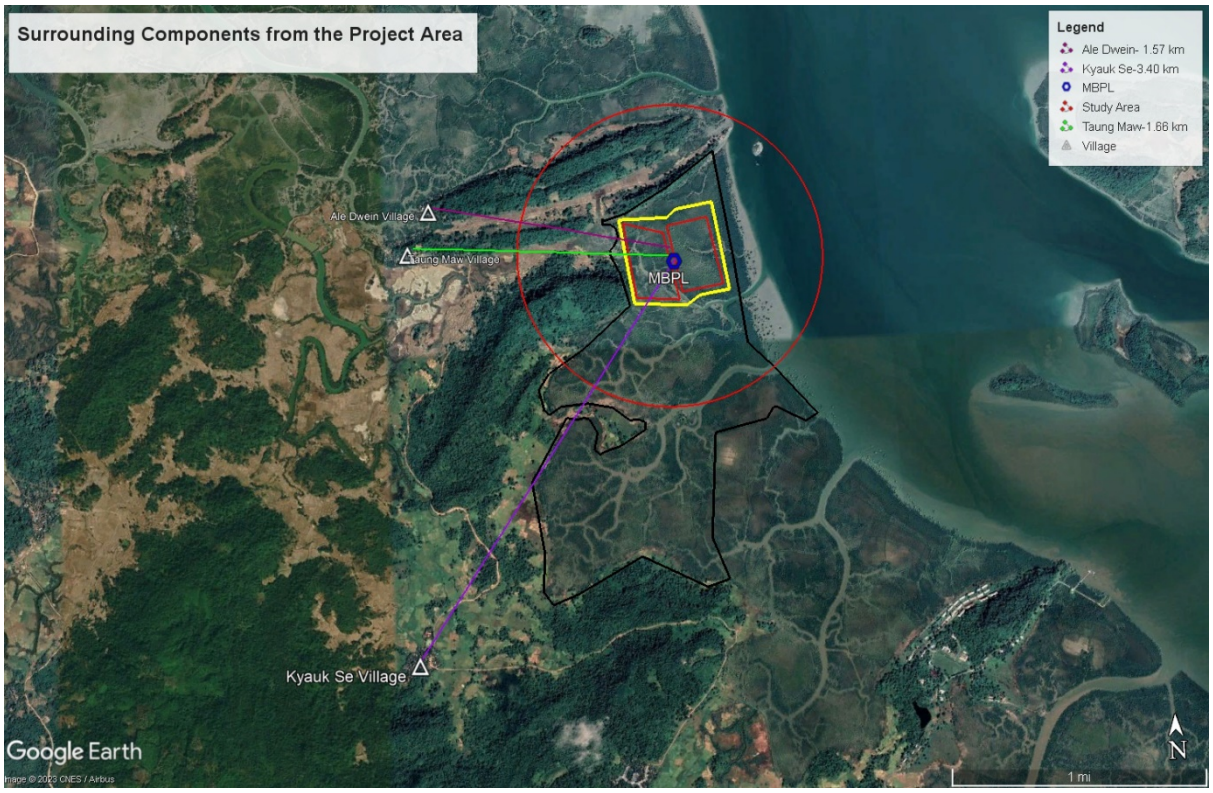


Figure: 5. 8- Location of the nearest villages from the project area

5.2.1 Feedbacks and Comments of the public

5.2.1.1 Methodology

It is vital to know the comments and or feedbacks of the respective stakeholders in the implementation of every project. The feedback forms were distributed to collect the comments and or feedbacks on the project of Farming and Production of Shrimp carried out by Myanmar Bright Prospect International Logistics Co., Ltd. and located at Kyauk Phyu Township, Kyauk Phyu District, Rakhine State. The feedbacks and comments on the project were collected during the public consultation held for this project.

The feedback form used for this project to collect the opinion of the respondent on the project. The collected data was analyzed by using Statistical Package for Social Science (SPSS).

The results of the data analysis are described in the following sections respectively.

Address of respondents

The following table describes the address of the respondents. According to the collected data, the respondents live in Taungmo Village, Kyauk Se Village and Aledwein Village.

Table 5. 8 Address of respondents

No.	Address	Frequency	Percentage
1.	Taungmo Village	5	55.6
2.	Kyauk Se Village	2	22.2
3.	Aledwein Village	2	22.2
	Total	**9**	**100**

Age of respondents

The age of the respondents is classified into 4 groups and the highest number of them in four village fall into the class from 18 years - 40 years followed by the range from 41 years - 65 years.

Table 5. 9 Age of respondents

No.	Age group	Village			Frequency	Percentage
		Taungmo	Kyauk Se	Aledwein		
1.	Under 18 yrs	0	0	0	0	0
2.	18 – 40 yrs	4	0	2	6	66.7
3.	41 – 65 yrs	1	2	0	3	33.3
4.	Over 65 yrs	0	0	0	0	0
	Total	**5**	**2**	**2**	**9**	**100**

Education of respondents

The following table describes the education of respondents by village based on 6 classified groups and it can be seen that graduated respondents are highest percentage followed by primary and middle school.

Table 5. 10 Education of respondents

No.	Education	Village			Frequency	Percentage
		Taungmo	Kyauk Se	Aledwein		
1.	No Education	0	0	0	0	0
2.	Monastry	0	1	0	1	11.1
3.	Primary	0	1	1	2	22.2
4.	Middle	1	0	1	2	22.2
5.	High	0	0	0	0	0
6.	Graduated	4	0	0	4	44.4
	Total	**5**	**2**	**2**	**9**	**100**

Gender of respondents

The following table describes the number of respondents by village and it can be seen that there are male respondents are 2 times more than female respondents.

Table 5. 11 Gender of respondents

No.	Gender	Village			Frequency	Percentage
		Taungmo	Kyauk Se	Aledwein		
1.	Male	2	2	2	6	66.7
2.	Female	3	0	0	3	33.3
	Total	**5**	**2**	**2**	**9**	**100**

Occupation of responddents

The following table summarizes the occupation of respondents who attend the stakeholder meeting. The respondents are government staff, farmer, fishermen, pension and odd job. The majority of total respondents with a percentage of 44.4 are government staff, followed by the fishermen with 22.2 percent.

Table 5. 12 Occupation of respondents

No.	Occupation	Village			Frequency	Percentage
		Taungmo	Kyauk Se	Aledwein		
1.	Student	0	0	0	0	0
2.	Government Staff	4	0	0	4	44.4
3.	Odd Job	0	1	0	1	11.1
4.	No occupation	0	0	0	0	0
5.	Farmer	0	1	0	1	11.1
6.	Fishermen	0	0	2	2	22.2
7.	Dependent	0	0	0	0	0
8.	Shopkeeper	0	0	0	0	0
9.	Pension	1	0	0	1	11.1
10.	Other	0	0	0	0	0
	Total	**5**	**2**	**2**	**9**	**100**

Project-related opinion

The following table describes the summary of project-related opinions obtained from the respondents who attend the stakeholder meeting. The most of respondents appreciated this project and respondents considered that it will improve employment opportunities for residents and Kawthaung Township will be more developed after the implementation of this project.

Table 5. 13 Project-related opinion

No.	Project-related opinion	Frequency	Percentage
1.	I appreciate this project	3	33.3
2.	Residents will also get employment opportunities	3	33.3
3.	Locals will be happy if the project does not harm the environment	1	11.1
4.	It will be a good project because it will develop our township	1	11.1
5.	To conserve and maintain natural environment	1	11.1
	Total	**9**	**100**

5. IMPACTS AND RISK ASSESSMENT AND MITIGATION MEASURES

5.1. Methodology for the Assessment and Impact Identification

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 phases and characteristics of the project site. The significance (quantification) of potential environmental impacts identified during the Basic Assessment has been determined using a ranking scale. Potential impact on the environment and mitigation measures are identified by their relevant significance in line with the requirements set out by international guidelines for Environmental Impact Assessment (IEMA, 2004)

The following methodology has been applied to assess the environmental impacts of the project 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 have five scales as mentioned below:

More detail impacts of environmental and social impacts will be explained in the EIA study report. Baseline Environmental survey such as air quality, water quality, noise and vibration and waste will be continued at the EIA stage after approving the scoping report from Environmental Conservation Department.

Table: 6. 1- Impact Assessment Parameters and Its scale

Assessment	Scale				
	1	2	3	4	5
Magnitude (M)	Insignificant	Small and have no effect on environment	Moderate and will result in minor changes on environment	High and will result in minor changes on environment	Very High and will result in permanent change on 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 local area	Limited to region	National	International
Probability (P)	Very improbable	Improbable	Probable	Highly probable	Definite

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

Significant Point (SP) = (Magnitude+ Duration+ Extent) * Probability

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

Explanation

Significant Point (SP) = (Magnitude+ Duration+ Extent) * Probability

Table 5. 1 Impact Significance

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

According to the assessment methodology, very low and low significance impacts can be regarded as negligible impact to the environment, in which there is no significant impact on the environment. However, moderate impact can have little effect on the environment. So, some mitigation measures must be considered. High impact can have significant changes in the environment. Therefore, mitigation measures must be done. Very high impact can be permanent changes in the environment. To reduce and control the impacts and disadvantages on the environment, mitigation measures must be performed.

5.2. Identification of Impact

There may be some positive and negative impacts in the surrounding environment of the proposed site due to the implementation of the project. The possible environmental impacts are identified based on the analysis of environmental baseline information and project activities. Most of the identified impacts have been quantified to the extent possible on the professional judgment. Each of the environmental issues has been examined in terms of their current conditions, likely impacts during operation and decommissioning.

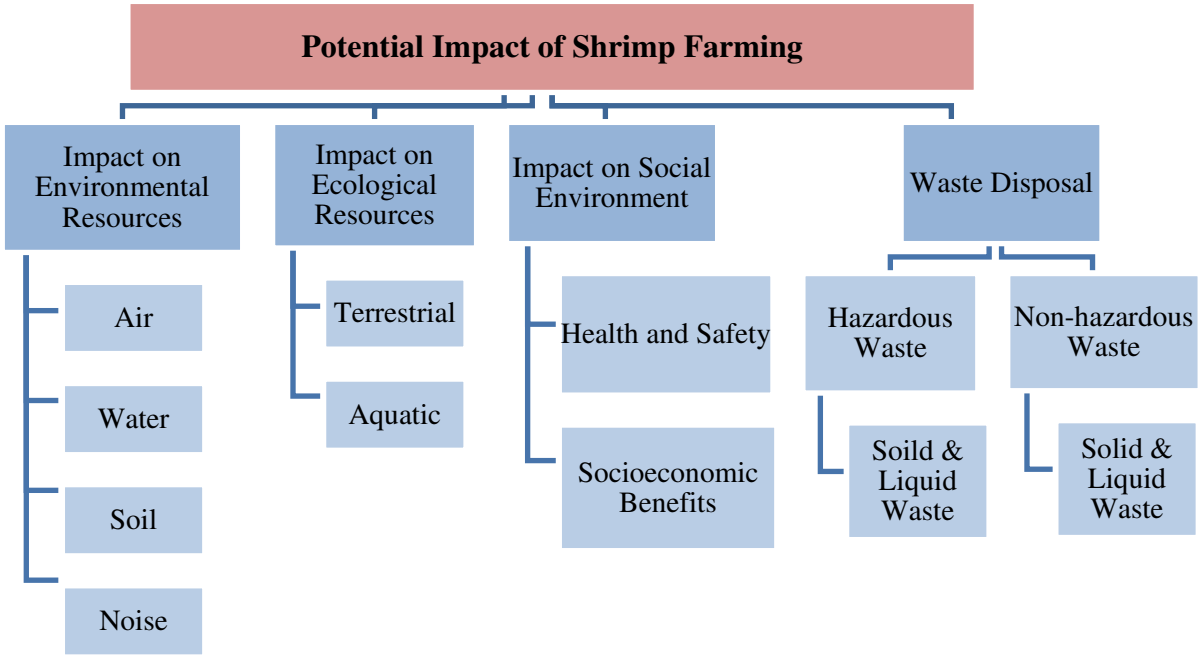


Table: 6. 2- Impact of the Proposed Project

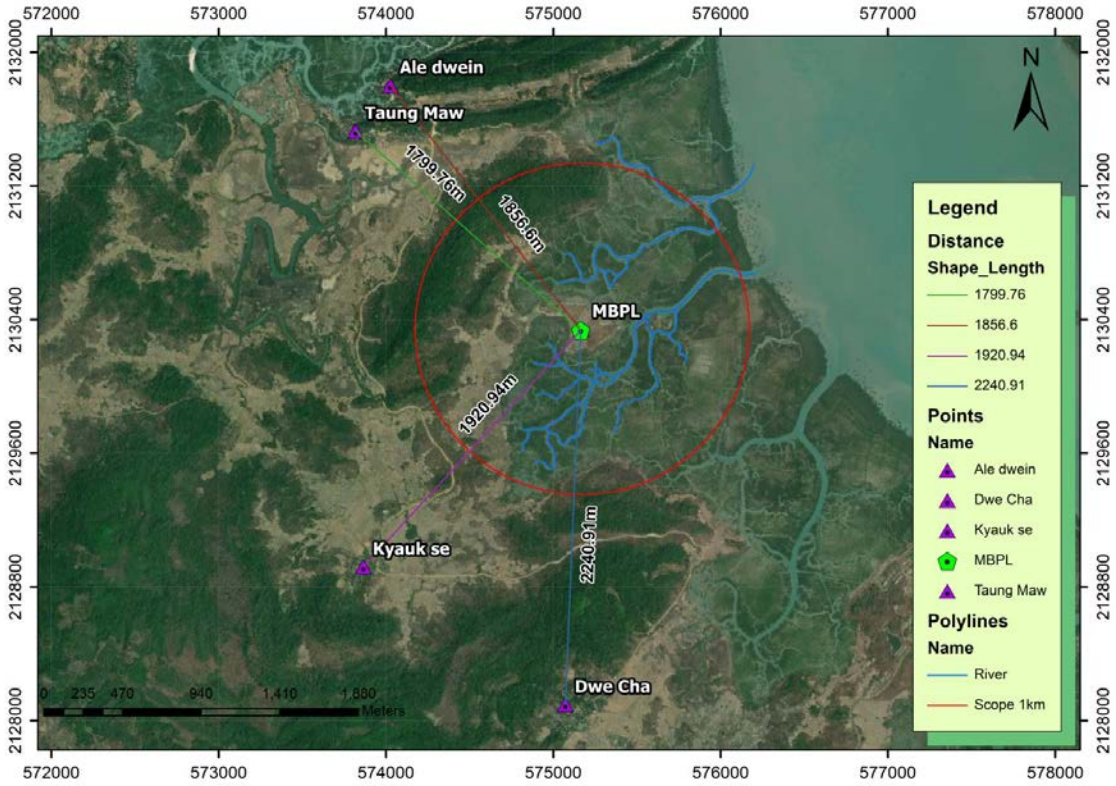
5.3. Impact and Significance

The project activities, their impacts and significance of impact are provided in the following **table (6.3)**. According to the results of analysis, it can be concluded that most of the project activities have the low significance on environment while some show moderate significance which needs to improve for environmental performance.

5.4. Study Scope

The scope of the study area for the proposed project is roughly defined to be the area within 1 km radius from the center of the project. The scoping process was prepared by site surveying, meeting with project proponent and studying literature reviews of similar previous projects. The habitat type of the project area is surrounded by secondary mangrove forest, water body, old shrimp farming pond and paddy fields affected by saltwater intrusion. The nearest village is located 1.8 km from the project site. The proposed scope area is sufficiently overlapped the necessary measures and study due to its nature of mangrove coverage and land use. This area would be large enough to cope with most potential environmental and socio-economic impacts of the construction and operation processes of the project. The scope of the study for the propose project is described in the following figure.

Figure: 6. 1- Scope of Study Area



5.4.1. Identification of Environmental Impacts for Construction Phase

Based on the project proposal data, information of the project nature, and township data of project site and onsite survey of surrounding environment of project site, potential impacts during construction phase of shrimp farming include:

1) Impact on Land use
2) Impact on nearest water body due to discharge of wastewater effluents from filling, excavating and earth working
3) Emit of dust, gases air pollutant, from construction processes. In addition, used of vehicles, air conditioners may also be the emission sources.
4) Impact of noise may cause due to transportation activities of vehicles and other earth works.
5) Impact on biodiversity
6) Impact of occupational health and safety on employee and worker due to cold and moist environment occur in the working areas and remoteness.

Table 6. 2 Potential Impacts, Project Activities and Impact Significance of the Proposed Project

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
A.	Construction Phase							
1.	Air Pollution	• Emission from the combustion of gas and fuel oil or diesel in turbines, machines, vehicles and other engines for power and heat generation • Temporary negative impacts are expected on air quality due to earthwork construction, construction vehicles, and operation of construction machines and equipment.	3	2	2	3	21	Low
2.	Water Pollution	• Water may be temporarily polluted due to (i) run-off water including soils from cutting, filling and excavation of earth working (ii) wastewater from worker camps and construction site and (iii) spilling over of toxic materials such as oil from vehicles and generators. Additionally, organic polluted water may be discharged from the basecamp.	3	2	2	3	21	Low
3.	Soil Contamination/pollution	• Leakage of oil and lubricant from vehicle maintenance area • Removal of topsoil	3	2	2	3	21	Low

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
		• Waste Disposal area • Implesant odor						
4.	Noise and vibration affect	• Noise is expected to increase to some extent during construction as a result of operation of machines and equipment. • Loading and unloading of transportation vehicles • Operation activities	3	2	2	3	21	Low
5.	Solid Waste Disposal	• Sewage system • General wastes such as wood, iron and debris • Waste from kitchen, temporay worker's camp	4	2	2	3	24	Low
6.	Hazardous/Liquid Waste	• Leakage of fuel and lubricants from workshop and fuel storage tank • Maintenance operations of heavy machineries • Domestic wastewater sources may include sanitary sewage discharged from the basecamp.	4	2	2	3	24	Low
7.	Aquatic ecosystem and Mangrove species	• Forest cover changes • Loss of habitats • Water quality degradation from construction waste and debris	4	2	3	4	36	Moderate

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
8.	Occupational Health and Safety	• Physical hazards from Movement of vehicles, crane and Dozers, Excavators, etc • Working long exposure in cold and moist environment • Natural hazard from strom surge, flood	2	2	1	3	15	Low
9.	Socio-economic Condition	• Job opportunities for local people • Food Security • Foreign income	-	-	-	-	-	Positive Impact

5.5. Proposed mitigation measure for construction phase

5.5.1. Impact on Air Quality

In construction phase, regular maintenance of machines and vehicles will be performed. Moreover, to reduce smoke production, the proposed project has to choose environmentally friendly machines as much as possible.

The following mitigation measures will be put in place for the project during operation phase to reduce air pollution on environment;

1) Gases filters are installed to reduce the GHG emissions from generators
2) Huge reduction in emissions from vehicle and equipment can be achieved by upgrading the engines
3) Switching off engines when idling
4) Dust will be efficiently countered by sprinkling of water after the transportation of heavy machines (along the main accessible road of project area)
5) Establish and enforce speed limits to reduce airborne fugitive dust
6) Prohibit burning in project area

5.5.2. Impact on Water Quality

In the operation phase of the project, water conservation and development measures need to be taken including all possible potential for conservation of water, reuse, harvesting and recycling of water. Proper water consumption and disposal measures will be performed. Improper disposal of solid wastes to natural water bodies will be extremely prohibited with monitoring and educating. Moreover, the supplied water quality of the proposed project will be monitored, measured and maintained to meet project requirements.

The following mitigation measures will be put in place for the project during operation phase to reduce water pollution and wastewater generation as per below;

1. Wastewater treatment system must be checked and repaired and updated the with new technology.
2. Domestic wastewater from the kitchen and canteen will be stored in a concrete pit and dried naturally by sunlight.
3. Install silt trap to treat surface run-off prior to discharge to the stormwater system;
4. Exposed soil surfaces should be protected by paving or fill material as soon as possible to reduce the potential of soil erosion and sedimentation;
5. No untreated sewage will be directly discharged into the drainage channel near the site, waterbodies or disposed of on land, during the project life cycle.
6. Liquid effluents arising from operations will be treated to the applicable NEQG guideline prior to discharge.
7. The presence of buffer zones, maintaining an acceptable balance between mangroves and shrimp pond area, improved pond design, reduction of water exchange, and an improved residence time of water, size and capacity to assimilate effluents of the water body, are examples of ways to mitigate the adverse effects.

8. The use of mangroves and halophytes as biofilters of shrimp pond effluents offers an attractive tool for reducing the impact in those regions where mangrove wetlands and appropriate conditions for halophyte plantations exist.
9. Use of appropriate water management system including sustainable drainage systems, efficient land drainage and water treatment plan.

5.5.3. Soil Quality

The project proponent will not make activities and disposal that can affect soil quality of the project area. Soil quality will be monitored at regular frequency to prevent unexpected impacts.

The following mitigation measures will be put in place for the project during operation phase to reduce soil pollution impact as per below;

1. Prepare proper waste management plan
2. Ensure the proper disposal site area
3. Regular checking the chemical storage area and waste disposal area
4. To construct the settlement tank and waste disposal area

5.5.4. Noise and vibration

In operation areas, suitable covers and barriers should be installed where noise and vibration production can occur exceed than standard values. In addition, modern machineries with low noise production will be favored to use.

The following mitigation measures will be put in place for the project during operation phase to reduce noise and vibration impact as per below;

1. Vehicles must follow procedures for proper maintenance of vehicles
2. No employee should be exposed to a noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection
3. Effective noise controls include: regular inspection and maintenance of all vehicles and equipment working onsite
4. There should not be unnecessary horning of the involved machinery
5. Regular maintain all exhaust system in good working and machine, use machine and equipment which generate low noise levels, turn off the machine that do not need to be used such as generators, compressor, etc.
6. Provide adequate ear plugs to workers working in the excessive noisy areas

6.4.5. Solid Waste

Proper waste management system for operation and domestic wastes (office wastes and employee residence wastes) will be conducted. Final waste disposal method will be performed in cooperation with Local Municipal Authorities. The Dust Bins will be provided at required points in both operation and domestic area. Education programs about wastes handling will be performed at some briefings to employee. Leachates from the pond must not put directly to the ground.

6.4.6. Liquid Waste

Proper waste water management measures will be conducted. Reduce water consumption and good drainage system will also be possible measures. In addition, direct discharge of waste water to natural water bodies will be seriously prohibited.

6.4.7. Resources Consumption

In operation phase, the project will use river water and sea water for shrimp farming. But these waters are from one of the renewable sources, so this impact cannot affect seriously. To prevent the unnecessary usage of resources, proper mitigation measures will be conducted such as switch off the lights when it is unnecessary, use energy saving machines and equipment as much as possible, etc.

6.4.8. Aquatic ecosystem

The ecosystem of the project area will be monitored and compared with that before project development. The following mitigation measures will be put in place for the project during operation phase to reduce biodiversity impact as per below;

1. Restrictions on location of worker rest shelters and offices for project staff near the project area with vegetation
2. Cutting, uprooting, of trees or small trees present around the project site for cooking, burning or heating purposes by the labor shall be prohibited and suitable alternatives for this purpose shall be made available.
3. Maintain the plants and vegetation which existing around the project area will reduce in a natural way of the pollution in water and terrestrial environment.
4. Growing the native tree species and create a green belt around the project area to control the air pollutants and natural balance of the environment.
5. Machinery such as generators, vehicles and water pumps will be maintained in accordance with standard to minimize unnecessary noise generation;
6. Periodically check the wastewater discharge from factory outlet.
7. Sharing knowledge and raising awareness to local residents in the vicinity

6.4.9. Living Conditions and Livelihood

Local people can get permanent job opportunities and related business chances because of project development. The project proponent will consider assigning suitable local people in the project operation phases. CSR programs from the project proponent must be provided for local development activities especially in education and health care sectors.

6.4.10. Occupational Health and Safety

The project proponent will provide required trainings and equipment to permanent workers in operation stage. The experienced, well-trained and skillful workers will be assigned in potential dangerous working areas. The project proponent must also provide sufficient PPEs to required workers. Then the EHS Team will be assigned to conduct this measure. Required signs and signals, SOPs and MSDSs will also be provided. In addition, Emergency Response Plan for emergency cases such as fire and natural disasters will be conducted and trained.

5.5.5. Identification of Environmental Impacts for Operation Phase

Based on the project proposal data, information of the project nature, and township data of project site and onsite survey of surrounding environment of project site, potential impacts during operation of shrimp farming may include:

10) Impact on Water quality
11) Impact on Biodiversity
12) Impact of chemical usage
13) Impact of disease
14) Nutrients input and output
15) Noise and Vibration
16) Resources Consumption
17) Living conditions and livelihood
18) Occupational Health and Safety

Table 6. 3 Potential Impacts, Project Activities and Impact Significance of the Proposed Project

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
A.	Operation phase							
1.	Water Quality	• Leakage of oil and lubricants from vehicles • Accidental oil spills from tanks, generators • Eutrophication due to untreated wastewater discharge to nearby aquatic environment • Domestic wastewater from kitchen and workers	4	4	2	4	40	Moderate
2.	Biodiversity (Aquatic)	• Proliferation and eutrophication due to sediment and nutrients overloading from untreated wastewater discharge to nearby waterbody • Decrease Dissolved oxygen level due to nutrients overloaded water • Residue of chemicals • Long term exposure to high suspended sediment level can damage to bottom-dwelling organisms.	4	4	2	4	40	Moderate
3.	Chemical usage	• Chemicals used in shrimp culture may be classified as therapeutants, disinfectants, water and soil treatment compounds, algicides and pesticides, plankton growth	4	4	2	3	30	Moderate

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
		inducers (fertilisers and minerals) and feed additives. • Excessive and unwanted use of such chemicals results in problems related to toxicity to non-target species (cultured species, human consumers and wild biota). • The continued use of antibiotics and their persistence in sediments tends to lead to the proliferation of antibiotic resistant pathogens, which may complicate disease treatment. • The presence of antibiotics in bottom sediments may also affect bacterial decomposition of wastes and hence influence the ecological structure of the benthic microbial communities. • Antibiotic use reduces natural microbial activity, which leads to waste accumulation and reduced degradation and nutrient recycling.						
4.	Disease	• The disease outbreak in shrimp farm will cause not only economic loss but also it can be severely impacted on other aquatic life form.	4	4	3	3	33	Moderate

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
5.	Nutrient input and output	• Untreated effluents from shrimp farms are moved between farms and are discharged into local waterways, and pollute surrounding water and soil. • Moreover, this causes eutrophication in water bodies and alters the structure of bottom dwelling organisms, that may eventually lead to substantial decline in aquatic biodiversity and capture fisheries in neighboring rivers and floodplains	4	4	3	3	33	Moderate
6.	Noise and vibration affect	• Noise from operation vehicles • Loading and unloading of transportation vehicles • Operation activities	2	4	1	3	21	Low
7.	Hazardous/Liquid Waste	• Leakage of fuel and lubricants from workshop and fuel storage tank • Maintenance operations of heavy machineries • SPW and Domestic wastewater sources may include sanitary sewage discharged from the office and worker site. • Usage of chemicals	4	4	2	4	40	Moderate
8.		• Physical hazards such as exposure to chemicals and electric shop	2	4	1	3	21	Low

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
	Occupational Health and Safety	• Movement of vehicles, crane and Dozers, Excavators, etc • Working long exposure in cold and moist environment						
9.	Socio-economic Condition	• Job opportunities for local people • Food Security • Foreign income	-	-	-	-	-	Positive Impact
B.	Decommissioning Phase							
1.	Air Pollution	• Gaseous and dust Emission from the activities of decommissioning of buildings and related materials.	2	2	2	3	18	Low
2.	Water quality	• Activities related with decommissioning works and waste disposed by decommissioning workers. • Oil spillage from demolition machinery equipment.	3	2	2	3	21	Low
3.	Soil pollution	• Accidental spillage of oil from transportation vehicles and decommissioning activities.	2	2	2	3	18	Low
4.	Noise and vibration	• Transportation of demolished materials. • Heavy vehicles and equipment from decommissioning activities.	3	2	3	4	32	Moderate

Item	Environmental Impacts	Project Activities	Significance of Potential Environmental Impacts					Impact Significance
			M	D	E	P	SP	
5.	Waste disposal	• Demolished wastes such as bricks, concrete materials, glass, iron, wood materials • Wastes from toilets facilities.	3	2	3	3	24	Low
6.	Hazardous/Liquid waste	• Accidental wastes used lubricants from vehicles and machines. • Residue of chemical wastes	3	2	2	2	14	Very low
7.	Occupational health and safety	• Injury by handling the heavy loads. • Air and noise pollution	4	4	2	3	30	Moderate
8.	Socio-economic condition	• Temporary job opportunities for local people.	-	-	-	-	-	Positive impact
9.	Implementation of Post Culture Management System	• Remedy the environment • Replantation • All waste, refuse materials and equipment shall be removed by the contractor at the end of post culture phase. • Pits and ponds should be backfilled with clean and/ or granular material, leveled or sloped and re-vegetated if necessary	-	-	-	-	-	Positive impact

5.6. Proposed mitigation measure for operation phase

5.6.1. Impact on Water quality

Good quality water is the most vital factor in shrimp farming and production of shrimp and often limited by water quality degradation and inappropriate water depth. Water quality problems are increasing in shrimp farming areas because of excessive feeding, presence of high biomass due to high stocking density and application of drugs, antibiotics and chemicals, effluents etc. Higher amounts of particulate substances also exist as suspension in the water of shrimp ponds. Without the proper treatment, the nutrients loading effluent water can be disturbance to neareat water body and biodiversities such as causation of proliferation and eutrophication.

The following mitigation measures will be put in place for the project during operation phase to reduce water pollution and wastewater generation as per below;

1. Wastewater treatment system must be checked and repaired and updated the with new technology.
2. Domestic wastewater from the kitchen and canteen will be stored in a concrete pit and dried naturally by sunlight.
3. Install silt trap to treat surface run-off prior to discharge to the stormwater system;
4. Exposed soil surfaces should be protected by paving or fill material as soon as possible to reduce the potential of soil erosion and sedimentation;
5. No untreated sewage will be directly discharged into the drainage channel near the site, waterbodies or disposed of on land, during the project life cycle.
6. Liquid effluents arising from operations will be treated to the applicable NEQG guideline prior to discharge.
7. The presence of buffer zones, maintaining an acceptable balance between mangroves and shrimp pond area, improved pond design, reduction of water exchange, and an improved residence time of water, size and capacity to assimilate effluents of the water body, are examples of ways to mitigate the adverse effects.
8. The use of mangroves and halophytes as biofilters of shrimp pond effluents offers an attractive tool for reducing the impact in those regions where mangrove wetlands and appropriate conditions for halophyte plantations exist.
9. Use of appropriate water management system including sustainable drainage systems, efficient land drainage and water treatment plan.

5.6.2. Impact on Biodiversity

Ecosystems within the coastal zone are highly diverse and include aquatic encompassing saline water, brackishwater and freshwater systems, and terrestrial ecosystems containing mud flats, sandy beach and sand dunes, flatlands and undulating terrain that houses different ecosystems with a diverse and wide range of habitats.

The establishment of shrimp aquaculture ponds has been the main cause behind mangrove loss in many countries (Hamilton et al., 1989; Primavera, 1998). Mangroves are salt tolerant forest ecosystem of tropical and subtropical intertidal regions of the world and are important resources in coastal ecosystems that contribute multiple ecosystem services. Damage

is caused by pollution and by clearing of the vegetation to make way for new farms. Chemical pollutants used in the process include antibiotics, fertilizers, disinfectants and pesticides, which could be harmful for human health as well as for the environment.

Shrimp farming can adversely affect wild fish stocks through pollution and destruction of wetlands, through removal of unsustainable levels of by catch during shrimp PL collection from the sea and through the introduction of disease. The nutrients enriched water discharged from shrimp farm to natural waterbody can cause the fluctuation and imbalance habitats for aquatic environment. The following mitigation measures will perform in order to reduce the impacts:

1. Restrictions on location of worker rest shelters and offices for project staff near the project area with vegetation
2. Cutting, uprooting, of trees or small trees present around the project site for cooking, burning or heating purposes by the labor shall be prohibited and suitable alternatives for this purpose shall be made available.
3. Maintain the plants and vegetation which existing around the project area will reduce in a natural way of the pollution in water and terrestrial environment.
4. Growing the native tree species and create a green belt around the project area to control the air pollutants and natural balance of the environment.
5. Machinery such as generators, vehicles and water pumps will be maintained in accordance with standard to minimize unnecessary noise generation;
6. Periodically check the wastewater discharge from factory outlet.
7. Sharing knowledge and raising awareness to local residents in the vicinity

5.6.3. Impact of chemical usage

Chemicals used in shrimp culture may be classified as therapeutants, disinfectants, water and soil treatment compounds, algicides and pesticides, plankton growth inducers (fertilisers and minerals) and feed additives. Excessive and unwanted use of such chemicals results in problems related to toxicity to non-target species (cultured species, human consumers and wild biota). The continued use of antibiotics and their persistence in sediments tends to lead to the proliferation of antibiotic resistant pathogens, which may complicate disease treatment. The presence of antibiotics in bottom sediments may also affect bacterial decomposition of wastes and hence influence the ecological structure of the benthic microbial communities. Antibiotic use reduces natural microbial activity, which leads to waste accumulation and reduced degradation and nutrient recycling. Consequently, the pond system will increasingly become a throughput system where natural feedback controls and regulators are cut off. This results in loss of buffer capacity and ecological resilience.

5.6.4. Impact of disease

The introduction of postlarvae and broodstock from areas affected by the Whitespot Syndrome Virus (WSSV) and Taura Syndrome Virus (TSV) was often followed by the rapid spread of these major shrimp pathogens throughout most of the shrimp-growing regions in Asia and Latin America, respectively (Lightner et al., 1997). The disease outbreak in shrimp farm will cause not only economic loss but also it can be severely impacted on other aquatic life form. The

following mitigation measures will be put in place for the project during operation phase for disease outbreak:

1. To implement a good health management system is most crucial role in aquaculture. Implementation of a proper pond maintenance by removing excess feed and suspended particulate matter, cleaning of fouling agents from the pond and frequent monitoring of the farmed animals and removal of dead or moribund animals from the pond.
2. Continuous monitoring in water quality, sediment loading and health of benthos can be a mitigated factor for these impacts.

5.6.5. Nutrient input and output

Most shrimp farms are generally enriched in suspended solids, added chemicals and fertilizers, and nutrients such as ammonia, nitrate, nitrite, and chlorophyll-a. As a result, the water of most shrimp farms has a high biochemical oxygen demand (BOD) (Paez-Osuna et al., 2003; Hall, 2004). Untreated effluents from shrimp farms are moved between farms and are discharged into local waterways, and pollute surrounding water and soil (Deb, 1998). Moreover, this causes eutrophication in water bodies and alters the structure of bottom dwelling organisms (Dewalt et al., 1996), that may eventually lead to substantial decline in aquatic biodiversity and capture fisheries in neighboring rivers and floodplains (Islam, 2003).

In semi-intensive and intensive farms, artificial feeds provide most of the nitrogen (N), phosphorous (P) and organic matter inputs to the pond system. Only 17% (by dry weight) of the total amount of feeds applied to the pond is converted into shrimp biomass (Primavera, 1993). The rest is leached or otherwise not consumed, egested as faeces, eliminated as metabolites, etc. Effluent water during regular flushing and at harvest can account for 45% of nitrogen and 22% of organic matter output in intensive ponds (Briggs and Funge-Smith, 1994). Consequently, pond sediment is the major sink of N, P and organic matter, and accumulates in intensive shrimp ponds at the rate of almost 200 t (dry weight) per ha and production cycle (Briggs and Funge-Smith, 1994). During pond preparation between cropping the top sediment is removed and usually placed on pond dikes, from where it continuously leaks nutrients to the environment.

5.6.6. Noise and vibration

In operation areas, suitable covers and barriers should be installed where noise and vibration production can occur exceed than standard values. In addition, modern machineries with low noise production will be favored to use.

The following mitigation measures will be put in place for the project during operation phase to reduce noise and vibration impact as per below;

7. Vehicles must follow procedures for proper maintenance of vehicles
8. No employee should be exposed to a noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection
9. Effective noise controls include: regular inspection and maintenance of all vehicles and equipment working onsite
10. There should not be unnecessary horning of the involved machinery

11. Regular maintain all exhaust system in good working and machine, use machine and equipment which generate low noise levels, turn off the machine that do not need to be used such as generators, compressor, etc.
12. Provide adequate ear plugs to workers working in the excessive noisy areas

5.6.7. Resources Consumption

In operation phase, the project will use river water and sea water for shrimp farming. But these waters are from one of the renewable sources, so this impact cannot affect seriously. To prevent the unnecessary usage of resources, proper mitigation measures will be conducted such as switch off the lights when it is unnecessary, use energy saving machines and equipment as much as possible, etc.

5.6.8. Living Conditions and Livelihood

Local people can get permanent job opportunities and related business chances because of project development. The project proponent will consider assigning suitable local people in the project operation phases. CSR programs from the project proponent must be provided for local development activities especially in education and health care sectors.

5.6.9. Occupational Health and Safety

The project proponent will provide required trainings and equipment to permanent workers in operation stage. The experienced, well-trained and skillful workers will be assigned in potential dangerous working areas. The project proponent must also provide sufficient PPEs to required workers. Then the EHS Team will be assigned to conduct this measure. Required signs and signals, SOPs and MSDSs will also be provided. In addition, Emergency Response Plan for emergency cases such as fire and natural disasters will be conducted and trained.

Provision of guardrails, footrails and safe working surfaces: A suitable and secure walkway needs to be provided around the exterior of each farm. Footrails need to be fitted at the inside edge of walkways to provide bracing and to prevent workers' feet slipping from the walkway.

Safety and rescue equipment: When working over water at any location, at least two people need to remain within sight and sound of each other at all times. They will require constant access to a moored boat or life raft. Suitable personal buoyancy equipment, such as lifejackets, should be provided by employers. Training should be given on the procedures for rescuing people from the water (including rescue into a boat) and also on the correct fitting, maintenance and use of lifejackets.

Clothing for wet weather/cold protection: There is always a risk of rheumatic complaints due to a combination of cold, damp and repetitive strain. To minimize such risk, protective clothing and/or adequate warm clothing (including gloves and boots) need to be provided and worn relevant to the prevailing conditions.

Shelter: Adequate and suitable shelter needs to be provided at farm. It should be weatherproof and big enough to accommodate the maximum number of employees normally expected to work at the farm.

First aid: Employers and workers need to be given adequate first aid training. The training needs to take account of the remoteness of the farm and should include resuscitation,

treatment of bleeding, the recognition and treatment of hypothermia. Suitable and sufficient first aid equipment needs to be provided at the farm or on the workboat.

Light: Adequate lighting need to be provided at the shelter and walkways.

5.7. Decommission Phase

Decommissioning phase of the proposed project will have the minimum environmental impacts. Minor air pollution, solid waste and wastewater generation, noise and vibration, and health & safety issues will be caused from demolition of infrastructures and use of heavy equipment and vehicle in project area.

5.7.1. Proposed Mitigation Measures

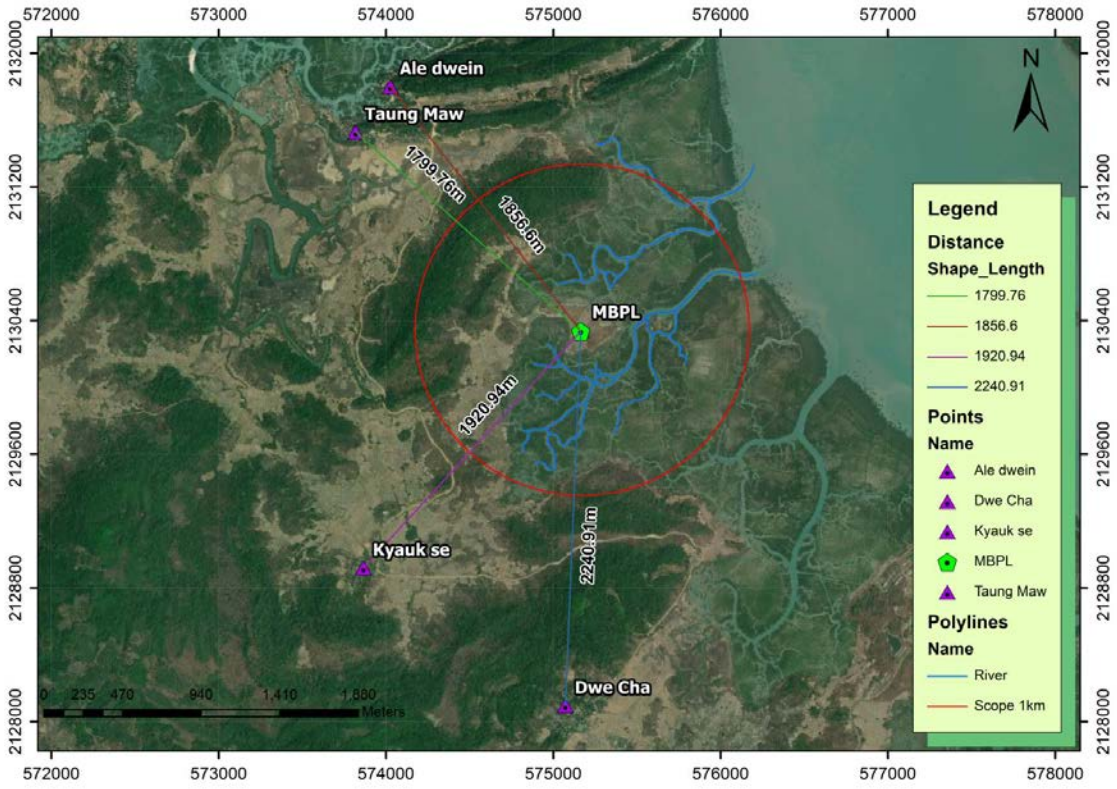
The following measures shall be carried out for potential impacts in decommissioning phase due to demolition process;

1. Authorize person of proposed project will be treated and monitor the sources of wastewater generation compliance with NEQG guideline from operation to decommissioning phase
2. Plantation on proposed project area
3. To measure soil quality of the project and nearest land area before demolition process
4. Adequate measures taken to prevent soil contamination
5. The project proponent shall be managed and ensure the measures to mitigate the negative environmental impacts during the whole project life cycle.

6. CUMULATIVE IMPACT ASSESSMENT

6.1. Methodology and Approach

6.1.1. Brief description and map of relevant existing and future private and public projects and developments



The project site is located at the Block No. 560 – Ahlae Dwain, 561-Kyaukse, 562 – Thadwelaungcha, Ahlae Dwain village tract, No. 1049,1050,1544, 1829, 1844, 2, 1846, 2463, 1848, 1823, 325/ 2562, Kyauk Phyu Township, Kyauk Phyu District, Rakhine State which is about 25 kilometers far from the Kyauk Phyu Township. The nearest villages are Taung Maw, 1799.76 meter, Ale Dwein, 1856.6 meter, Kyauk Se, 1920.94 meter and Dwe Cha 2240.91 meter far from the project area. There was no current commercial development observed at and surrounding area of the project.

6.1.2. Identification and assessment of the potential cumulative impacts on the components in the surrounding environment and the Project's contribution to such impacts

The commulative impact of the shrimp farming can be catergorized in resources usage especially on marine or brackish water, water quality degradation that is affected by the release of untreated liquid waste and semi-solid sludge enriched in solid matter and organic nutrients. According to the (Braaten and Flaherty, 2000) and Jackson, (1989), the water consumption of

shrimp farm are no significant differences in rice crops production and marginally higher than for cotton, beans and corn production but lower consumption rate for crop such as banannas and sugar cane. Moreover, the proposed operation will only consume brackish water which is naturally abundance in the area, therefore there is no significant commulative impact on fresh water supply. The commulative water supply effects by shrimp production can be recognized as negligible during raining season due to substantial direct water inputs from precipitation and runoff, the water withdraws should be limited during the dry season in order to avoid the effect on nearest aquatic habitats.

7. ENVIRONMENTAL MANAGEMENT PLAN

7.1. Institutional Requirement

This EIA report had prepared by Guardians of Green Environmental Services on behalf of Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) as the part of the Environmental and Social Impact Assessment (ESIA) process for Farming and Production of Shrimp. The environmental management practices, procedures and responsibilities are defined herein to get full compliance with the existing environmental policy, laws, rules and instructions of the Republic of the Union of Myanmar. The project proponent should appoint one Health, Safety and Environment (HSE) Coordinator or Environmental Staff throughout the life span of the project. The environmental coordinator/ staff will review and update this plan at least one time annually to cover all potential impacts, mitigations and modifications as necessary. Revisions will be made as need throughout the year. Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) is responsible party for this Environmental Management Plan of Farming and Production of Shrimp. Moreover, if the cost estimation for the implementation of Environmental Management Plan and Environmental Monitoring Plan does not fully cover the practical solutions stated in this report at the time of implementation, we, Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) will add additional funds to get the target of these plans through the project lifespan. Any suggestions, comments and questions must be directed to Myanmar Bright Prospect International Logistics Co., Ltd (MBPL). We, Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) had made commitment that we will construct and operate our project according to our commitments and implement Environmental Management Plans (EMP) and mitigation measures that are mentioned in this EMP report, prepared by Guardians of Green Environmental Services Co., Ltd. for our project. We also commit to work out our best not to cause any impacts on social and environment during the construction, operation and decommissioning phases of the project by implementing the appropriate mitigation measures described in this EMP report and if any impacts that are not anticipated in the report occur, appropriate mitigation measures must be implemented accordingly.

7.2. Environmental Management Plan

The Environmental Management Plan (EMP) prepared for the proposed project covers the anticipated impacts of the project, mitigation measures, management and monitoring plans during each of the phases:

- Construction Phase and
- Operation Phase

The objectives of EMP areas are as follows:

- Identify the possible environmental impacts due to implementation the activities of the project;
- Develop measures to minimize, mitigate and manage these impacts and
- Estimate the budget of EMP for each phase.

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) must manage the development of the proposed project by implementing this EMP, which is comprised the following parts:

i. Environmental Management Plan
ii. Environmental Monitoring Plan
iii. Waste and Wastewater Management Plan
iv. Disease Preventation and Outbreak Control Plan
v. Firefighting Plan
vi. Health and Safety Plan
vii. Disaster Management, Emergency Preparedness and Response Plan
viii. Grievance Redress Mechanism
ix. Corporate Social Responsibility Plan

Responsible Persons for EMP and Mitigation Measures

Implementation of the EMP, management practices and mitigation measures are the responsibility of all site personnel: however, key personnel (Site Director, Site Manager, HSE Coordinator, HSE Assistant, Ministry of Natural Resources and Environmental Conservation (MONREC)) are main responsible persons for communicating environmental matters and ensuring management practices and procedures are being implemented. The list of responsible persons for implementing EMP and mitigation measures are described in the following tables in terms of their name, position, department, phone number and responsibilities.

Table 7. 1- Responsible Persons for EMP and Mitigation Measures

No.	Name	Position	Department	Responsibilities and Duties
1.		Director	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)	• Implementation of the EMP • Supervision and management of the implementation of EMP
2.		Project Manager		• Implementation of the EMP • Supervision and monitoring of the implementation of EMP
3.		HSE Officer		• Implementation of the EMP • Oversight of overall implementation of the project environmental activities • Supervision and monitoring of the implementation of EMP • Supervision, monitoring and performing of Health and safety for workers
4.	Members of MONREC	Representative of Department	MONREC	• Monitoring and inspection of projects to determine compliance with all environmental and social requirements

No.	Name	Position	Department	Responsibilities and Duties
				• The Ministry may impose penalties and/ or require the project proponent to undertake corrective action • Where, the Ministry views that the project is not in compliance, it shall o Promptly inform the project proponent o Indicate specific non-compliances of the project environmental and social requirements; and o Specify a time period for the project proponent to bring the project into compliance • In the event of noncompliance o Inform the project proponent indicating the specific non-compliances with environmental and social requirements; • Where a project is not in compliance or not likely to comply with its environmental and social requirements, take enforcement action including: o Suspension of project operation; and o Employing third parties to correct non-compliance **Source: Environmental Impact Assessment Procedure (2015).**

7.2.1. Environmental Management Plan

Table 7. 2- Environmental Management Plan for Construction Phase and Operation Phase

No.	Potential Impacts	Location	Impacts	Mitigation Measures	Estimated Cost of Proposed Measures	Residual Impacts	Responsible Party
Construction Phase							
1.	Water Quality	Farm	Surface water and Groundwater pollution	Install appropriate wastewater management plan and sewage control plan to reduce water pollution and to prevent the wastewater from the ponds to nearest drainages.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
2.	Soil Quality	Farm	Soil contamination	Construction materials storage area must be prepared properly to control soil contamination. Regular checking and monitoring of wastewater quality not more than NEQEG limits.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
3.	Air Quality	Farm	Dust and gaseous emission	Generators and other equipment which might generate an emission gas will have to be shut down, when not in use.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
4.	Noise	Farm	Nuisance due to noise and vibration	The construction activities that produce noise should be done during normal working hours.	Already included in cost estimation for EMP	Very Low	Myanmar Bright Prospect

			generation	Moreover, the workers should be issued to wear earplugs for conditions that generate sound level more than maximum limit.			International Logistics Co., Ltd (MBPL)
5.	Waste	Farm	Water and soil pollution and impact on health	There should be proper construction waste management plan by the contractor including reduce, reuse and recycle system. The project proponent will follow the guidelines of Township Development Committee (Township Municipal) to dispose the construction wastes.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
6.	Flora and Fauna (Terrestrial and Aquatic)	Farm area and surrounded wetland	Disturbance terrestrial and aquatic ecology and habitats	No protected area like designated conservation zone is observed in the proposed project area, but in the mangrove area. Therefore, alternative design should be choosing for the best way.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
7.	Occupational Health and Safety	Farm	Health and safety problems for construction workers	The contractor should have health and safety management plan.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
8.	Community Health and Safety	Farm	Health and safety problems for	The contractor should have health and safety management plan.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect

			nearby local communities				International Logistics Co., Ltd (MBPL)
9.	Fire Hazard	Farm	Loss of properties and life	Installation of firefighting extinguishers and plan to mitigate the impact and training and awareness about fire hazard and action plans should be given to staff.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
Operation Phase							
1.	Water Quality	Farm area and adjacent wetland	Nutrients loading and water pollution	The presence of buffer zones, maintaining an acceptable balance between mangroves and shrimp pond area, improved pond design, reduction of water exchange, and an improved residence time of water, size and capacity to assimilate effluents of the water body, are examples of ways to mitigate the adverse effects. The use of mangroves and halophytes as biofilters of shrimp pond effluents offers an attractive tool for reducing the impact in those regions where mangrove wetlands and appropriate conditions for halophyte plantations exist. Use of appropriate water management	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

				system including sustainable drainage systems, efficient land drainage and water treatment plan.			
2.	Soil Quality	Farm	Disposal of SPW	Waste disposal area should be adjusted after every crop in line with waste production level, local environmental conditions and government requirements.	Already included in cost estimation for EMP	Moderate	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
3.	Air Quality	Farm	Dust and gaseous emission	Generators and other equipment which might generate an emission gas will have to be shut down, when not in use.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
4.	Noise	Farm	Nuisance due to noise and vibration generation	Operation process will generate some level of noise in the surrounding area.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
5.	Waste from workers camp and SPW	Farm	Water and soil pollution and impact on health	Sedimentation ponds will install to capture solid waste and suspended particles from shrimp farm effluents before discharge into the estuarine area. The project area was mostly composed of swamp and	Already included in cost estimation for EMP	Moderate	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

				wetlands, therefore these areas will be used as a biological filters to treat shrimp farm effluents. These systems use plants and microorganisms to naturally filter and break down organic matter and nutrients in the wastewater before it reaches the estuarine area. Implement regular water quality monitoring programs to assess the impact of shrimp farm effluents on the estuarine area. The buffer zone is essential for the shrimp pond culture to prevent the potential environmental impacts to nearest waterbody. The most suggested buffer area is 100 meters for shrimp pond culture, therefore the MBPL will set up the buffer area as 200 meters. Waste disposal area should be adjusted after every crop in line with waste production level, local environmental conditions and government requirements. Farms that use 'remain' management approaches should			

				have additional management systems to lower SPW volume and improve quality of SPW while in operation Farms that use 'remove' management approaches should have a proper waste management system before disposing out of farm environment. Use of chemicals and drugs to manage SPW should be avoided where possible.			
6.	Odor	Farming and Production of Shrimp Project		Regular maintenance plan of shrimp ponds should be managed to mitigate odor impact.	Already included in cost estimation for EMP	Moderate	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
7.	Flora and Fauna (Terrestrial and Aquatic)	Farming and Production of Shrimp Project	Disturbance terrestrial and aquatic ecology and habitats	To prevent the shrimp not to go out to natural mangrove area because the proposed project area is in the mangrove.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
8.	Occupational Health and Safety	Farming and Production	Health and safety problems for construction	Preparation of safety management plan and enlighten occupational safety to workers.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International

		of Shrimp Project	workers				Logistics Co., Ltd (MBPL)
9.	Community Health and Safety	Farming and Production of Shrimp Project	Health and safety problems for nearby local communities	Preparation of safety management plan and enlighten occupational safety to workers.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
10.	Fire Hazard	Farming and Production of Shrimp Project	Loss of properties and life	Installation of firefighting extinguishers and plan to mitigate the impact and training and awareness about fire hazard and action plans should be given to staff.	Already included in cost estimation for EMP	Low	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

7.2.2. Environmental Monitoring Plan

The following table describes the detail Environmental Monitoring Plan for construction phase and operation phase of the proposed project.

Table 7. 3- Environmental Monitoring Plan for construction phase and operation phase

No.	Environmental Concerns	Parameters	Frequency	Location	Estimated Cost	Responsible Party
Construction Phase						
1.	Water Quality	pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Total Coliform Bacteria, Total Nitrogen, Total Phosphorus, Total Suspended Solids	Once/ Year	At final outlet of drainage system	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
2.	Air Quality	Particulate matter PM10, Nitrogen Dioxide, Sulphur Dioxide, Ozone, Carbon Monoxide, Volatile Organic Compound, Relative Humidity, Temperature	Once/ Year	A suitable point within the project site	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
3.	Noise	Equivalent Noise Level dB (A)	Once/ Year	A suitable point within the project site and a suitable point at village near the project site	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

4.	Waste	Amount of construction solid waste, and domestic solid waste	Monthly	All operation area	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
Operation Phase						
1.	Water Quality	pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Total Coliform Bacteria, Total Nitrogen, Total Phosphorus, Total Suspended Solids	Once/ Year	At final outlet of drainage system	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
2.	Air Quality	Particulate matter PM10, Nitrogen Dioxide, Sulphur Dioxide, Ozone, Carbon Monoxide, Volatile Organic Compound, Relative Humidity, Temperature	Once/ Year	A suitable point within the project site	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
3.	Noise	Equivalent Noise Level dB (A)	Once/ Year	A suitable point within the project site and a suitable point at village near the project site	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
4.	Waste	Amount of pond waste, and domestic solid waste	Quarterly	All operation area	Already included in cost estimation for	Myanmar Bright Prospect International

					EMP	Logistics Co., Ltd (MBPL)
5.	Odor	Odor	Once/ Year	A suitable point within the project site	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)
6.	Environmental Auditing	Assess the compliances with this EMP as well as laws, rules, policies and regulations	Once/ Year	At the project office	Already included in cost estimation for EMP	Myanmar Bright Prospect International Logistics Co., Ltd (MBPL)

7.2.3. Cost Estimation for EMP and EMoP

The following table shows the expenditures for the implementation of Environmental Management Plan and mitigation measures. Estimated prices may be varied according to the implementation time and service providers. We, Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) strongly commit that we will add required funds for the implementation of Environmental Management Plan and mitigation measures including monitoring plan if the following cost estimation for EMP is not enough at the time of real practices throughout the project lifespan.

Table 7. 4- Cost Estimation for EMP and Mitigation Measures

No.	Item	Unit	Frequency	Unit Cost (MMK)	Cost (USD)
A.	**Mitigation Measures for Construction Phase**				
1.	Dust control			Lump Sum	1,300
2.	Provide Personal Protective Equipment (PPEs) to workers			Lump Sum	600
3.	Provide adequate toilets and septic tanks facilities			Lump Sum	700
4.	Provide first aid kits and training for workers			Lump Sum	500
5.	Provide purified drinking water for workers			Lump Sum	500
6.	Install fire extinguishers			Lump Sum	600
7.	Wastes disposal			Lump Sum	500
Subtotal					**4,700**
B.	**Mitigation Measures for Operation Phase**				
1.	Install good ventilation system			Lump Sum	1,500
2.	Install appropriate wastewater management plan and sewage control plan to reduce water pollution			Lump Sum	600
3.	Install proper drainage system			Lump Sum	700

No.	Item	Unit	Frequency	Unit Cost (MMK)	Cost (USD)
4.	Provide Personal Protective Equipment (PPEs) for workers			Lump Sum	500
5.	Provide first aid kits for workers			Lump Sum	500
6.	Provide purified drinking water for workers			Lump Sum	500
7.	Install dry powder type fire extinguishers, fire hose reels and fire hydrants			Lump Sum	400
8.	Install visible and audible fire alarm system			Lump Sum	400
9.	Waste disposal	Month	12	100,000	700
	Subtotal				**5,800**
Contingency					**800**
Total					**11,300**

The following table describes the cost estimation for Environmental Monitoring Plan, Supervision and Capacity Building Programs and these will cost annually. Prices may be varied according to the implementation time and services providers.

Table 7. 5- Cost Estimation for Monitoring, Supervision and Capacity Building

No.	Item	Unit	Quantity	Unit Cost (USD)	Annual Cost (USD)
A.	**Environmental Monitoring Plan**				
1.	Air quality	Frequency per year	1	400	400
2.	Water quality	Frequency per year	1	450	450
3.	Noise level	Frequency per year	1	250	250
4.	Waste quantity	Frequency per year	4	200	800
5.	Odor level	Frequency per year	1	200	200
6.	Monitoring and	Frequency	1	500	500

No.	Item	Unit	Quantity	Unit Cost (USD)	Annual Cost (USD)
	Reporting	per year			
Subtotal					**2,600**
B.	**Supervision**				
1.	Environmental Officer	Months	12	300	3,600
Subtotal					**6,200**
C.	**Capacity Building (Training Programs for workers)**				**800**
Total					**7,000**

7.2.4. Waste and Wastewater Management Plan

In operation period, wastewater effluents will be discharged from cleansing the hatchery tanks, water irrigation from culture and breeding pond. The wastewater may contain SPW and nutrients enriched water from the operation processes. Waste products will also be produced continuously during shrimp culture in a mixture of liquids, semi-solid and solid forms. Some of these waste materials are removed in the discharge; however, some settles out on the pond bottom and becomes semisolid and solid waste. Moreover, sewage generated from the existing infrastructures will be discharged into septic sewer system while storm water from the project area will be channeled into the existing drainage system. In order to reduce the waste generation, the floating pellets will be used with continuous monitoring.

7.2.4.1. Effects of Shrimp Pond Wastes

Shrimp pond waste affects greatly to growth and survival of shrimp and water quality of the pond. Too frequent removal of waste deposited in the pond bottom, significantly reduces the organic nutrient concentration in water and can result in low levels of phytoplankton and low pond productivity. Accumulation of shrimp farming wastes may lead not only to increases in sediment oxygen demand but also to anaerobic conditions resulting in production of undesirable gasses such as hydrogen sulfide. The sediment consumes a large percentage of the pond oxygen budget and so a large volume of accumulated shrimp pond waste will increase oxygen demand and may cause oxygen depletion on the bottom where the shrimp live. This in turn will stress shrimp and render them more susceptible to disease. The undesirable gasses produced from wastes can also affect the appetite of shrimp thereby increasing feed conversion ratios and leading to further deterioration of water quality. Therefore, shrimp pond waste management during culture operation plays vial role in shrimp production and prevention of disease.

7.2.4.2. Impact of Shrimp Pond waste on environment

Little information is available on effect of wastes on environment. Shrimp pond waste produces negative, neutral and positive impacts on environment. The degree of impact intensity and its consequences is largely dependent upon wastes management practiced during culture operation and post culture period. Usually, negative impacts are reported and positive impacts of wastes are ignored for the fear of encouraging a high incidence of negligence in proper

wastes management. Nevertheless, release of wastes into the environment has already raised many controversies in the shrimp farming industry in terms of environmental issues. The environmental impact of shrimp farming wastes can be divided into three parts: (1) impact on coastal water quality and hydrology, (2) impact on aquatic organisms, and (3) impact on mangrove and terrestrial vegetation.

7.2.4.3. Shrimp Pond wastes (SPW) management during cultural operation

Three of the most useful approaches to shrimp pond wastes management are 'remain', 'remove' and re-suspend'. The 'remain' management technique refers to accumulation of SPW within the pond where it may produce least negative effects to shrimp population. In this approach, SPW is usually concentrated in the middle of culture pond in order to create larger clean space for the shrimp to inhabit around the edges. Different aeration equipment is commonly used to create circular currents that sweep SPW into the middle of pond where it is deposited. Chemicals such as oxidants may be used to allow aerobic decomposition on the surface layer so that the negative effects of SPW on pond water quality can be reduced.

The 'remove' management technique implies removal of SPW from grow out ponds during the culture period complete removal of SPW is not commonly practiced since it may cause a plankton crash due to low level of nutrient availability in pond ecosystem. Only partial removal of SPW is practiced in lined ponds in order to allow nutrient lease from SPW to water. However, ponds with high nutrient availability and high waste loading rate usually have continuous deposition of SPW at a high rate. In this case, SPW that deposited in the middle of the pond is usually removed completely as new SPW keeps moving inward so nutrients are available for maintaining plankton growth. Different devices are being used to remove SPW from pond during the culture operation. Some farms effectively use the central drain system with additional pipe structure affixed to the central drainpipe. The additional pipe sweeps the waste deposited in the middle of pond bottom in a circular motion and discharges into the drainage canal.

The resuspension method uses aeration or bioturbation but the technique is not widely practiced in shrimp farming. Small particles of resuspended SPW increase the surface area available for bacterial attachment leading to faster breakdown. Utilization of this technique causes high BOD in the water column requiring more dissolved oxygen to balance the oxygen budget in the pond.

7.2.4.4. Action Plan for Shrimp Pond wastes during operation

The following should be observed as a general guideline for SPW management. Although these are mainly for the farm operators and owners to follow it still needs assistance of related government agencies. In order to reduce the waste production and wastewater discharged to the environment the following factors will imply for the shrimp production project.

- To implement efficient feeding practices to minimize excess feed and nutrient discharge into the water, floating pellets will be used as a feeding mechanism and to prevent overfeeding will implement continuous monitoring system.
- The stocking density will be optimized to reduce waste generation.

- Sedimentation ponds will install to capture solid waste and suspended particles from shrimp farm effluents before discharge into the estuarine area.
- The project area was mostly composed of swamp and wetlands, therefore these areas will be used as a biological filters to treat shrimp farm effluents. These systems use plants and microorganisms to naturally filter and break down organic matter and nutrients in the wastewater before it reaches the estuarine area.
- Implement regular water quality monitoring programs to assess the impact of shrimp farm effluents on the estuarine area.
- The buffer zone is essential for the shrimp pond culture to prevent the potential environmental impacts to nearest waterbody. The most suggested buffer area is 100 meters for shrimp pond culture, therefore the MBPL will set up the buffer area as 200 meters.
- Waste disposal area should be adjusted after every crop in line with waste production level, local environmental conditions and government requirements.
- Farms that use 'remain' management approaches should have additional management systems to lower SPW volume and improve quality of SPW while in operation
- Farms that use 'remove' management approaches should have a proper waste management system before disposing out of farm environment.
- Use of chemicals and drugs to manage SPW should be avoided where possible.
- The use of mangroves and halophytes as biofilters of shrimp pond effluents offers an attractive tool for reducing the impact in those regions where mangrove wetlands and appropriate conditions for halophyte plantations exist.
- Use of appropriate water management system including sustainable drainage systems, efficient land drainage and water treatment plan.

7.2.4.5. Mitigation Measure of post-culture for Shrimp Pond wastes

- Shrimp Pond Waste should not be discharged to outside environment.
- There should be proper and sufficient disposal area for Shrimp Pond waste on farm.
- Primary treatment such as sedimentation and sun drying should be performed before the waste is disposed off.
- A certain degree of treatment should be applied to SPW before the disposal based on SPW condition: quality, volume and especially if the pond had received some probiotic and antibiotic treatment or if the pond had disease problems.
- Avoid disposing any form of SPW either dried or wet into freshwater aquatic environments.
- SPW disposal areas should not be near freshwater sources that are shared by other resource users.
- SPW should be recycled to use in pond where possible.

7.2.5. Disease Preventation and Outbreak Control Plan

The introduction of postlarvae and broodstock from areas affected by the Whitespot Syndrome Virus (WSSV) and Taura Syndrome Virus (TSV) was often followed by the rapid spread of these major shrimp pathogens throughout most of the shrimp-growing regions in Asia and Latin

America, respectively (Lightner et al., 1997). The disease outbreak in shrimp farm will cause not only economic loss but also it can be severely impacted on other aquatic life form.

- Regularly done pond maintenance by removing excess feed and suspended particulate matter, cleaning of fouling agents from the pond and frequent monitoring of the farmed animals and removal of dead or moribund animals from the pond.
- Continuous monitoring in water quality, sediment loading and health of benthos.
- Adopt good pond management and the use of prophylactic agents. The use of prophylactic agents will be last resort to use.
- Implement early warning system, early detect system and early response system.

7.2.6. Firefighting Plan

The plan must be applicable in both construction and operation phases. The firefighting training should be provided to workers and regular instruction and practice are also necessary for continuous improvement. The sufficient amount of the extinguishers and firefighting system for the site by following the instructions, techniques and guidelines in concern with the fire emergency matters of Myanmar Fire Services Department should be installed. Fire action signs and emergency signs should be posted at site and concerned areas. The emergency contact numbers of Myanmar Fire Services Department should be posted in places where staves and relevant people can read it and become familiar with its contents. The smoking at the working site should be strongly prohibited and the warning signs for electric shock should be posted at concerned places to avoid any emergency situations. Voice or emergency light alarm system, fire hose reels, manual portable extinguishers and sprinklers, temperature and gas sensors should be installed and the instructions of the routine to be followed are required to be cleared. The existing ways, emergency exits and fire evacuation places are also needed to be prepared at working site since the construction phase.

7.2.7. Health and Safety Plan

The occupational health and safety plan (OHS) and the community health and safety plan (CHS) is necessary to be implemented during construction and operation phases of Farming and Production of Shrimp. It is aiming to provide the safe and sound working environment not only for workers on site but also, for the community.

The MBPL will implement following plan for safe work places for the workers.

Provision of guardrails, footrails and safe working surfaces: A suitable and secure walkway will be provided around the exterior of each farm. Footrails need to be fitted at the inside edge of walkways to provide bracing and to prevent workers' feet slipping from the walkway.

Safety and rescue equipment: When working over water at any location, at least two people need to remain within sight and sound of each other at all times. They will require constant access to a moored boat or life raft. Suitable personal buoyancy equipment, such as lifejackets, will be provided. Training will be given on the procedures for rescuing people from the water (including rescue into a boat) and also on the correct fitting, maintenance and use of lifejackets.

Clothing for wet weather/cold protection: There is always a risk of rheumatic complaints due to a combination of cold, damp and repetitive strain. To minimize such risk, protective clothing and/or adequate warm clothing (including gloves and boots) will be provided and worn relevant to the prevailing conditions.

Shelter: Adequate and suitable shelter will be provided at farm. It should be weatherproof and big enough to accommodate the maximum number of employees normally expected to work at the farm.

First aid: Employers and workers will be given adequate first aid training. The training needs to take account of the remoteness of the farm and should include resuscitation, treatment of bleeding, the recognition and treatment of hypothermia. Suitable and sufficient first aid equipment needs to be provided at the farm or on the workboat.

Light: Adequate lighting will be provided at the shelter and walkways.

7.2.8. Disaster Management, Emergency Preparedness and Response Plan

The project proponent has already prepared an emergency preparedness plan in order to prevent consequences of natural disasters such as fire, floods and earthquakes and man-made errors. Care should be given to manufacturing processes in order to prevent man-made errors (e.g. electricity shock, fire hazards) etc. The emergency contact numbers of Township and District Fire Services Department must be printed and tagged at easily visible places for fire emergency cases. The main entrances and emergency routes of the office and pond area must not be blocked with materials or machines for fire emergency cases. Moreover, the project proponent will be installed fire extinguishers and fire hose reels. Audible and visible fire alarm systems have been installed at the project site.

For all emergency cases, emergency response plan must be developed by the project proponent and train to all workers in order to evacuate systematically during emergency cases. Recovery plan must be developed because recovery plan should be followed after severe damages due to emergency cases.

If an earthquake occurs minimize your movements to a few steps to a nearby safe place and if you are indoors stay there until the shaking has stopped and you are sure exiting is safe.


[FIRE]
A fire is both frightening and destructive. Fires are a danger to buildings and residents in equal measure. Keep your cool in the event of a fire by following these SAFE STEPS:
BE PREPARED...
PREPARE YOUR GO-BAGS
KNOW AND PRACTICE YOUR ESCAPE ROUTE
FIRE ALARM
GET IT
INSTALL IT
CHECK IT
CARRY OUT ANNUAL CHECKS, ENSURE FIRE ALARMS WORK
DO NOT LEAVE BURNING CIGARETTES OR CANDLES UNATTENDED
SAND
PREPARE FIRE FIGHTING EQUIPMENT...
AND KNOW HOW TO EXTINGUISH A FIRE
PULL
AIM
SQUEEZE
SWEEP
IF USING EXTINGUISHER, PULL PIN, AIM AND SQUEEZE HANDLE, SWEEP BASE OF FIRE
NEVER USE WATER OR FOAM EXTINGUISHER ON AN OIL OR ELETRICAL FIRE
IN CASE OF FIRE...
IF YOUR CLOTHES CATCH FIRE...
STOP
STOP WHERE YOU ARE
DROP
DROP TO THE GROUND
ROLL
ROLL ON THE FLOOR TO PUT OUT THE FLAMES
IF THERE IS SMOKE...
GET DOWN LOW - COVER YOUR MOUTH WITH A DAMP CLOTH AND GET OUT!
EXIT
GET OUT THROUGH A SAFE EXIT
FIRE ALARM
SOUND ALARM AND CALL FOR HELP
BEWARE OF GAS LEAKS AND EXPOSED WIRE
DO NOT GO HOME UNLESS LOCAL AUTHORITIES DEEM IT SAFE
NATIONAL GEOGRAPHIC CHANNEL
SAFESTEPS.COM
SAFE STEPS TIPS APPROVED BY:
International Federation of Red Cross and Red Crescent Societies
PRUDENCE FOUNDATION

Figure: 7. 1- Safety Cards for Awareness of Emergency Cases

The Emergency Response Plan describes the actions to be taken by MBPL personnel to respond to severe weather, theft and vandalism, tsunami alerts, and other potential and unknown crisis and disaster situations at its shrimp farm site. In any of these instances, the Company's actions will adhere to the following priority concerns:

- Safeguarding the life and health of all personnel and individuals involved.
- Safeguarding the aquatic environment from spills of oil or other detrimental liquids and materials.
- Securing the loose materials and waste to avoid discharging to aquatic environment.
- Timely notification of appropriate government body of the event and its impacts to seek consultation as required.

In any emergency situation, personnel on site will notify senior management of the situation. Management will guide and direct responses to the situation. Staff will have communication capabilities with radios and cell phones. Every staff member will be given training in emergency response procedures.

Specifically, in the event of the occurrence of the situations noted below, the several procedures and protocols to be followed are listed.

Severe Weather (including hurricane)

- All ponds will be inspected to prepare for the storm.
- In the event of cyclones conditions, the feed/security barge will be towed to nearest secured area.
- The Company's land-based support facilities will be appropriately secured.
- Any resulting post-storm damage or recovery actions will be reported to Management body of MBPL

Tsunami

- In the event of a tsunami warning, all pond will be well secured.
- The feed/security barge will be secured and remain on site.
- Land-based facilities will be secured given time and staff will seek higher ground.
- Any post-tsunami problems will be reported to MBPL's management body, the nearest maritime station and other government body and agencies, as required.

7.2.9. Grievance Redress Mechanism

Complaints and conflicts may arise during construction, land acquisition and compensation process. These complaints and conflicts can be of many kinds. It could be unexpected natural and social adverse impacts by the project construction activities. The aim of the Grievance Redress Mechanisms (GRM) is to ensure that grievances and concerns raised by the communities can be effectively dealt with in a timely and satisfactory manner. Given the potential for quick and effective resolution on the ground, utilizing local dispute mechanisms as a first step in line with current traditional practices makes the mechanism more effective.

People who live near the project site or stakeholders concerned with the problems and impacts that they suffer from the proposed project; they can complain though Grievance Committee, which includes the responsible persons of the project proponent, representatives from Aledwein Village and representative from General Administration Department (Kyauk Phyu 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 court will decide in legal terms. The following diagram shows detail steps of Grievance Redress Mechanism of the proposed project.

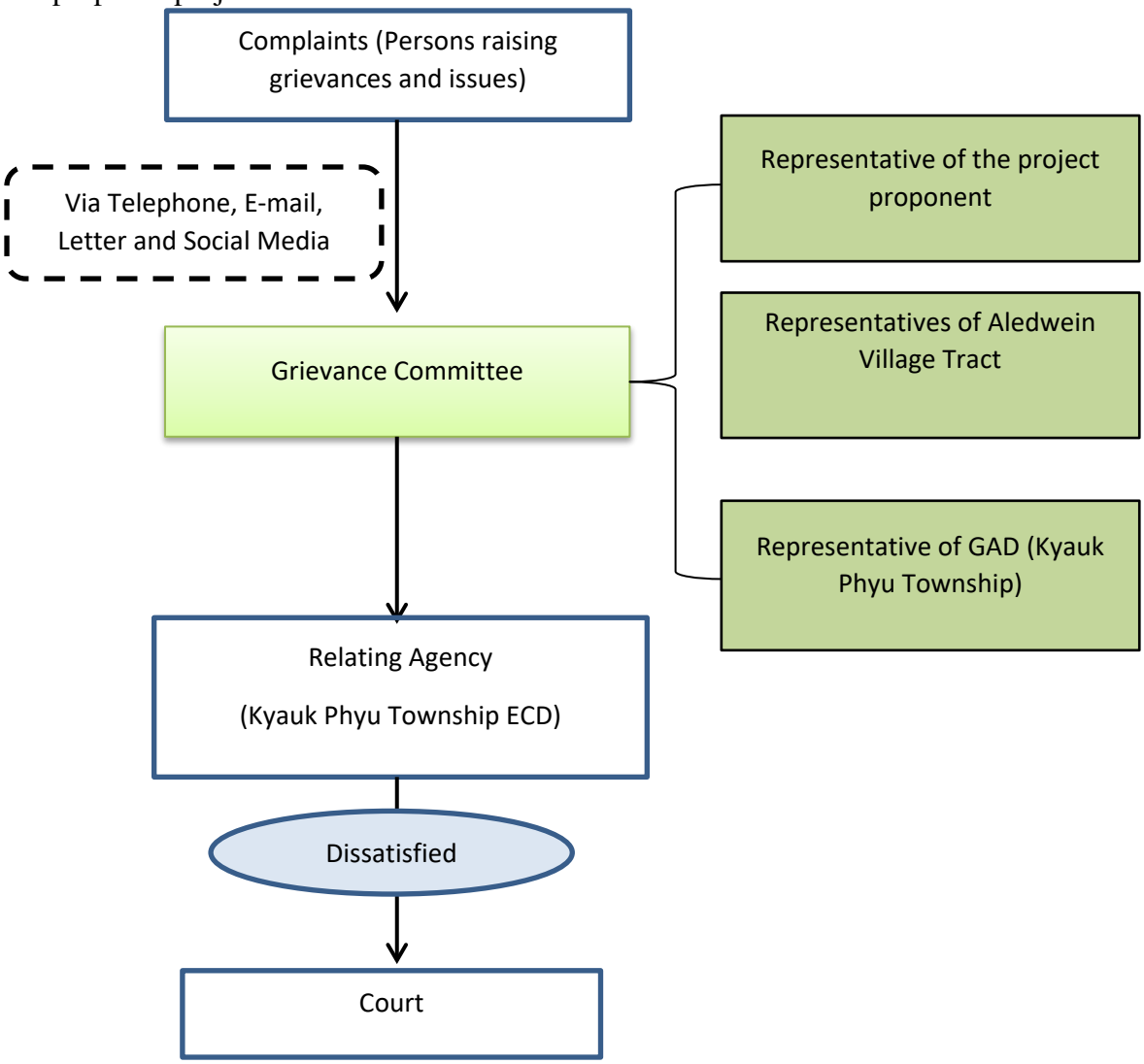


Figure: 7. 2- Grievance Redress Mechanism for the Proposed Project

7.2.10. Corporate Social Responsibility (CSR) Plan

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) will implement Corporate Social Responsibility (CSR) Plan together with Environmental Management Plan (EMP) through the project lifespan for community development. The objective of this plan is to create social welfare for local community and to prove that implement of the proposed project is beneficial for not only the project proponent but also for the development of the local community. The project proponent has a plan to use **2% of Annual Net Profit** for the corporate social responsibility fund for the following subjects.

Table 7. 6- Corporate Social Responsibility Plan of the Project

No.	Subjects	Percentage of the Fund
1.	Education	20%
2.	Transportation	20%
3.	Health Care	40%
4.	Social Aid	10%
5.	Environmental Conservation	10%

Myanmar Bright Prospect International Logistics Co.,Ltd မှ CSR အတွက် လှူဒါန်းမှုစာရင်း				
No.	Date	Particular	Amount (MMK)	ပူးတွဲ
1	28.11.2018	Donation Mid Size Solar Dryer 5 Units	150,000,000.00	ဓာတ်ပုံမှတ်တမ်း
2	5.12.2018	Donation for Maday Island Road Construction	2,000,000.00	ဂုဏ်ပြုမှတ်တမ်း
3	3.1.2020	Donaion for Maday Education Foundation	500,000.00	ဂုဏ်ပြုမှတ်တမ်း
4	29.11.2021	ကျောက်ဖြူမြို့ Golf Club သို့ Green ဖြတ်စက်(၂)လုံး လှူဒါန်းခြင်း	1,200,000.00	ဂုဏ်ပြုမှတ်တမ်း
5	13.8.2021	Donation of Oxygen Concentrator 3Units , oxygen cylinder, oxygen bags , N95 Mask, Surgical Mask and PPE	13,000,000.00	ဂုဏ်ပြုမှတ်တမ်း
6	28.9.2021	Donation of Oxygen Concentrator , oxygen mask and 640 pcs Test Kit	2,500,000.00	ဂုဏ်ပြုမှတ်တမ်း
7	29.12.2021	Donation to ECD	1,000,000.00	ဂုဏ်ပြုမှတ်တမ်း
8	23.2.2022	Donation to ECD about training	500,000.00	ဂုဏ်ပြုမှတ်တမ်း

9	3.6.2022	Donation to ECD	300,000.00	ဂုဏ်ပြုမှတ်တမ်း
10	14.10.2022	Donation to ECD	300,000.00	ဂုဏ်ပြုမှတ်တမ်း
		Total Amount	171,300,000.00	

8. PUBLIC CONSULTATION AND DISCLOSURE

8.1. Methodology and Approach

Stakeholder meeting was held at two places in two days. One is Aledwein village tract head's hall, Taung Maw village, Kyauk Phyu Township, and Rakhine State and Environmental Conservation Department's meeting hall in Kyauk Phyu Township with various stakeholders including government organizations, administrative and local people. According to the scope of the Farming and Production of Shrimp, the stakeholder meetings focused on the project scope, the legal and institutional framework for environmental and social impact management applicable to the project.

8.2. Summary of consultations and activities undertaken

With those purposes of disclosing the project information to the concerned parties and authorities, the stakeholder meeting was held at two places in two days. The first meeting was held on 9th December 2021, at Aledwein village tract head's hall, Taung Maw village, Kyauk Phyu Township, Rakhine State.

The stakeholder meeting was held in following agenda;

1. Opening Ceremony
2. Presentation about Project by one of representative from MBPL Company
3. Presentation about EIA (Scoping stage) by Director (Guardians of Green Environmental Services)
5. Recommendations and suggestions by Attendees
6. Closing Ceremony

Stakeholders/ Participants List

Government Department	- 5
Companies	- 3
Local People	- 12
Interested Person	- 2
Total	- 22

8.3. Results of Consultations for first meeting

(1) U Kyaw Yein Oo (Villager)

Question: If there are no negative impacts, we are welcome. But, are there any negative impacts to the environment? We are worried about our fishing process because of wastewater discrete from the project area.

Answer: Yes, Of course, if the new project starts, there will be more or less impacts. But we can mitigate these negative impacts by following the EMP from MBPL side. We will not allow the discharge of wastewater without any treatment. If the water is not clean, they have negative impacts first because they also depend on this water. We also prepare Grievance Redressed Mechanism (GRM) for your complaints in EIA stage and you can report to GRM team.

(Answered by Director, Guardians of Green Environmental Services)

(2) U Ba Thein Oo (Villager)

Question: How to support to local people's livelihoods, happiness, education, transportation, health and regional development from this project?
Answer: We will follow CSR plan and we will support 2% of profit from this project for local people's livelihoods and regional development.
(Answered by representative from MBPL Company)

(3) U Maung Tin Nyunt (Villager)

Question: We would like to request health and transportation mainly.
Answer: Noted.
(Answered by representative from MBPL Company)

(4) U Tun Tun (Teacher)

Question: In the presentation, I noted the worker percentage from local people is 80%, if the project will start, is the foreign technicians may be more than local workers? Is there any training for local workers?
Answer: Yes, firstly our technicians may be more than local people but they will give trainings to local workers and then they will go back and finally the local workers percentages will be 80%. *(Answered by representative from MBPL Company)*

The second meeting was held on 10th December 2021, at Environmental Conservation Department's meeting hall in Kyauk Phyu Township.

The stakeholder meeting was held in following agenda;
1. Opening Ceremony
2. Presentation about EIA process by Assistant Director from Environmental Conservation Department
3. Presentation about Project by one of representative from MBPL Company
4. Presentation about EIA (Scoping stage) by Director (Guardians of Green Environmental Services)
5. Recommendations and suggestions by Attendees
6. Closing Ceremony

Stakeholders/ Participants List

Government Department	- 12
NGOs	- 3
Local People	- 1
Total	- 16

8.4. Results of Consultations for second meeting

(1) U Hlwan Moe Htet (Assistant Director, Environmental Conservation Department)

Suggestion: Baseline data of Than Zit river water quality should be measured from Third Party side. How many acres of mangroves in the 84 acres of project site and the company should plant mangroves in another place because coastal area mainly depend on mangroves and if there is no mangroves; there is no fish and prawn. It is needed to confirm that the project area is within the Special Economic Zone or not.

Answer: Noted and we will present in the EIA report.

(Answered by Director, Guardians of Green Environmental Services)

(2) U Min Thu (Staff Officer, Fire Service Department)

Suggestion: Systematic fire safety plan and equipment should be prepare before the construction phase with our Fire Service Department's engineers.

Answer: We will report to Company site.

(Answered by Director, Guardians of Green Environmental Services)

(3) U Kyaw Naing Win (Program Manager, Rakhine Arr Man)

Question: Can local people accept this project? How many acres of vacant land and village areas in this project? Do local people understand the EIA process? Can CSO join for this? Do MBPL implement the similar project in other places and the condition of development before and after this project and the percentages of progress?

Answer: We purchased legally with local people for their old shrimp pond, now vacant land and then we apply to Vacant Fallow and Virgin Land Management Committee compliance with procedures and we got permit at 9.4.2020. This is the first shrimp farming project for our Company. *(Answered by representative from MBPL Company)*

Answer: We already meet with local people at 9th December 2021 and they mainly discussed about job opportunities. They can't understand EIA procedure at all but we explained about environmental impact as much as we can. *(Answered by Director, Guardians of Green Environmental Services)*

(4) U Kyaw Kyaw Win (Aledwain Village Tract Leader)

Recommendation: Our region is very poor and local people mainly depend on fishing, shrimp and crab process, so we all pleased and welcome to this project for our region development. I'd like to request job opportunities for local people and Thank you all.

(5) Daw Sandar (Department of Labour)

Question: When will the project start? When will the local people get job? If the project starts, they should report to our department about work beginning. How much the initial percentage of local unskilled workers? At the present time, how to operate 50% of employee as per the presentation? The unskilled workers amount is very much and please report unskilled workers percentages and foreign technician amount to us. It is also needed to confirm that the project

area is within the Special Economic Zone or not. The project proponent will prepare PPE for safety, social welfare and social security for accidents in case. At the current time, how many employee in Company? Please mention the total amount of unskilled workers from ALedwain only?

Answer: Yes, 50% is initial amount and firstly our technicians may be more than local people but they will give trainings to local workers and then they will go back and finally the local workers percentages will be 80%. Currently, the head employee only. I will report the above questions and discussion to our Company. *(Answered by representative from MBPL Company)*

(6) U Nay Soe Khaing (TRNG)

Question: We are welcome for local people's job opportunities but you should explain the potential impacts and environmental impacts to local people. This region is very poor and not good at transportation and I'd like to request for region development.

Answer: We will follow CSR plan and we will support 2% of profit from this project for local people's livelihoods and regional development. *(Answered by representative from MBPL Company)*

Answer: We also conduct socio economic survey with local people one by one and summarized about the current needs and we will prepare CSR plan in the EIA and the project proponent will follow this. And we will hold 2nd Public Consultation in EIA stage. *(Answered by Director, Guardians of Green Environmental Services)*

(7) U Naing Naing Win (Director, CPD Myanmar)

Question: When will the project start? We are welcome for local people's job opportunities and the project proponent will carry out CSR plan effectively.

Answer: We will follow the directions from Department of Labour for unskilled workers employment. Project will starts at 2022 dry season. *(Answered by representative from MBPL Company)*

(8) U Tin Shwe (General Administration Department)

Suggestion: Although the Local People From Aledwain accept the project we need to explain clearly about positive and negative and what is pollution to local people. Please project proponent will fulfill the actual needs like health and education. How to compensate for Agricultural land?

Answer: Thanks for your suggestion. *(Answered by representative from MBPL Company)*

(9) U Kyaw Myo Naing (Staff Officer, Forest Department)

Suggestion: Although the Land use permit was got, the clear cutting of mangrove areas will be compensated to State Government under the directions and coordinate with Forest Department.

Answer: Thanks for your suggestion and we will mention in EIA. *(Answered by Director, Guardians of Green Environmental Services)*

9. CONCLUSIONS AND RECOMMENDATIONS

9.1. Conclusions

This Environmantal and Social Impact Assessment report has been prepared for Myanmar Bright Prospect International Logistics Co., Ltd. commissioned by Guardians of Green Environmental Services Co., Ltd. for environmental studies. This ESIA report is based on consideration of resource conservation and pollution assessment such as water pollution, air pollution (NO2, SO2, CO2, CO), solid waste disposal, noise and vibration, dust emission, occupational health and safety, socioeconomic impact, and biodiversity impact.

Guardians of Green Environmental Services conducted environmental quality measuring at project site during December 2021. According to the observed data, dust level and gas emission of the proposed project is within the guideline value from the National Environmental Quality (Emission) Guideline.

Environmental Monitoring Plan (EMoP) will be implemented for monitoring the environmental quality of the proposed project. Then, the estimated budget need for implementing Environmental Management Plan and Environmental Monitoring Plan are mentioned in this report. Moreover, CSR plan, firefighting plan, emergency preparedness and response plan and grievance redress mechanism to solve the complaints related with the proposed project are also described in this report. It is also necessary to consider every opinion of all stakeholder potential to be affected by the development of the proposed project.

9.2. Recommendations

The following recommendations have been prepared for nominal implementation of the project.

- The monitoring procedure should be implemented during the construction.
- Installation of wastewater management plant should be implemented during the construction.
- Use low-noise equipment and silent generators, avoiding night time working with heavy equipment to reduce noise pollution.
- The adequate warning and alert system set up for the probable diasaster.
- Wastes segregation system should be implemented for waste disposal method. Waste disposal system should be done systematically by following local municipal law.
- Shrimp Pond Waste need to be treated according to the mitigation measures and management plans.
- Training programs should be done for the workers and staff for firefighting and environmental awareness to meet the environmental performance standard.
- Corporate Social Responsibly (CSR) Plan should be implement annually.
- Provide relevant Personal Protective Equipment (PPEs) for the workers during construction and operation phases of the project.
- Implement Post-Culture Management Plan and Rehabilitation Plan to remedy the environment.

10. REFERENCES

GAD. (2020). Kyauk Phyu Township Data Report.

Good Aquaculture Practices – GAqP

IFC. (2016). Environmental and Social Management System Implementation Handbook.

Population, D. o. (2017). *The 2014 Myanmar Population and Housing Census Rakhine State, Kyauk Phyu District.* Ministry of Labour Immigration and Population.

11. APPENDICES

Appendix-1: Commitments Letter

MBPL | Myanmar Bright Prospect International Logistics Co.,Ltd

Commitments to Follow and Implement Mitigation Measures Stated in the Environmental Management Plan of Environmental Impact Assessment Report

We, Myanmar Bright Prospect International Logistics Co., Ltd., hereby affirm that our Environmental Impact Assessment Report for the Shrimp Farming and Production Project is both robust and comprehensive. The report has been meticulously prepared, strictly adhering to all Environmental Impact Assessment (EIA) procedures. We are committed to executing prescribed mitigation measures as outlined in the Environmental Management Plan and sub-plans all of which were described in the Environmental Impact Assessment Report. We are fully committed to ensuring that the project complies with all relevant environmental regulations, as well as social responsibilities outlined in the t.

Furthermore, should there be any recommended methods or techniques that enhance the approved Environmental Management Plan during the operational phase, we will promptly incorporate these improvements into our system and align them with the necessary business requirements. Additionally, we have devised plans to prevent environmental and social impacts during the project closure stage and we emphasize our unwavering commitment to adhere to all applicable local, national, and international environmental laws, regulations, and ethical standards during the entirety of the EIA process.

Managing Director
Myanmar Bright Prospect International Logistics Co., Ltd.(MBPL)

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Appendix 2- Third Party Commitment Letter

Guardians of Green
Environmental Services Company Limited

Commitment to follow and compliance with Environmental Conservation Law, Rules, Environmental Impact Assessment Procedure, National Environmental Quality (Emission) Guidelines, Standards and Mitigation Measures Stated in the Environmental Impact Assessment Report

With regards to the above matter, we, Guardians of Green Environmental Services Co., Ltd., have diligently prepared the Environmental Impact Assessment Report for the Shrimp Farming and Production Project proposed by Myanmar Bright Prospect International Logistics Co., Ltd (MBPL). Our company wholeheartedly assures that this EIA Report for the project has been meticulously developed, strictly adhering to all Environmental Impact Assessment (EIA) procedures (2015), as well as complying with the Environmental Conservation Law (2012), Environmental Conservation Rules (2014), National Environmental Quality (Emission) Guidelines (2015), and other relevant environmental standards. The successful implementation of the Terms of Reference, Scope of Work, Potential Impact Identification, Mitigation Measures, and Management Plans, outlined in this Scoping Report, underscores our unwavering commitment to environmental excellence.

Yours Sincerely,

Moh Moh Khaing
Director
Guardians of Green
Environmental Services Co., Ltd.

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Mandalay- No 61, 27th Street, Between 73rd & 74th Street, Chan Aye Thar Zan Township
+95(0)9 765 890 118, +95(0)9 765 990 118
gog.info.18@gmail.com

Appendix-3- From 7A

ပုံစံ (၇ - က)

မြေအသုံးပြုခွင့် လျှောက်ထားလွှာ

သို့

ဥက္ကဋ္ဌ
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

စာအမှတ် ။ ။MBPL / MIC /2020(၀၀၃)
ရက်စွဲ ။ ။ 17 - 6 - 2020

အကြောင်းအရာ။ ။ရင်းနှီးမြှုပ်နှံမှု လုပ်ငန်းဆောင်ရွက်ရန် မြေဌားရမ်းခွင့် သို့မဟုတ် မြေအသုံးပြုခွင့် လျှောက်ထားခြင်း။

ကျွန်တော် / ကျွန်မသည် ရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းဆောင်ရွက်ရန်အတွက် မြေဌားရမ်းခွင့် သို့မဟုတ် မြေအသုံးပြုခွင့်ကို မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု နည်းဥပဒေ ၁၁၆ နှင့် အညီ အောက်ပါ အချက်အလက်များကို ဖော်ပြ၍ လျှောက်ထားအပ်ပါသည် -

၁။ မြေ / အဆောက်အအုံ၏ ပိုင်ရှင် နှင့် စပ်လျဉ်းသော အချက်အလက်များ

(က) ပိုင်ရှင်အမည် / အဖွဲ့အစည်း - ဦးဒိန်ယိန်း

(ခ) ဧရိယာ အကျယ်အဝန်း - ၅၅၀ ဧက(၂၂၂၅၇၃၃ စတုရန်းမီတာ) အနက်မှ ၈၄ ဧက (၃၃၉၉၃၆. ၂၄ စတုရန်းမီတာ)

(ဂ) တည်နေရာ - ဦးပိုင်အမှတ် ၁၀၄၉၊ ၁၀၅၀၊ ၁၅၄၄၊ ၁၈၂၉၊ ၂၊ ၁၈၄၆၊ ၂၄၆၃၊ ၁၈၄၈၊ ၁၈၂၃၊ ၃၂၅၊ . . / ၂၅၆၂ ၊ ကွင်းအမှတ် ၅၆၀ - အလယ်ဒို့နှင်းကွင်း ၊ ကွင်းအမှတ် ၅၆၁ - ကျောက်ဆည်ကွင်း ၊ ကွင်းအမှတ် ၅၆၂ - သဒ္ဓါလောင်းချကွင်း ၊ အလယ်ဒို့နှင် ကျေးရွာအုပ်စု၊ ကျောက်ဖြူမြို့နယ်၊ ကျောက်ဖြူခရိုင် ၊ ရခိုင်ပြည်နယ်။

(ဃ) မူလမြေအသုံးပြုခွင့် ရရှိထားသောကာလ (မြေဌားဂရမ် သက်တမ်း) - လျှောက်ထားဆဲ

(င) နှစ်ရှည်ဌားရမ်းခများကို မတည်ရင်းနှီးငွေအဖြစ်ဖော်ပြခဲ့ခြင်း ရှိ - မရှိ - Nil

(စ) ကနဦး ဌားရမ်းသူက သဘောတူ / မတူ - သဘောတူပါသည်

(ဆ) မြေအမျိုးအစား -

၂။ အဌားချထားသူ

(က) အမည်/ကုမ္ပဏီအမည် / ဌာန / - ဦးဒိန်ယိန်း

(ဂ) နေရပ်လိပ်စာ - အမှတ် (၁၅၀-ဘီ)၊ တက္ကသိုလ် ရိပ်သာလမ်းသစ်၊ ဗဟန်းမြို့ နယ်၊ ရန်ကုန်၊

၃။ အဖွဲ့အစား/ကုမ္ပဏီအမည်

(က) အမည်/ကုမ္ပဏီအမည် / ဌာန / အဖွဲ့အစည်း - Myanmar Bright Prospect International Logistics Co.Ltd

(ခ) နိုင်ငံသားစီစစ်ရေးကဒ်အမှတ်/ နိုင်ငံကူးလက်မှတ် အမှတ် - Registration No.113671505

(ဂ) နိုင်ငံသား - Incorporated in Myanmar

(ဃ) နေရပ်လိပ်စာ - အမှတ် (၁၅၀-ဘီ)၊ တက္ကသိုလ် ရိပ်သာလမ်းသစ်၊ ဗဟန်းမြို့ နယ်၊ ရန်ကုန်။

၄။ ဌာနရမ်းလိုသည့် မြေနှင့် စပ်လျဉ်း သည့်အချက်အလက်များ

(က) ရင်းနှီးမြှုပ်နှံသည့် လုပ်ငန်းအမျိုးအစား - ရေနေ့ ပုဇွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၊

(ခ) ရင်းနှီးမြှုပ်နှံသည့် အရပ်ဒေသ(များ) - ဦးပိုင်အမှတ် ၁၀၄၉၊ ၁၀၅၀၊ ၁၅၄၄၊ ၁၈၂၉၊ ၁၈၄၆၊ ၂၄၆၃၊ ၁၈၄၈၊ ၁၈၂၃၊ ၃၂၅၊ ၀၀/၂၅၆၂၊ ကွင်းအမှတ် ၅၆၀ - အလယ်ဒွိန်ကွင်း ၊ ကွင်းအမှတ် ၅၆၁ - ကျောက်ဆည်ကွင်း ၊ ကွင်းအမှတ် ၅၆၂ - သဇွဲလောင်းချကွင်း ၊ အလယ်ဒွိန် ကျေးရွာအုပ်စု၊ ကျောက်ဖြူမြို့နယ်၊ ကျောက်ဖြူခရိုင် ၊ ရခိုင်ပြည်နယ်၊

(ဂ) တည်နေရာ (ရပ်ကွက် ၊ မြို့နယ် ၊ ပြည်နယ် / တိုင်းဒေသကြီး) - ဦးပိုင်အမှတ် ၁၀၄၉၊ ၁၀၅၀၊ ၁၅၄၄၊ ၁၈၂၉၊ ၁၈၄၆၊ ၂၄၆၃၊ ၁၈၄၈၊ ၁၈၂၃၊ ၃၂၅၊ ၀၀/၂၅၆၂၊ ကွင်းအမှတ် ၅၆၀ - အလယ်ဒွိန်ကွင်း ၊ ကွင်းအမှတ် ၅၆၁ - ကျောက်ဆည်ကွင်း ၊ ကွင်းအမှတ် ၅၆၂ - သဇွဲလောင်းချကွင်း ၊ အလယ်ဒွိန် ကျေးရွာအုပ်စု၊ ကျောက်ဖြူမြို့နယ်၊ ကျောက်ဖြူခရိုင် ၊ ရခိုင်ပြည်နယ်၊

(ဃ) မြေဧရိယာ အကျယ်အဝန်း - ၅၅၀ ဧက(၂၂၂၅၇၃၃ စတုရန်းမီတာ) အနက်မှ ၈၄ ဧက (၃၃၉၉၃၆. ၂၄ စတုရန်းမီတာ)

(င) အဆောက်အအုံအရွယ်အစား/ အရေအတွက် - ၃,၆၉၈,၅၅၂. ၈၅စတုရန်းပေ (နောက်ဆက်တွဲနှင့်အတူ)
- အဆောက်အဦး ၅၁ လုံး

(စ) အဆောက်အအုံ တန်ဖိုး - အမေရိကန်ဒေါ်လာ ၂. ၆၅၃ သန်း

ပုံစံ (၇ - က)

၅။ မြေပိုင်ဆိုင်မှု / မြေဂရန် အထောက်အထား (စက်မှုဇုန်မှ အပ) ၊မြေပုံနှင့် မြေဌားစာချုပ် (မူကြမ်း တင်ပြရန်။

၆။ မြေဌားရမ်းခြင်းနှင့် စပ်လျဉ်း၍ အောက်ဖော်ပြပါ ပုဂ္ဂိုလ်ထံမှ တစ်ဆင့်ဌားရမ်းထားခြင်း ရှိ - မရှိ -

☐ နိုင်ငံတော်၏ ဥပဒေများနှင့် အညီ အစိုးရဌာန ၊ အစိုးရအဖွဲ့အစည်းထံမှ နိုင်ငံတော် ပိုင်မြေ သို့မဟုတ်
အဆောက်အအုံ အသုံးပြုခွင့်အား ယခင်ကပင် ရရှိထားသော ပုဂ္ဂိုလ် ၊

☐ အစိုးရဌာန ၊ အစိုးရအဖွဲ့အစည်း၏ ခွင့်ပြုချက်နှင့် အညီ နိုင်ငံတော်ပိုင်မြေ သို့မဟုတ် အဆောက်အအုံ
အား တစ်ဆင့်ဌားယူရန် သို့မဟုတ် တစ်ဆင့်လိုင်စင် ရယူရန်အခွင့်ရှိသည့် ပုဂ္ဂိုလ်။

၇။ မြေ/အဆောက်အအုံ ဌားရမ်းခနှုန်း - မြေဌားရမ်းခတစ်နှစ်လျှင်တစ်စတုရန်းမီတာအတွက်
တစ်နှစ်လျှင် တစ်စတုရန်းမီတာအတွက် - အမေရိကန်ဒေါ်လာ ၀. ၀၁၇၆၅ ဒေါ်လာ

၈။ မြေအသုံးချမှု ပရီမီယံကြေး (land Use Premium – LUP) (အစိုးရဌာန / အစိုးရအဖွဲ့ အစည်းပိုင် မြေဌားရမ်းခြင်းဖြစ်ပါက အဌားချထားခြင်းခံရသူထံမှ ငွေသားဖြင့် LUP တောင်းခံပါမည်။)
တစ်ဧကနှုန်း: -

၉။ မူလမြေဌားရမ်းခွင့်ရှိသူ သို့မဟုတ် မြေအသုံးပြုခွင့် ရသူမှ : သဘောတူပါသည်။
ဌားရမ်းရန် သဘောတူ / မတူ

၁၀။ လျှောက်ထားသည့် မြေ သို့မဟုတ် - ကနဦးနှစ် (၃၀)နှစ် နှင့် (၁၀) နှစ်သက်တမ်းတိုး (၂) ကြိမ် အဆောက်အအုံ ဌားရမ်း / အသုံးပြုခွင့်သက်တမ်း

၁၁။ စက်မှုဇုန် ၊ ဟိုတယ်ဇုန် ၊ ကုန်သွယ်ရေးဇုန် မွေးမြူရေးလုပ်ငန်းအတွက် အသုံးပြုခွင့်ပေးသောမြေ
အစရှိသည့် သက်ဆိုင်ရာ လုပ်ငန်းဇုန်ဧရိယာ.....
အတွင်းရှိမြေ ဟုတ်/မဟုတ် (ဇုန်ကိုဖော်ပြရန်)

ပုံစံ (၇ - က)

လျှောက်ထားသူလက်မှတ်
အမည် ဦးဒိန်ယိန်း
ရာထူး Promoter
ဌာန / ကုမ္ပဏီ တံဆိပ် Myanmar Bright Prospect International Logistics Co.Ltd

Form (7-A)

Application form for Land Rights Authorization

To,

Chairman
Myanmar Investment Commission

Reference No: : MBPL / MIC / 2020 (002)
Date. : : 17 - 6 - 2020

Subject: **Application for Land Lease or land Rights Authorization to be invested**

I do hereby apply with the following information for permit to lease the land or permit to use the land according to the Myanmar Investment Rules 116: -

1. Particulars relating to Owner of land / building

(a) Name of owner/organization	-	U Ding Ying
(b) Area	-	84 Acres(339,936.24 Sqm) Out of total 550 Acres (2,225,773 Sqm)
(c) Location	-	Holding No.1049,1050,1544,1829,1844, 2,1846,2463,1848,1823,325, ../2562, Block No 560 – Ah Lel Dwein Kwin, Block No 561 – Kyauk Sal Kwin, Block No 562 – Tha Dwell Laung Cha Kwin, Ah Lel Dwein Village Tract, Kyauk Pyu Township, Kyauk Pyu District,Rakhine State.
(d) Initial period permitted to use the land (Validity of land grant)	-	
(e) Payment of long term lease as equity	-	Yes ( ) No (✔)
(f) Agreed by Original Lessor	-	Yes (✔) No ( )
(g) Type of Land	-	

2. Lessor

(a) Name / Company's name/ Department/ organization	-	U Ding Ying
(b) National Registration Card No	-	1/ Ma Ka Na (N) 048388
(c) Address	-	No.150/B, New University Avenue Road, Bahan Township, Yangon.

3. Lessee

(a) Name / Company's name /Department/ Organization	-	Myanmar Bright Prospect International Logistics Co.Ltd
(b) National Registration Card No / Passport No.	-	Registration No.113671505
(c) Citizenship	-	Incorporated in Myanmar
(d) Address	-	No.150/B, New University Avenue Road, Bahan Township, Yangon.

Form (7-A)

4. Particulars of the proposed Land Lease

(a) (a) Type of Investment	- Farming and Production of shrimp
(b) Investment Location(s)	- Holding No.1049,1050,1544,1829,1844, 2,1846,2463,1848,1823,325, ../2562, Block No 560 – Ah Lel Dwein Kwin, Block No 561 – Kyauk Sal Kwin, Block No 562 – Tha Dwell Laung Cha Kwin, Ah Lel Dwein Village Tract, Kyauk Pyu Township, Kyauk Pyu District,Rakhine State.
(c) Location(Ward, Township, State/Region)	- Holding No.1049,1050,1544,1829,1844, 2,1846,2463,1848,1823,325, ../2562, Block No 560 – Ah Lel Dwein Kwin, Block No 561 – Kyauk Sal Kwin, Block No 562 – Tha Dwell Laung Cha Kwin, Ah Lel Dwein Village Tract, Kyauk Pyu Township, Kyauk Pyu District,Rakhine State.
(d) Area of Land	- 84 Acres(339,936.24 Sqm) Out of total 550 Acres (2,225,773 Sqm)
(e) Size and Number of Building (s)	- 3,698,552.85 Sqft (with attach) - Building 51
(f) Value of Building	- US$ 2.653 Million

5. To enclose land ownership and Land Grant , ownership evidences (except Industrial Zone) ,Land map and Land Lease Agreement(Draft)

6. Whether it is sub-leased from the following person in regarding to Land Lease or not-

- Person who has the rights to use the land or Building of the Government from Government Department and Organization in accordance with the national laws.

- Authorized Person to get the Sub License or Sub Lease of the building or land owned by the Government in accordance with the permission of the Government department and Organization.

7. Land / Building lease rate (per square meter per year) – US$ 0.01765 /per Sq meter/per year

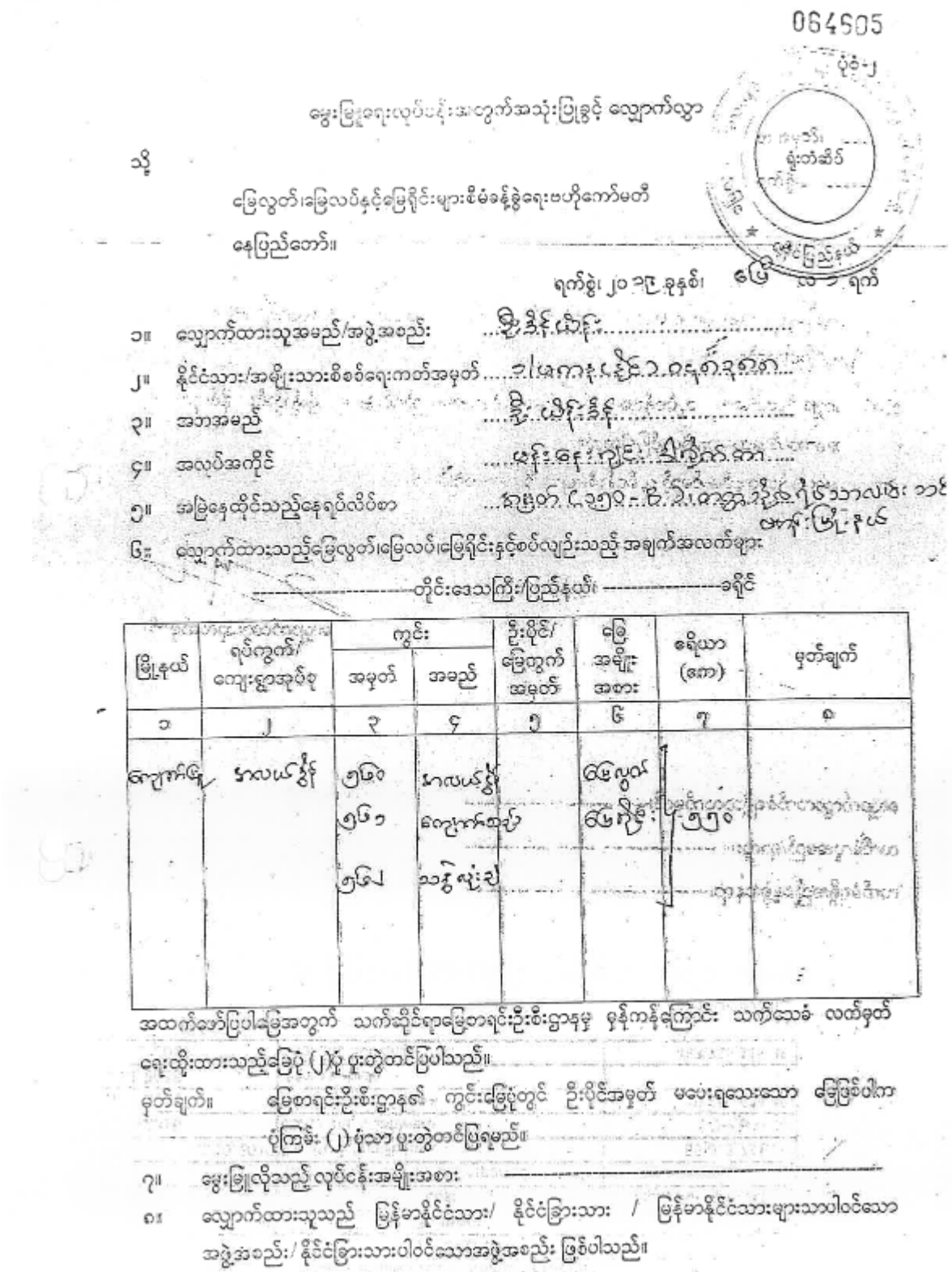
Form (7-A)

8. Land Use Premium – (LUP) (If it is leased from the land belonged to Government Department / Organization, the LUP shall be paid in cash by the lessee.)
   Rate per Acre: **Nil**
9. Whether it is agreed by original land lessor or land tenant not: **Agreed**
10. Proposed land or building use/lease period - Initial 30 Years (Extendable and Renewable for another 10 years 2 times)
11. Whether it is the land located မွေးမြူရေးလုပ်ငန်းအတွက် အသုံးပြုခွင့်ပေးသောမြေ
    in the relevant business zone .....
    area such as Industrial Zone, ...
    Hotel Zone, Trade Zone and etc .....
    or not (To describe Zone)

Signature

Name of Investor U Ding Ying
Designation Promoter
Department/Company Myanmar Bright Prospect International Logistics Co.Ltd
(Seal/Stamp)

Appendix 4- Land Use Permit



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ပုံစံ-၂

မွေးမြူရေးလုပ်ပန်းအလွှာကိုအသုံးပြုခွင့် လျှောက်လွှာ

သို့

မြေလွတ်၊မြေလပ်နှင့်မြေရိုင်းများစီမံခန့်ခွဲရေးဗဟိုကော်မတီ

နေပြည်တော်။

ရက်စွဲ၊ ၂၀ ၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီ လ ၂၈ ရက်

၁။ လျှောက်ထားသူအမည်/အဖွဲ့အစည်း ...မြို့ဦးနိုင်ယိန်း.....

၂။ နိုင်ငံသား/အဖျိုးသားစိစစ်ရေးကတ်အမှတ် ...၁၂/မကန(နိုင်)၀၀၄၈၈၃...

၃။ အဘအမည် ...ဦးမြင့်နိုင်...

၄။ အလုပ်အကိုင် ...မွေးမြူရေးလုပ်ငန်း...

၅။ အမြဲနေထိုင်သည့်နေရပ်လိပ်စာ ...အမှတ် ၄၁၅၃-၆၊ ၁၂ လမ်း၊ တာမွေ မြို့သစ် ၁၁ ရပ်ကွက်၊ မော်လမြိုင်မြို့

၆။ လျှောက်ထားသည့်မြေလွတ်၊မြေလပ်၊မြေရိုင်းနှင့်စပ်လျဉ်းသည့် အချက်အလက်များ

----------တိုင်းဒေသကြီး/ပြည်နယ်၊ ----------ခရိုင်

မြို့နယ်	ရပ်ကွက်/ကျေးရွာအုပ်စု	ကွင်း		ဦးပိုင်/မြေတွက်အမှတ်	မြေအမျိုးအစား	ဧရိယာ (ဧက)	မှတ်ချက်
		အမှတ်	အမည်				
၁	၂	၃	၄	၅	၆	၇	၈
ကျောက်ဖြူ	အလယ်ခွံ	၅၆၀	အလယ်ခွံ		မြေလွတ်		
		၅၆၁	ကျောက်ဆည်		မြေကိုင်း	၂၅၅၀	
		၅၆၂	သစ်ပလုံးချ				

အထက်ဖော်ပြပါမြေအတွက် သက်ဆိုင်ရာမြေစာရင်းဦးစီးဌာနမှ ဓနိုကန်ကြောင်း သက်သေခံ လက်မှတ်ရေးထိုးထားသည့်မြေပုံ (၂)ပုံ ပူးတွဲတင်ပြပါသည်။

မှတ်ချက်။ မြေစာရင်းဦးစီးဌာန၏ ကွင်းမြေပုံတွင် ဦးပိုင်အမှတ် မပေးရသေးသော မြေဖြစ်ပါက ပုံကြမ်း (၂) ပုံသာ ပူးတွဲတင်ပြရမည်။

၇။ မွေးမြူလိုသည့် လုပ်ငန်းအမျိုးအစား ----------

၈။ လျှောက်ထားသူသည် မြန်မာနိုင်ငံသား/ နိုင်ငံခြားသား / မြန်မာနိုင်ငံသားများသာပါဝင်သော အဖွဲ့အစည်း/ နိုင်ငံခြားသားပါဝင်သောအဖွဲ့အစည်း ဖြစ်ပါသည်။

၁။ မြေလွှတ်၊ မြေလပ်နှင့် မြေရိုင်းများ စီမံခန့်ခွဲရေး ဥပဒေ၊ နည်းဥပဒေများပါ စည်းကမ်းချက်များနှင့် ဗဟိုကော်မတီမှ သတ်မှတ်သည့် စည်းကမ်းများကို လိုက်နာပါမည်။

၁၀။ သတ်မှတ်ထားသော အာမခံကြေးငွေကို ပေးသွင်းပါမည်။

၁၁။ ကောက်ခံမည့် မြေခွန်များကို သတ်မှတ်ကာလအတွင်း ပေးသွင်းပါမည်။

၁၂။ တည်ဆဲဥပဒေနှင့်အညီ ဖွဲ့စည်းတည်ဆောင်ထားသော အဖွဲ့အစည်း ဖြစ်ပါသည်။ အဖွဲ့အစည်း တည်နေရာ၊ မှတ်ပုံတင်အမှတ်၊ မှတ်ပုံတင်သည့်နေ့စွဲနှင့် အသင်းသားဦးရေစာရင်းတို့ကို ပူးတွဲ တင်ပြပါသည်။

၁၃။ လျှောက်ထားသော လုပ်ငန်းအတွက် လုံလောက်သောမတည်ငြိမ်းခွင့် ရှိကြောင်း ခိုင်လုံသော အထောက်အထားပူးတွဲတင်ပြပါသည်။

၁၄။ အခြားဝင်အထည်မြောမည့် လုပ်ငန်းစီမံချက်ကို ပူးတွဲတင်ပြပါသည်။

လျှောက်ထားသူလက်မှတ်

လျှောက်လွှာလက်ခံရရှိသူလက်မှတ်၊

လက်ခံသူအမည်/ရာထူး၊

လက်ခံရရှိသည့်နေ့စွဲ/နေရာ၊

Appendix5- Form 13

ပုံစံ-၁၃

မြေလွှတ်၊ မြေလပ်နှင့် မြေရိုင်းများစီမံခန့်ခွဲရေးဗဟိုကော်မတီ

မွေးမြူရေးလုပ်ငန်းအတွက် အသုံးပြုခွင့်ပေးသော ခွင့်ပြုမိန့်

လုပ်ငန်းစာတွဲအမှတ် --၉၀/ ဧလ/------ ၂၀၁၈ - ၂၀၁၉ ------ ခုနှစ်၊ မှတ်ပုံတင်စာရင်း စာအုပ်တွင် ၂၀၁၉---- ၂၀၂၀---- ခုနှစ် အမှတ်စဉ် ----၈၇---- အဖြစ် ရေးသွင်းပြီး။

အောက်ပါဖေးယားတွင် ဖော်ပြသောကေ ---၅၅၀.၀၀--- ခန့်ရှိ မြေလွတ်၊ မြေလပ်နှင့် မြေရိုင်းကို ကျောဘက်တွင် ဖော်ပြထားသည့် စည်းကမ်းချက်များနှင့်အညီ ---ရန်ကုန်--- တိုင်းဒေသကြီး/ ပြည်နယ်၊ ---အရှေ့ဘက်ပိုင်း----ခရိုင်---ဗဟန်း----- မြို့နယ်၊----- အမှတ်(၁၅၀-B)၊ တတ္တဆိုလ်မိုင်ဆော လမ်းသစ် ---- ရပ်ကွက်/ ကျေးရွာနေ ဦး----ယိန်းဒိန်---၏ သား/သမီး ဦး/ဒေါ်/ အဖွဲ့အစည်း ---ဒိန်ထိန်း ---- အား ---- ငါး/ ၀၇၆ ---မွေးမြူရန် (၂၀၂၀ မှ ၂၀၅၀ ထိ) နှစ်ပေါင်း (၃၀) နှစ် လုပ်ပိုင်ခွင့်ပြု လိုက်သည်။

အသုံးပြုခွင့်ပြုသည့် မြေလွတ်၊ မြေလပ်၊ မြေရိုင်းနှင့်စပ်လျဉ်းသည့် အချက်အလက်များ

---ရန်ကုန်--- တိုင်းဒေသကြီး/ပြည်နယ်၊ ---ကျောက်ဖြူ---ခရိုင်၊ ----ကျောက်ဖြူ---- မြို့နယ်

ရပ်ကွက်/ ကျေးရွာအုပ်စု	ကွင်း		ဦးဝိုင်/ မြေကွက် အမှတ်	ဧရိယာ		* နယ်နိမိတ်
	အမှတ်	အမည်		ဧက	ဒသမ
၁	၂	၃	၄	၅	၆	၇
အလယ်ခွိန်	၅၆၀ ၅၆၀ ၅၆၂	အလယ်ခွိန် ကျောက်ဆည် သဘွဲလောင်းချ	၁၀၄၉၊ ၁၀၅၀၊ ၁၀၄၄၊ ၁၀၄၅၊ ၁၀၄၆၊ ၂၊ ၁၀၄၈၊ ၂၄၆၃၊ ၁၀၄၈၊ ၁၀၂၃၊ ၃၂၅၊ --- ၂၄၆၂	၅၅၀ ၅၅၀	၀၀ ၀၀	သက်သေခံမြေပုံ အတိုင်း

ကျပြီးဆက်မြေတိုင်းတာပုံးဧသောအခါ ဧရိယာအပြောင်းအလဲရှိနိုင်ပါကြောင်း ၂ ခု

* သက်သေခံမြေပုံရှိလျှင် "သက်သေခံမြေပုံအတိုင်း" ဟု ရေးပါ။

စည်းကမ်းချက်များ

၁။ မည်သည့်မွေးမြူရေးလုပ်ငန်းအတွက် ——— **ငါး/ ပုစွန်မွေးမြူရန်** ———
အသုံးပြုရန် ခွင့်ပြုခြင်း။

၂။ အသုံးပြုခွင့်ပြုသည့် မြေလွတ်၊ မြေလပ်၊မြေရိုင်းဧရိယာအနက် တစ်နှစ်လျှင်အနည်းဆုံးမည်မျှမွေးမြူ လုပ်ကိုင်ရမည်ဟုသတ်မှတ်ခြင်း

ပထမနှစ်	———— ၅၂.၅၀
ဒုတိယနှစ်	———— ၁၆၅.၀၀
တတိယနှစ်	———— ၁၆၅.၀၀
စတုတ္ထနှစ်	———— ၁၃၇.၅၀

၃။ ခွင့်ပြုထားသည့်မြေကို သတ်မှတ်ထားသော လုပ်ငန်းမှအပ အခြားလုပ်ငန်း **မလုပ်ကိုင်ရ၊ အကယ်၍** ပြောင်းလဲလုပ်ကိုင်လိုလျှင် ကြိုတင်ခွင့်ပြုချက်ရယူရမည်။

၄။ သတ်မှတ်ထားသော အာမခံကြေးကို ပေးသွင်းရမည်။

၅။ မိမိလုပ်ကိုင်ခွင့် ရရှိသည့် မြေအတွက် သတ်မှတ်ထားသော **မြေခွန်ကို သတ်မှတ်ကာလအတွင်း** အပြေအကျေ ပေးဆောင်ရမည်။

၆။ ခွင့်ပြုထားသည့်မြေပေါ်တွင် လုပ်ကိုင်ရမည့် လုပ်ငန်းကို သတ်မှတ်ထားသော အချိန်အတွင်း **ပြီးစီး** အောင်လုပ်ကိုင်ရမည်။ အကယ်၍ သတ်မှတ်ထားသည့် ကာလအတွင်း မူလတင်ပြထားသော လုပ်ငန်းအစီအစဉ်အတိုင်း ဆောင်ရွက်ခြင်းမရှိပါက တင်သွင်းထားသော အာမခံကြေးကို နိုင်ငံတော် ဘဏ္ဍာငွေအဖြစ် လိုအပ်သလို သိမ်းယူခြင်းခံရမည့်အပြင် လုပ်ပိုင်ခွင့်၊ အသုံးပြုခွင့် **ပေးထားသော** မြေကို ပြန်လည်သိမ်းယူခြင်းခံရမည်။

၇။ ခွင့်ပြုထားသည့်မြေကို ပြည်ထောင်စုအစိုးရအဖွဲ့၏ ခွင့်ပြုချက်မရရှိဘဲ ရောင်းချခြင်း၊ ပေါင်နှံခြင်း၊ ပေးကမ်းခြင်း၊ အငှားချထားခြင်း၊ အခြားနည်းဖြင့် လွှဲပြောင်းခြင်း သို့မဟုတ် ခွဲစိတ်ခြင်းမပြုရ။

၈။ မွေးမြူရေးအတွက် ခွင့်ပြုထားသော မြေကို မွေးမြူရေးနှင့် ယင်းမွေးမြူရေးနှင့် ဆက်နွယ်လျက်ရှိသော စီးပွားရေးလုပ်ငန်းများအတွက်သာ အသုံးပြုရမည်။

၉။ ခွင့်ပြုချက်ရယူထားသော လုပ်ငန်းမှအပ မြေပေါ်မြေအောက်ရှိ **အခြားသယံဇာတပစ္စည်းများ**ကို ထုတ်ယူခြင်းမပြုရ။

၁၀။ ခွင့်ပြုထားသော မြေအတွင်း သယံဇာတပစ္စည်းများနှင့် ရှေးဟောင်းယဉ်ကျေးမှု အမွေအနှစ်များ တွေ့ရှိ၍ ပြည်ထောင်စုအစိုးရအဖွဲ့က လိုအပ်လျှင် ခွင့်ပြုထားသော မြေအနက် လိုအပ်သည့် မြေဧရိယာကို ပြန်လည်သိမ်းယူသည့်အခါ ပြည်ထောင်စုအစိုးရအဖွဲ့၏ ညွှန်ကြားချက်အတိုင်း ပြန်လည်အပ်နှံရမည်။

၁၁။ ခွင့်ပြုထားသောမြေအတွင်း နိုင်ငံတော်၏အကျိုးငှာ အခြေခံအဆောက်အဦ စီမံကိန်း သို့မဟုတ် အထူးစီမံကိန်းလုပ်ငန်းများ ဆောင်ရွက်ရန် လိုအပ်ခြင်းအတွက် ခွင့်ပြုထားသောမြေအနက် လိုအပ်မည့် မြေဧရိယာကို ပြန်လည်သိမ်းယူသည့်အခါ ပြည်ထောင်စုအစိုးရအဖွဲ့၏ ညွှန်ကြားချက်အတိုင်း ပြန်လည်အပ်နှံရမည်။

၁၂။ လုပ်ပိုင်ခွင့်၊ အသုံးပြုခွင့်ရရှိပြီးနောက် ဆက်လက်လုပ်ကိုင်အသုံးပြုနိုင်ခြင်းမရှိပါက ဗဟိုကော်မတီသို့ ပြန်လည်အပ်နှံရမည်။

၁၃။ မြေလွတ်၊ မြေလပ်နှင့် မြေရိုင်းများ စီမံခန့်ခွဲရေးဗဟိုကော်မတီ၏ (၁၃ - ၃ - ၂၀၂၀)ရက်နေ့ အစည်းအဝေးအမှတ်စဉ်(၂၃ / ၂၀၂၀) ဆုံးဖြတ်ချက်အမှတ် ——(၈)—— အရ လက်မှတ်ရေးထိုး ထုတ်ပေးခြင်းဖြစ်ပါသည်။

စာအမှတ်၊ ၁၉/ မလရ-၁၆ (၁၃ ဂ /၂၀၂၀)
ရက်စွဲ၊ ၂၀၂၀ ပြည့်နှစ်၊ ဧပြီလ (၈) ရက်

ဥက္ကဋ္ဌ/ အတွင်းရေးမှူး
မြေလွတ်၊မြေလပ်နှင့်မြေရိုင်းများစီမံခန့်ခွဲရေးဗဟိုကော်မတီ

ဖြန့်ဝေခြင်း

- ဦးဒိန်ယိန်း၊
- အမှတ်(၁၅၁-B)၊ တက္ကသိုလ်ရိပ်သာလမ်းသစ်၊ ဗဟန်းမြို့နယ်။

မိတ္တူကို

- ဥက္ကဋ္ဌ၊ ရန်ကုန်ပြည်နယ်မြေလွတ်၊ မြေလပ်နှင့် မြေရိုင်းများစီမံခန့်ခွဲရေးကော်မတီ၊
- ညွှန်ကြားရေးမှူးချုပ်၊ လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့် စာရင်းအင်းဦးစီးဌာန၊
- ပြည်နယ်လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့် စာရင်းအင်းဦးစီးဌာန၊ ရန်ကုန်ပြည်နယ်၊
- ခရိုင်လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့် စာရင်းအင်းဦးစီးဌာန၊ ကျောက်ဖြူခရိုင်၊
- မြို့နယ်လယ်ယာမြေစီမံခန့်ခွဲရေးနှင့် စာရင်းအင်းဦးစီးဌာန၊ ကျောက်ဖြူမြို့နယ်၊
- ရုံးလက်ခံ။

Appendix 6- Cover Letter from Fishery Department

နိုက်ပျိုးရေးမွေးမြူရေးနှင့်ဆည်မြောင်းဝန်ကြီးဌာန
ခ ရိုင် ငါး လုပ် ငန်း ဦး စီး ဌာ န၊ကျောက် ပြု မြို့
စာအမှတ်၊ငလ / ကဖ- ၂၄ / ၂၀၁၉(၁၄၃ / ၁၆၄)
ရက် စွဲ ၊ ၂၀၁၉ ခုနှစ်၊ ဒီဇင်ဘာလ(၁၂) ရက်

သို့

ပြည်နယ်ဦးစီးဌာနမှူး
ပြည်နယ်ငါးလုပ်ငန်းဦးစီးဌာန
စစ်တွေမြို့။

အကြောင်းအရာ။ ။ မြေလွတ်၊မြေလပ်၊မြေရိုင်း များအား အခြားနည်းဖြင့် အသုံးပြု ခွင့် လျှောက်ထားလာခြင်းအား ကွင်းဆင်းစစ်ဆေး တွေ့ရှိ ချက် များအား တင်ပြခြင်း။

ရည် ညွှန်း ချက်။ ။ရခိုင်ပြည်နယ်ငါးလုပ်ငန်းဦးစီးဌာန၊စစ်တွေမြို့၏(၆-၁၂-၂၀၁၉) ရက်စွဲပါစာအမှတ်၊ငလ-ရ/ပန-ထွေ/၂၀၁၉(၄၇၂)

၁။ အဆက်အကြောင်းအရာပါကိစ္စနှင့်ပါတ်သက်၍ မြေလွတ်၊မြေလပ်နှင့်မြေရိုင်း များအား ငါး/ပုစွန်မွေးမြူရန်အတွက် အခြားနည်းဖြင့် အသုံးပြုခွင့်ပြုပါရန် လျှောက်ထား လာသော ဦးဒိန်းယိန်း ၊ ၁/မကန(နိုင်)၀၄၈၃၈ ကိုင်ဆောင်ထားသူသည် ကျောက်ပြုမြို့ နယ် ၊ အလယ်ခွိန်ကျေးရွာအုပ်စု၊ကွင်းအမှတ် (၅၆၀-၅၆၁) အလယ်ခွိန်ကွင်း၊ကျောက်ဆည် ကွင်း ၊အဝတောင်ကျေးရွာအုပ်စုရှိ ကွင်းအမှတ်(၅၆၂) သဘွဲလောင်းချကွင်း မြေလွတ်၊မြေရိုင်း (၅၅၀)ကေအား EIA / SIA များထိခိုက်မှုရှိ/မရှိ ရည်ညွှန်းစာဖြင့် စစ်ဆေးရေးအဖွဲ့ ဖွဲ့စည်းပြီး သဘောထားမှတ်ချက် ပြန်ကြားပေးပါရန် အကြောင်းကြားလာပါသည်။

၂။ ကွင်းဆင်းစစ်ဆေးရေးအဖွဲ့အနေဖြင့် (၁၂-၁၂-၂၀၁၉)ရက်နေ့တွင် အဆိုပါ ကျေးရွာများသို့ ကွင်းဆင်းပြီးစစ်ဆေးခဲ့ရာအဆိုပါ မြေလွတ်နှင့်မြေလပ် မြေရိုင်းများအား ငါး/ပုစွန်မွေးမြူရန် အတွက် လျှောက်ထားလာသည့်ဧရိယာ (၅၅၀)ဧကသည် မြေလွတ်

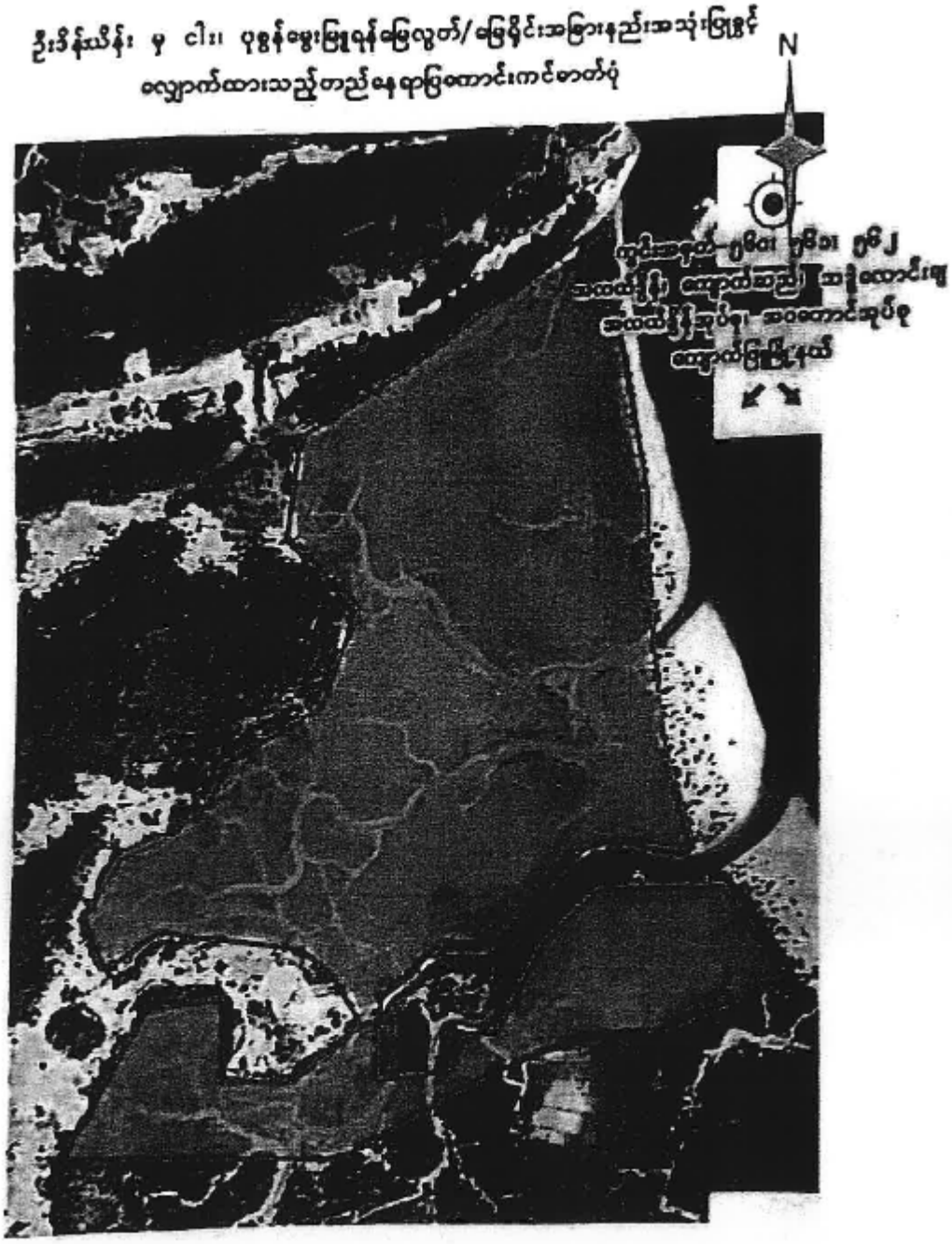
မြေရိုင်း အမှန်တစ်ကယ် ဖြစ်ပြီး ကျေးရွာလူထုများမှလည်း သဘောတူကြောင်းသိရှိရပါ၍ ဒေသခံအကျိုးစီးပွါးအားလုံး လည်း ထိခိုက်မှုမရှိပါသဖြင့် ၎င်း မြေလွတ် မြေရိုင်း အား အခြားနည်းဖြင့် အသုံးပြုခွင့် ပြုသင့်ပါကြောင်း ကွင်းဆင်းခါတ်ပုံမှတ်တမ်းများ ပူးတွဲလျက်တင်ပြအပ်ပါသည်။

(အဖွဲ့ဝင်)	(အဖွဲ့ဝင်)	(အဖွဲ့ခေါင်းဆောင်)
(ကြည်ဝင်း)	(ခင်ခင်ရွှေ)	(ဦးထွန်းသိန်း)
မြို့နယ်ဦးစီးဌာနမှူး	မြို့နယ်ဦးစီးဌာနမှူး	ခရိုင်ဦးစီးဌာနမှူး
မာန်အောင်မြို့	ရမ်းမြမြို့	ကျောက်ဖြူမြို့

မိတ္တူကို-

-စစ်ဆေးရေးအဖွဲ့ဝင်များအားလုံး( )

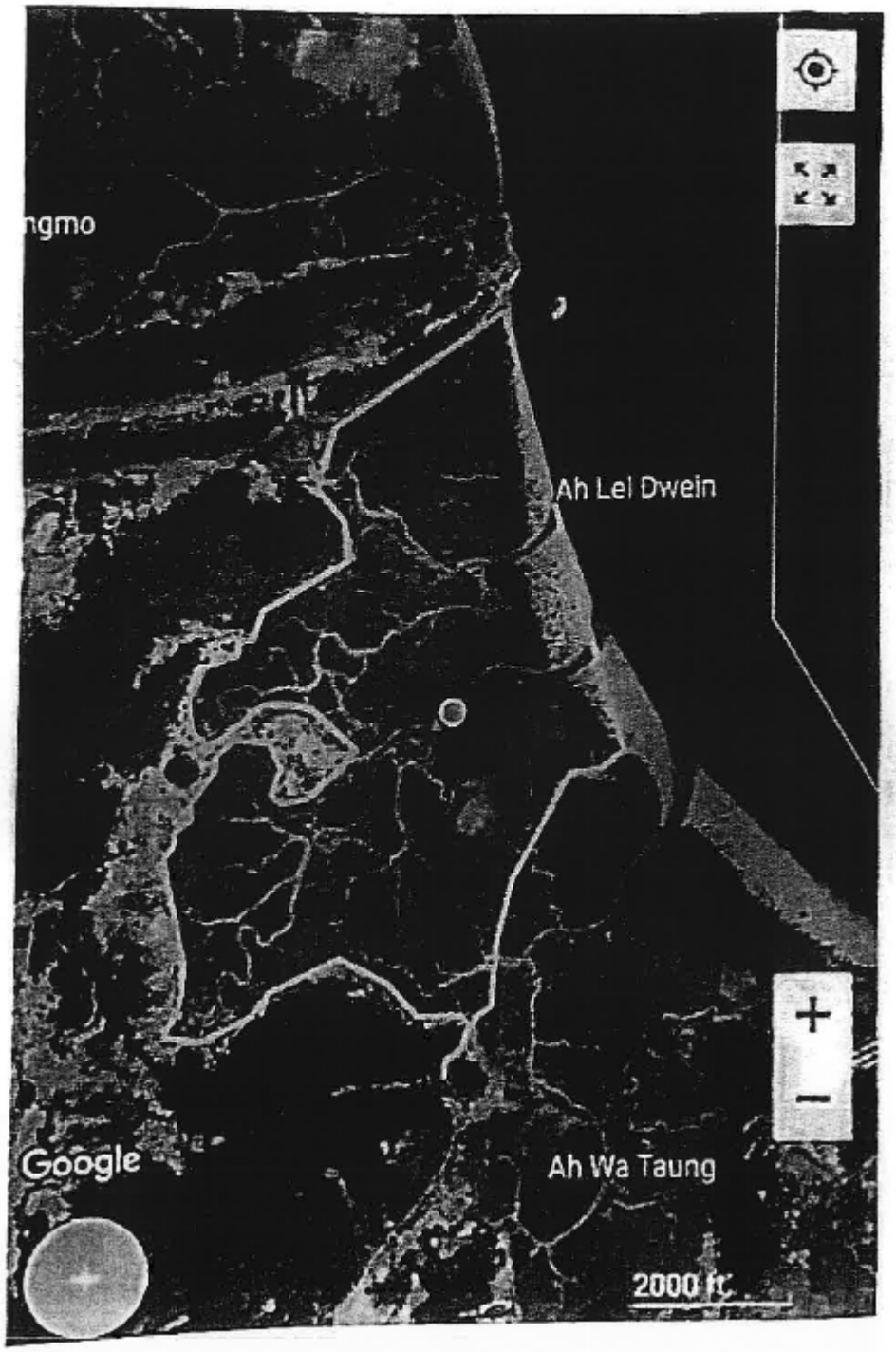
-ရုံးလက်ခံ/မျှောစာတွဲ။



လျှောက်ထားမြေ –

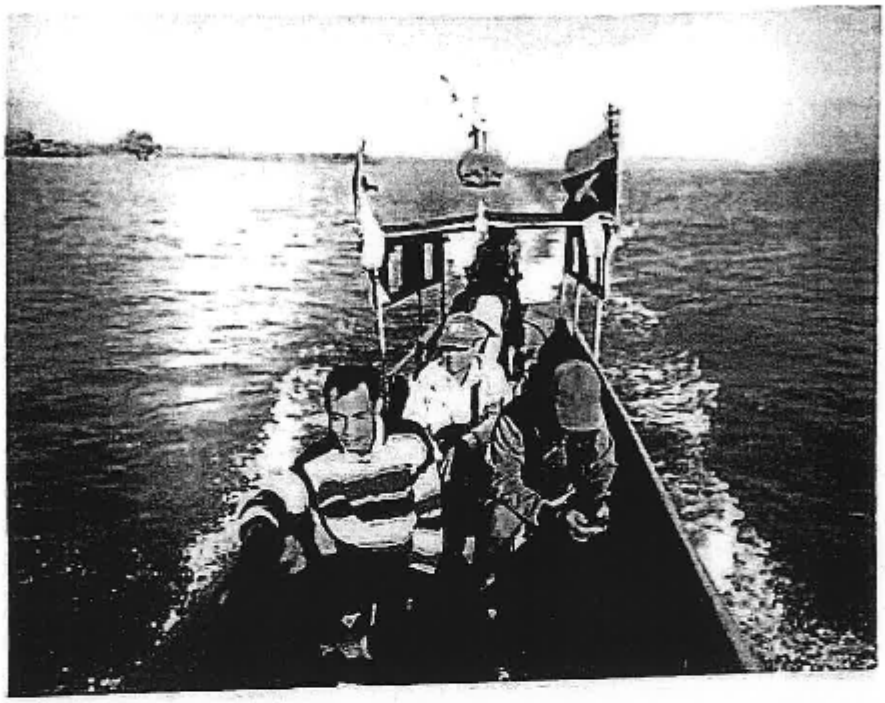
လျှောက်ထားမြေဧရိယာ – (၅၅၀.၀၀)ဧက

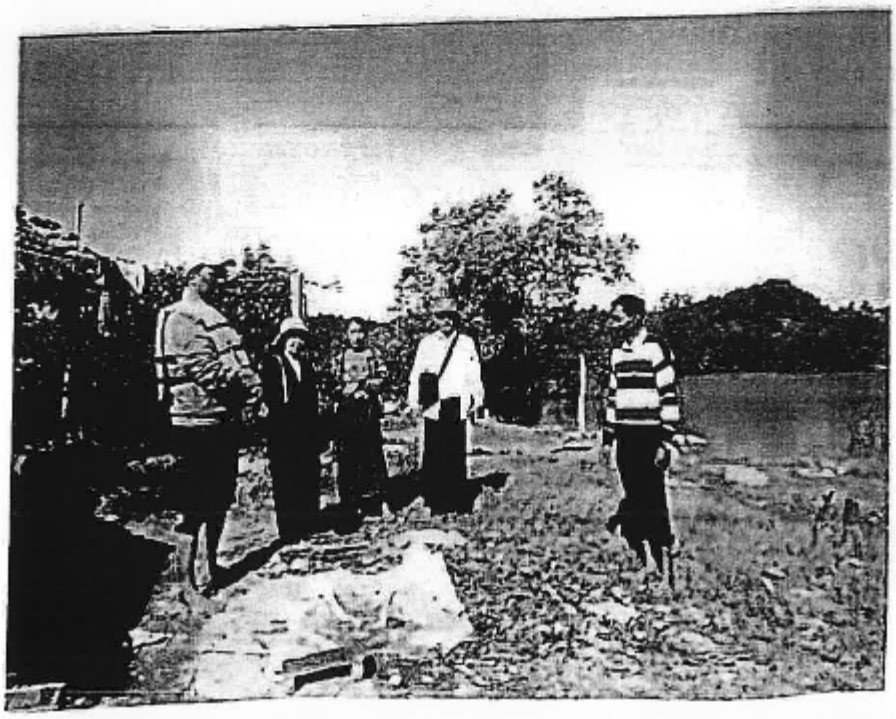
(၁၂-၁၂-၂၀၁၉) နေ့ ဦးဒိန်းယိန်းမှ ငါး ပုစွန်မွေးမြူရန် မြေလွတ်/မြေရိုင်း အခြားနည်းအသုံးပြုခွင့်
လျှောက်ထားသည့်မြေနေရာအား ကွင်းဆင်းစစ်ဆေးမှုမှတ်တမ်း



(၁၂-၁၂-၂၀၁၉) နေ့ ဦးဒိန်းယိန်းမှ ငါး ပုစွန်မွေးမြူရန် မြေလွတ်/မြေရိုင်း အခြားနည်းအသုံးပြုခွင့်
လျှောက်ထားသည့်မြေနေရာအား ကွင်းဆင်းစစ်ဆေးမှုမှတ်တမ်း

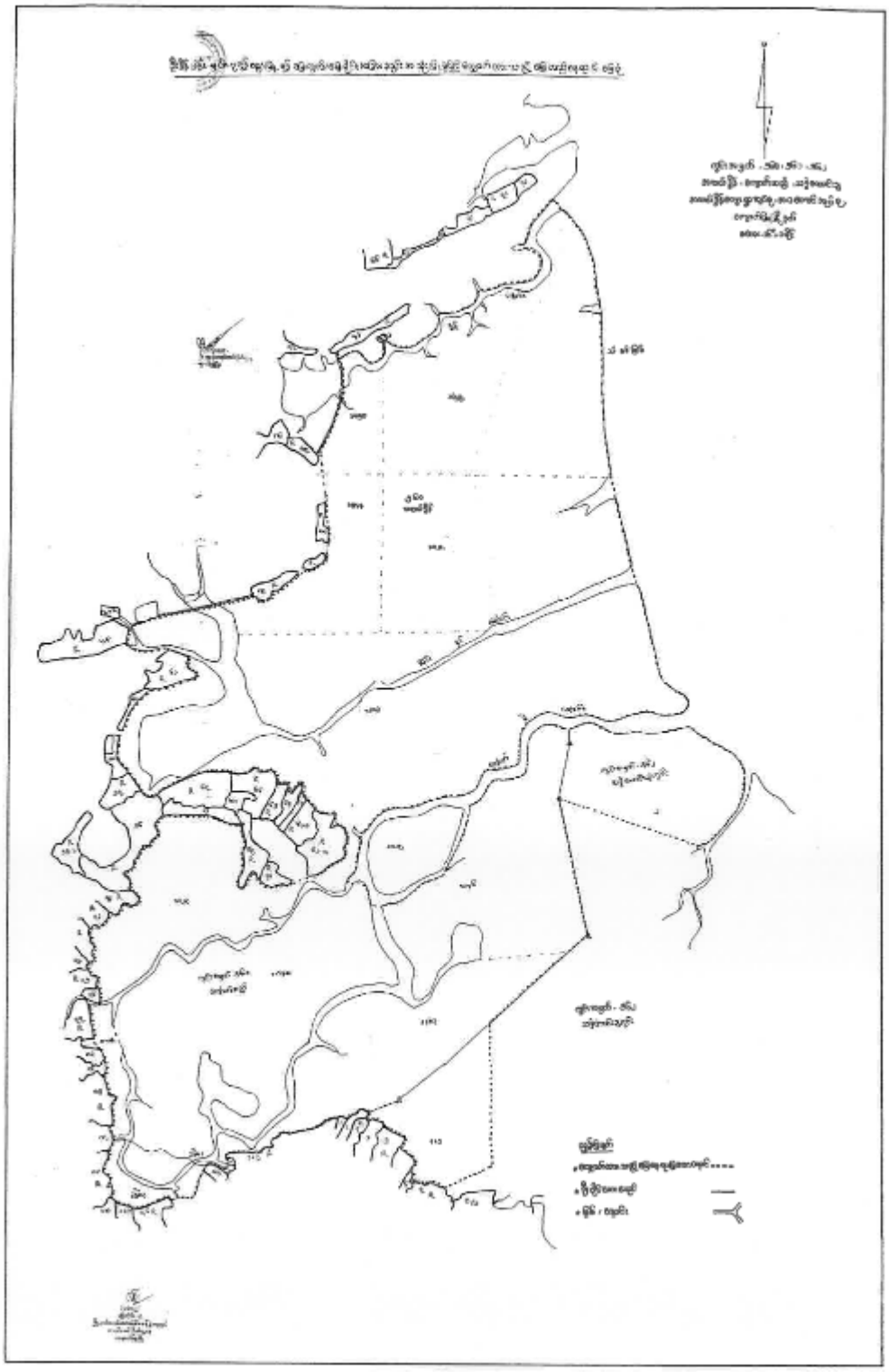
(၁၂-၁၂-၂၀၁၉) နေ့ ဦးဒိန်းယိန်းမှ ငါး၊ ပုစွန်မွေးမြူရန် မြေလွတ်/မြေရိုင်း အခြားနည်းအသုံးပြုခွင့်
လျှောက်ထားသည့်မြေနေရာအား ကွင်းဆင်းစစ်ဆေးရန်သွားရောက်မှုမှတ်တမ်း

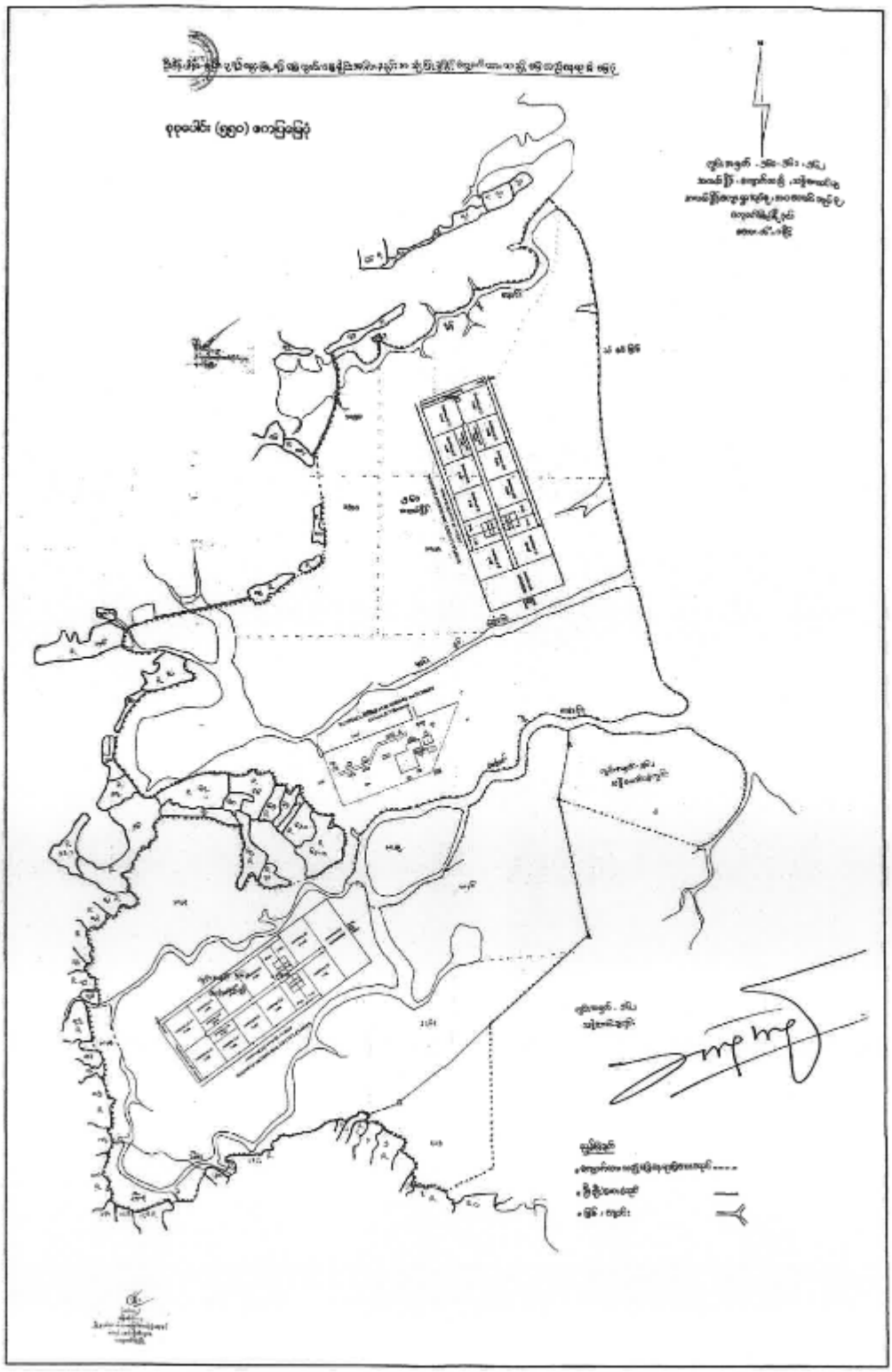


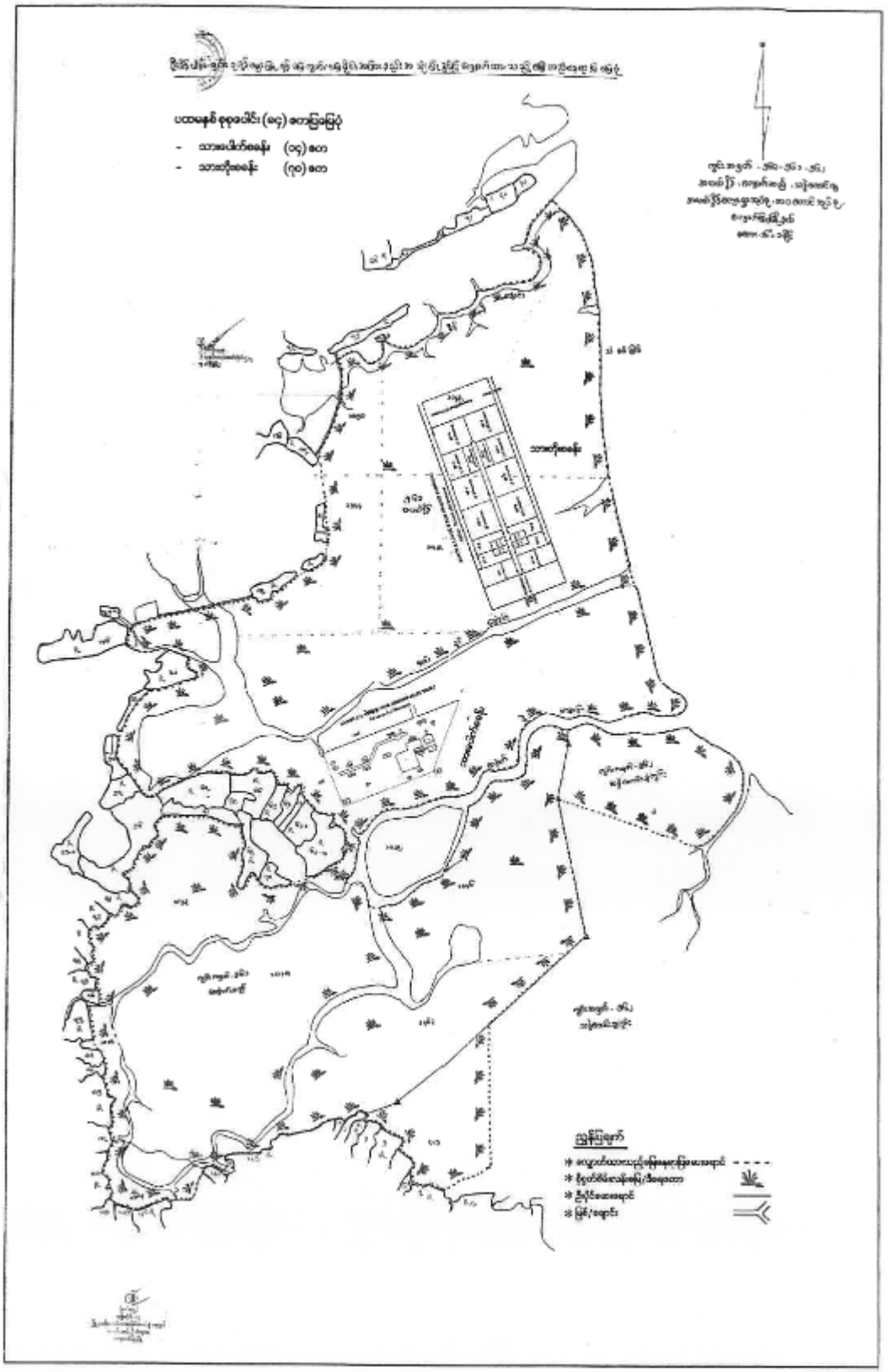


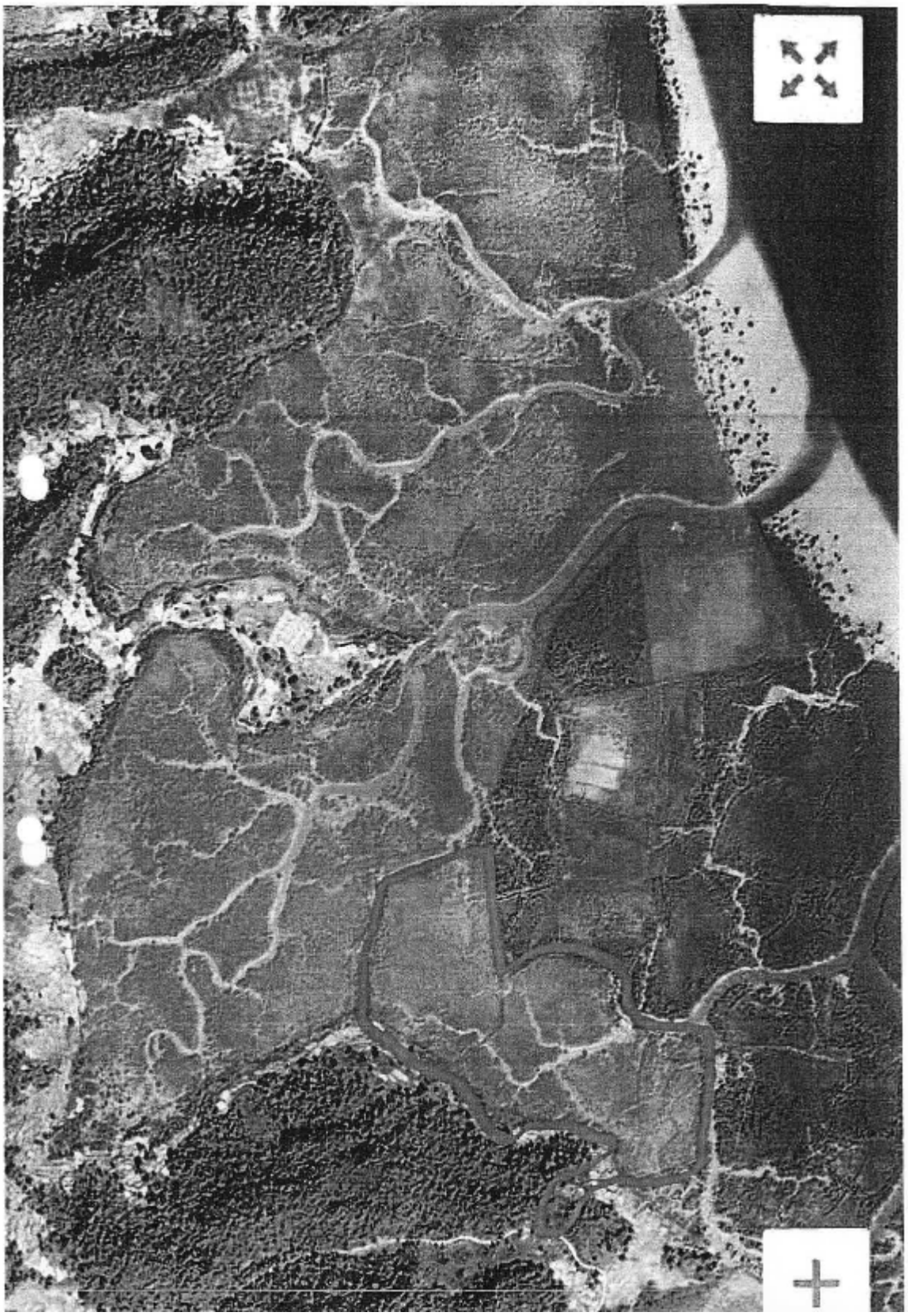
(၁၂-၁၂-၂၀၁၉) ရေ. ဦးဒိန်းယိန်းမှ ငါး၊ ပုစွန်မွေးမြူရန် မြေလွတ်/မြေရိုင်း အခြားနည်းအသုံးပြုခွင့်
လျှောက်ထားသည့်မြေနေရာအား ကွင်းဆင်းစစ်ဆေးမှုမှတ်တမ်း

Appendix 7- Maps of the Project









Appendix 8- Fire Fighting Plan

Myanmar Bright Prospect International Logistics Co.,Ltd

- မီးဘေးကာကွယ်မှုနှင့် မီးငြိမ်းသတ်မှု အစီအမံများ။
- လုပ်ငန်းခွင်သာယာရေး ၊ ဝန်ထမ်းသက်သာချောင်ချိရေးအတွက် ဆောင်ရွက်ထားရှိရမည့် အစီအစဉ်အား တင်ပြခြင်း။
- Corporate Social Responsibility (CSR)
- ပုဇွန်မွေးမြူရေးလုပ်ငန်းများဆိုင်ရာ ဆိုးကျိုးနဲ့သက်ရောက်နိုင်မှု အခြေနေများ
- လိုက်နာဆောင်ရွက်ရန်အချက်များ

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ပီးဘေးကာကွယ်မှုနှင့် ပီးငြိမ်းသတ်မှု အစီအမံများ

ကျွန်တော်တို့ Myanmar Bright Prospect International Logistics Co.,Ltd အနေဖြင့် ပီးဘေးအွန္တရာယ်မဖြစ်စေရေးအတွက် အောက်ပါအစီအမံများ ကြိုတင်ကာကွယ်တားဆီးမှုများ ပြုလုပ်ထားမည်ဖြစ်ပါသည်။

(၁) ပီးသတ်ဆေးဗူးများအား အဆောင်အတွင်းနံရံများတွင် ချိတ်ဆွဲထားရှိခြင်း ၊ Fire Alarm System များတပ်ဆင်ထားရှိခြင်း။

(၂) အမှိုက်သရိုက်လောင်စာများကို ပုံမှန် ရှင်းလင်းခြင်း။

(၃) လောင်စာဆီပေါ်များကို ရေကန်ငယ်များ ပြုလုပ်၍ အနီးအနားတွင်ထားရှိရန် စီစဉ်ခြင်း။

(၄) အလျဉ်းသင့်သလို ဝန်ထမ်းများကို အရန်ပီးသတ်သင်တန်းများ တက်ရောက်စေရန် စီစဉ်ထားခြင်း။

(၅) လျှပ်စစ်နှင့်ပတ်သက်သည့် အွန္တရာယ်များမဖြစ်ပေါ်အောင်လည်း ဆောင်ရွက်ထား ရှိခြင်း။

(၆) အကြောင်းအမျိုးမျိုးကြောင့် ပီးလောင်ကျွမ်းမှုဖြစ်ပါက အချိန်မီ စနစ်တကျငြိမ်း သတ်သွားနိုင်ရန်။

Best Regards
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Appendix 9- Occupational Health and Safety Plan

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Myanmar Bright Prospect International Logistic Co.,Ltd

လုပ်ငန်းခွင်သာယာရေး ၊ ဝန်ထမ်းသက်သာချောင်ချိရေးအတွက် ဆောင်ရွက်ထားရှိရမည့် အစီအစဉ်အားတင်ပြခြင်း

ကျွန်တော်တို့ Myanmar Bright Prospect International Logistic Co.,Ltd အနေဖြင့် လုပ်ငန်းခွင်သာယာရေးအတွက်

(က) အရာရှိအိပ်ဆောင် (ရေအိမ် ၊ ရေချိုးခန်း) တွဲလျှက်ပါ (၁၆ ပေ x ၁၆ ပေ) ရှိအခန်း (၆) ခန်း ဆောက်လုပ်ထားရှိပါမည်။

(ခ) ဝန်ထမ်းအိပ်ဆောင် (၁၀ ပေ x ၁၅ ပေ) ရှိ (၆)ခန်းတွဲတစ်ဆောင် နှင့် တစ်ခန်းလျှင် (၉ ပေ x ၁၅ ပေ) ရှိ (၇) ခန်းတွဲတစ်ဆောင် ဆောက်လုပ်ထားရှိပါမည်။

(ဂ) ၂၄ နာရီဝန်ဆောင်မှုပေးသော ဆေးမှူးနှင့် ဆေးပေးခန်းရှိပါမည်။

ဝန်ထမ်းသက်သာချောင်ချိရေးအတွက် အောက်ပါအတိုင်းဆောင်ရွက်ထားရှိမည် ဖြစ်ပါသည်။

(က) ပုစွန်များအစာကျွေးရန်နှင့် ပုစွန်ကန်အမြွေစောင့်ကြည့်စစ်ဆေးရန် လိုအပ်သောကြောင့် အလုပ်ချိန်ကို နံနက် (၉ ၊၀၀)နာရီမှ ညနေ (၅ ၊ ၀၀) အထိ တစ်ဆိုင်း နှင့် ည (၉ ၊ ၀၀)နာရီမှ နံနက် (၅ ၊ ၀၀) အထိ တစ်ဆိုင်း သတ်မှတ်ထားပါမည်။

(ခ) အားလပ်ရက်အဖြစ် အပတ်စဉ် တနင်္ဂနွေနေ့ နှင့် နိုင်ငံတော်အစိုးရ၏ ရုံးပိတ်ရက်များအား သတ်မှတ်ထားပါသည်။

(ဂ) ဆုကြေးအဖြစ် (၁)နှစ်လျှင် (၁)ကြိမ် အလုပ်ဆင်းရက်မှန်ဆု ၊ အလုပ်ကြိုးစားမှုဆု ၊ လုပ်သက် အကြာဆုံးဆုများပေးရန် သတ်မှတ်မည်ဖြစ်ပါသည်။

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Appendix 10- Corporate Social Responsibility

MBPL | **Myanmar Bright Prospect International Logistics Co.,Ltd**

Corporate Social Responsibility (CSR) of "Myanmar Bright Prospect International Logistics Co.,Ltd "

Myanmar Bright Prospect International Logistics Co.,Ltd ၏ နှစ်စဉ် အမြတ်ငွေမှ ၂ % ကို ပြည်သူအကျိုးတိုးတက်ကောင်းမွန်စေရေးအတွက် အသုံးပြုရန် ရည်ရွယ်ပါသည်။

(၁) ရန်ပုံငွေ၏ (၄၀%) လုပ်ငန်းတည်ရှိရာ ကျောက်မြို့နယ်တွင် စာသင်ကျောင်းများနည်းပါးခြင်း၊ လမ်းဘံတားများ မဖွံ့ဖြိုးခြင်းကြောင့် မိမိတို့လုပ်ငန်းမှ ရရှိသည့် နှစ်စဉ်အမြတ်ငွေ မှ ကျေးရွာများမှ ကျောင်းများသို့သွားသည့် လမ်းများအား ခင်းပေးခြင်း၊ စာသင်ကျောင်းအသစ်များ ဆောက်လုပ်ခြင်း၊ လက်ရှိစာသင်ကျောင်းများ ဖွံ့ဖြိုးရေးအတွက် ဆောင်ရွက်ခြင်း လုပ်ငန်းများတွင် သုံးစွဲရန် ရည်ရွယ်ပါသည်။

(၂) ရန်ပုံငွေ၏ (၆၀%) ရပ်ရွာနေပြည်သူများ ကျန်းမာရေးအတွက်ပညာပေးခြင်း၊ ကျန်းမာရေး စစ်ဆေးပေးခြင်း၊ ကျန်းမာရေးစောင့်ရှောက်ရေးလုပ်ငန်းများဆောင်ရွက်ခြင်း၊ ကျန်းမာရေး အသိပညာ တိုးပွားလာစေရန် ဟောပြောပွဲများ ကျင်းပခြင်းတို့ကို သက်ဆိုင်ရာမြို့နယ်၊ ကျေးရွာကျန်းမာရေးမှူးများနှင့် ညှိနှိုင်းဆောင်ရွက်ထားရန် ရည်ရွယ်ပါသည်။

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Appendix 11- Disadvantages of Shrimp Farming

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ပုစွန်မွေးမြူရေးလုပ်ငန်းများဆိုင်ရာ ဆိုးကျိုးနဲ့သက်ရောက်နိုင်မှုအခြေအနေများ

ပုစွန်မွေးမြူထုတ်လုပ်မှုနည်းပညာသည်ကမ္ဘာတစ်ဝှမ်းရှိပုစွန်မွေးမြူရေးလုပ်ငန်းဖွံ့ဖြိုးတိုးတက်လာ စေခဲ့သည်။ပုစွန်မွေးမြူရေးလုပ်ငန်းမရှိပါကစားသုံးသူများ၏ပုစွန်ဝယ်လိုအားကိုမဖြည့်ဆည်းနိုင်ခြင်း ကြောင့်တောရိုင်းပုစွန်အရင်းအမြစ်များအပေါ်ဖိအားများပြားလာမည်ဖြစ်သည်။

ပုစွန်အများဆုံးထုတ်လုပ်သည့်အပူပိုင်းဒေသရာသီဥတုတွင် ဈေးကွက်တင်နိုင်သည့်အရွယ်ပုစွန်မွေးရန် ခန့်မှန်းခြေအားဖြင့်သုံးလမှခြောက်လခန့်ကြာပြီး အများစုသည်တစ်နှစ်လျှင် ၂ ကြိမ် မှ ၃ ကြိမ်အထိ မွေးမြူကြသည်။
ပုစွန်မွေးမြူရေးခြံများမှအော်ဂဲနစ်စွန့်ပစ်ပစ္စည်းများ။ ဓာတုပစ္စည်းများ နှင့်ပဋိဇီဝဆေး များသည်မြေအောက်ရေနှင့်ကမ်းရိုးတန်းမြစ်ဝများသို့စည်မ်းစေနိုင်သည်။ ကန့်များမှဆားများ သည်မြေအောက်ရေနှင့်စိုက်ပျိုးရေးမြေများထဲသို့ပါ ဝင်နိုင်သည်။ ၎င်းသည်ရေရှည်ဂေဟစနစ်ကို ဖြစ်ပေါ်စေပြီး စိုစွတ်သောဂေဟစနစ်၏ အခြေခံအုတ်မြစ်ဖြစ်သောဇလဗေဒ ပြောင်းလဲမှုကို ပြောင်းလဲစေသည်။

ပုစွန်မွေးမြူခြင်း၏အကျိုးဆက်အားဖြင့် estuarine ဂေဟစနစ်အပေါ်သဘာဝ ပတ်ဝန်းကျင်ဆိုင်ရာ ဆိုးကျိုးများဖြစ်ပေါ်လာနိုင်သည့်အလားအလာရှိသည်။ ပုစွန်မွေးမြူရေးခြံများ ဆောက်လုပ်ခြင်းကြောင့် ရေစုန်မြေများပျက်စီးခြင်း (wetland destruction)၊ ပုစွန်ကန့်မထွက်ရှိသည့်စွန့်ထုတ်သည့် အညစ်အကြေးများကြောင့် မြစ်ဝှမ်းဂေဟစနစ်များအား အာဟာရအလွန်အကွဲဖြည့်တင်းခြင်း၊ မွေးမြူရေးခြံများမှလွတ်မြောက်သည့် ပုစွန်ထုတ်များသည် ဓာတိပုစွန်ထုပ်များ၏ ဇီဝညစ်ညမ်းမှု ဖြစ်စေခြင်း၊ estuarine ဂေဟစနစ်အပေါ် ပုစွန်မွေးမြူရေးခြံများမှထွက်ရှိသည့် ဓာတုပစ္စည်းများ သက်ရောက်ခြင်း။

Best Regards

U Ding Ying
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Appendix 12- Commitments

MBPL | **Myanmar Bright Prospect International Logistics Co.,Ltd**

လိုက်နာဆောင်ရွက်ရန်အချက်များ

၁။ ရေစုန်မြေများပျက်စီးခြင်း (wetland destruction) မဖြစ်စေရန်တင်းကျပ်သောစည်းကမ်းများ ချမှတ်ခြင်း။

၂။ စွန့်ပစ်ပစ္စည်းထုတ်လွှတ်မှု လျှော့ချခြင်း။ မွေးမြူထားသည့်ပုစွန်များ လွတ်မြောက်မှုကာကွယ်ခြင်းနည်းပညာနှင့်သန့်ရှင်းလတ်ဆတ်သောပုစွန်များမွေးမြူသိုလှောင်ခြင်း။

၃။ water conservation and screening technology ရေထိန်းသိမ်းစောင့်ရှောက်ရေးနှင့် စိစစ်နည်းပညာမှ တဆင့် estuarine biota ဝင်ရောက်မှုလျော့နည်းစေခြင်းနှင့်

၄။ ပုစွန်မွေးမြူရေးလုပ်ငန်းတွင်ဓာတုဗေဒ အသုံးပြုမှုကိုထိန်းညှိခြင်း ။

၅။ သယ်ဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီး ဌာနမှ ထုတ်ပြန်ထားသည့်လမ်းညွှန်ချက်များ နှင့် အခြံနှိပ်စက်ကြားချက်များအတိုင်း လိုက်နာဆောင်ရွက်ခြင်း။

၆။ ပုဇွန်မွေးမြူရေးကန်များမှ ရေများပြင်ပချောင်း၊ မြစ်များ နှင့် ရေအိုင်များဆီသို့မရောက်ရှိသွားစေဖို့ရန် ခိုင်မာထူထပ်ပြီး၊ မြင့်မားသည့်ရေထိန်းနံရံ (သို့) အတားအဆီးမြေသားနံရံဘောင်များအား ခေတ်မီအင်ဂျင်နီယာနည်းပညာရပ်နှင့်အညီ တည်ဆောက်ထားရှိစေခြင်း။

Best Regards
U Ding Ying
Promoter
Myanmar Bright Prospect International Logistics Co.,Ltd

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Appendix 13- MIC Proposal

MBPL | **Myanmar Bright Prospect International Logistics Co.,Ltd**

No.....
Date.....

ဥက္ကဋ္ဌ

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

ရန်ကုန်မြို့၊

ရက်စွဲ။ ။ ၂၀၂၀ ပြည့်နှစ် နိဝင်ဘာလ ( ) ရက်

အကြောင်းအရာ။ ။ Myanmar Bright Prospect International Logistics Co.,Ltd ရေနံ ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်းဆောင်ရွက်ရန်အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ (၁၄/၂၀၂၀) ကြိမ်မြောက်အစည်းအဝေး ဆုံးဖြတ်ချက်အရ လိုက်နာဆောင်ရွက်သွားမည်ဖြစ်ပါကြောင်း တင်ပြခြင်း၊

ရည်ညွှန်းချက် ။ ။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ ၂၀၂၀ ပြည့်နှစ် နိဝင်ဘာလ ၆ ရက်စွဲပါ စာအမှတ် ၊ မရက-၂ / ခ - ၀၇၂ /၂၀၂၀ (၂၉၁)

Myanmar Bright Prospect International Logistics Co.,Ltd သည် ဦးပိုင်အမှတ် ၁၀၄၉၊ ၁၀၅၀၊ ၁၅၄၄၊ ၁၈၂၉၊ ၁၈၄၄၊ ၂၊ ၁၈၄၆၊ ၂၄၆၃၊ ၁၈၄၈၊ ၁၈၂၃၊ ၃၂၅၅ ../၂၅၆၂ ၊ ကွင်းအမှတ် ၅၆၀ - အလယ်ဒွိန်ကွင်း ၊ ကွင်းအမှတ် ၅၆၁ - ကျောက်ဆည်ကွင်း ၊ ကွင်းအမှတ် ၅၆၂ - သဒ္ဓါလောင်းချကွင်း ၊ အလယ်ဒွိန်ကျေးရွာအုပ်စု ၊ ကျောက်ဖြူမြို့နယ် ၊ ကျောက်ဖြူခရိုင် ၊ ရခိုင်ပြည်နယ်ရှိ မြေဧရိယာ (၅၅၀) ဧက အနက်မှ မြေဧရိယာ (၈၄) ဧက (၃၃.၇ ဟက်တာ) တွင် ရေနံ ပုစွန် မွေးမြူ ထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း စီမံကိန်း ရင်းနှီးမြှုပ်နှံလုပ်ငန်း ဆောင်ရွက်ရန်အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ တင်ပြခဲ့ပါသည် ။ အထက်ရည်ညွှန်းချက်ပါစာအရ ဒီရေတောကာကွယ်ရေးနှင့် ဖွံ့ဖြိုးစေရန်အတွက် ဒီရေတောဧရိယာများကို ချန်လှပ်၍ လုပ်ငန်းအကောင် အထည်ဖော်ဆောင်ရွက်သွားမည်ဖြစ်ပြီး မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ အစည်းအဝေးဆုံးဖြတ်ချက် နှင့် အညီ ကျွန်တော်များကုမ္ပဏီမှ လိုက်နာဆောင်ရွက်သွားမည် ဖြစ်ပါသည်၊

လေးစားစွာဖြင့်

U Ding Yin
The Promoter

Ding Ying
Managing Director
Myanmar Bright Prospect
International Logistics Co., Ltd.(MBPL)

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Appendix 14- MIC Approval

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
အမှတ်(၁)၊ သစ္စာလမ်း၊ ရန်ကင်းမြို့နယ်၊ ရန်ကုန်မြို့

☎ ၀၁-၆၅၈၁၂၇
🖷 ၀၁-၆၅၈၁၃၆

စာအမှတ်၊ မရက-၂/ခ-၀၇၂/၂၀၂၀ (၂၉၇)
ရက်စွဲ ၊ ၂၀၂၀ ပြည့်နှစ် နိုဝင်ဘာလ ၆ ရက်

အကြောင်းအရာ။ **ရခိုင်ပြည်နယ်၊ ကျောက်ဖြူမြို့နယ်တွင် ဖက်စပ်နိုင်ငံခြားရင်းနှီးမြှုပ်နှံမှုဖြင့် Myanmar Bright Prospect International Logistics Co., Ltd. မှ ရေနှင်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း ဆောင်ရွက်ခွင့်ပြုပါရန် အဆိုပြုချက် တင်ပြလာခြင်းကိစ္စ**

ရည်ညွှန်းချက် ။ Myanmar Bright Prospect International Logistics Co., Ltd. ၏ (၇-၇-၂၀၂၀) ရက်စွဲပါ စာအမှတ်၊ MBPL/MIC/2020 (001)

၁။ ဖက်စပ်နိုင်ငံခြား ရင်းနှီးမြှုပ်နှံမှုဖြင့် Myanmar Bright Prospect International Logistics Co., Ltd. မှ ကွင်းအမှတ် (၅၆၀) အလယ်ဒွိန်ကွင်း၊ ကွင်းအမှတ် (၅၆၁) ကျောက်ဆည်ကွင်း၊ ကွင်းအမှတ် (၅၆၂) သဒ္ဒဲလောင်းချကွင်း၊ အလယ်ဒွိန်ကျေးရွာအုပ်စု၊ ကျောက်ဖြူမြို့နယ်၊ ရခိုင်ပြည်နယ်ရှိ မြေ(၈၄)ကေအား ငှားရမ်း၍ ရေနှင်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်းအား မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေနှင့်အညီ ဆောင်ရွက်ခွင့်ပြုပါရန် ရည်ညွှန်းပါစာဖြင့် အဆိုပြုချက် တင်ပြလာပါသည်။

၂။ ယင်းအဆိုပြုချက်အား ၂၀၂၀ ပြည့်နှစ် အောက်တိုဘာလ ၂၈ ရက်နေ့တွင် ကျင်းပသော မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ (၁၄/၂၀၂၀)ကြိမ်မြောက် အစည်းအဝေးသို့ တင်ပြခဲ့ရာ အစည်းအဝေးမှ လုပ်ငန်းအား ဆောင်ရွက်ခွင့်ပြုရန် နှင့် ဒီရေတောကာကွယ်ရေးနှင့် ဖွံ့ဖြိုးစေရန် အတွက် ဒီရေတောဇရိယာများကို ချန်လှပ်၍ လုပ်ငန်း အကောင်အထည်ဖော် ဆောင်ရွက်ရန် ဆုံးဖြတ်ခဲ့ပါသည်။

၃။ သို့ဖြစ်ပါ၍ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ အစည်းအဝေး ဆုံးဖြတ်ချက် နှင့်အညီ လိုက်နာ ဆောင်ရွက်ရန် အကြောင်းကြားပါသည်။

ဦးကျော်ဌ(ကိုယ်စား)
(သန့်စင်လွင်၊ အတွင်းရေးမှူး)

Myanmar Bright Prospect International Logistics Co., Ltd.

မိတ္တူကို
ပြည်ထောင်စုဝန်ကြီးရုံး၊ သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ညွှန်ကြားရေးမှူးချုပ်၊ သစ်တောဦးစီးဌာန
ရုံးလက်ခံ/မျှောစာတွဲ

Appendix 15- Stakeholder Meeting Photos

Presentation by MBPL

Presentation by GOG

U Hlwan Moe Htet (ECD)

U Min Thu (Fire Service Department)

U Kyaw Naing Win (Rakhine Arr Man)

U Kyaw Kyaw Win (Aledwain VT Leader)

Daw Sandar (Department of Labour)

U Nay Soe Khaing (TRNG)

 U Naing Naing Win (Director, CPD Myanmar)	 U Tin Shwe (GAD)
 U Kyaw Myo Naing (Staff Officer, FD)	 **Discussion**

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ တိုခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

Company

အနီးရုမဟုတ်သော အဖွဲ့အစည်းများနှင့် NGOs

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ ( ) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်
၁။					
၂။			။		
၃။			။		
၄။					
၅။					
၆။					
၇။					
၈။					
၉။					
၁၀။					
၁၁။					
၁၂။					

Appendix 16- Stakeholder Meeting Attendee List

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

ဌာနဆိုင်ရာ အဖွဲ့အစည်းများ

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၃၉) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်
၁။	ဦးအိန္ဒာ အုန်းမိုး	ဒဲသောင်းရွာ	ရေနုံးအုပ်ပါ(ကျေးရွာ)	၀၅၂၄၁၁၄၀၀၄၉	
၂။	ဒေါ်သန်းမျိုးဇင်	ဧရာဝတီမော်	ပညာရေးဝန်ထမ်း	၀၅၂၄၁၁၄၀၀၄၉	
၃။	ဒေါ်ခင်ခင်ဆွေ	〃	〃	၀၅ ၂၄၅၄၅၇၂၇	
၄။	ဒေါ်နုနု ခင်ဇော်ဝင်း	〃	〃	၀၅၂၄၀၆၀၆၈၄	
၅။	ဒေါ်ကြည်သဇင်ဘဝင်း	ဒေဘင်ရေမော်	ကျန်းမာရေး	၀၅၂၅၀၃၃၀၇၁၄	
၆။					
၇။					
၈။					
၉။					
၁၀။					
၁၁။					
၁၂။					

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒီနံကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နှယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

ရပ်မိရပ်ဖအေသခံပြည်သူများ (တောင်ပေါ် ကျေးရွာ)

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၉) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်
၁။					
၂။					
၃။					
၄။					
၅။					
၆။					
၇။					
၈။					
၉။					
၁၀။					
၁၁။					
၁၂။					

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

[redacted]

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ ([illegible]) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်
၁။	[illegible]	[illegible]	[illegible]	09-421763[illegible]	[illegible]
၂။					
၃။	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
၄။					
၅။					
၆။					
၇။					
၈။					
၉။					
၁၀။					
၁၁။					
၁၂။					

Appendix 17- Feedback Form

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ခွဲနိုင်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	ဦးကျော်မောင်ဝင်း
	လိပ်စာ	ဒေါက်ဖရား အုပ်ချုပ်ရေးမှူး
	ဆက်သွယ်ရန် ဖုန်း	09405433322
	မှတ်ပုံတင်အမှတ်	

၁။ သဘာဝပတ်ဝန်းကျင်ကို လိုလည်း အကာကွယ်ဆုံးဖြစ်အောင် ကြိုးစား
လုပ်ပါတယ်

၂။ ဒေသခံများကို လိုလည်း အလုပ်အကိုင်ရ၊ စားဝတ်နေရေး တည်ငြိမ်အေးချမ်းတယ်

၃။ ဒေသကို ဖွံ့ဖြိုးတိုးတက်အောင် ဆောင်ရွက်ကြတယ်လို့ ယုံကြည်
တယ်

၄။ အခုလို ဟလပ်ဒေသတဲ့ ကမ္ဘာကြီးကို လည်း ကယ်တင်ကြပါတယ်

လက်မှတ်	
ရက်စွဲ	

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	
လက်မှတ်		
ရက်စွဲ		

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	

ကောင်မောက်ကျေး ရွာ နေ -
ခွဲ:အ သိမ်း:ခွဲ:
၁ မူလတန်းကျောင်း-အလတ်သက်ကြီး-အသွေးအရွဲ့ ရှိသင့်ဆန်းဒီ ရှိတယ်
၂ ပတ်ဝန်းကျင်:အခြေခံပညာ-မိုဘိုင်းမှုန်ဆီ သိပ်ပြီတယ်
၃ ပတ်ဝန်းကျင်-ရေမြေကြီး-အလား:ပြည်သူ့ကျန်း:မာရေး:
အဆေးကြီး-ကျောင်း:ကျီး:-အိုးကျီး:ကြီး-တက်ကြွက်
ဟာရောက်သော-ပရိတ်သတ်အဆေးကား-နာရေး
သိရှိရန် ချင်ပြုရန်ကြစ်တယ်

လက်မှတ်	
ရက်စွဲ	

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	ဦးစောဝင်းစောဝင်း
	လိပ်စာ	ဒဂောဒစော်
	ဆက်သွယ်ရန် ဖုန်း	09459182584
	မှတ်ပုံတင်အမှတ်	
ဒဒေသခံလူမျိုးအား ဖြစ်စေ၊ ဒပေး၊ စေခြင်းဖြင့် ဒဆောင်ရွက်စေပေါ့		
လက်မှတ်		M
ရက်စွဲ		

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏

အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း

(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏

သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	မြို့နယ်ဝန်ကြီးဌာန
	လိပ်စာ	ကောင်းမွန်
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	
		၁၁၀၇၇၇၇
	လက်မှတ်	
	ရက်စွဲ	၉ ၇.၀၇

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏

အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း

(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏

သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	
လက်မှတ်		
ရက်စွဲ		

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒေါ်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	[illegible]
	လိပ်စာ	[illegible]
	ဆက်သွယ်ရန် ဖုန်း	09-[illegible]
	မှတ်ပုံတင်အမှတ်	[illegible]
[illegible]		
လက်မှတ်		
ရက်စွဲ		၅.12.2021

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏

အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း

(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏

သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	
	လက်မှတ်	
	ရက်စွဲ	

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏

အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း

(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏

သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	
	လက်မှတ်	
	ရက်စွဲ	

Appendix 18- Stakeholder Meeting Attendee List

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

ဌာနဆိုင်ရာ အဖွဲ့အစည်းများ — ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၁၀) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ ဌာန	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်	
၁။	ဒေါ်ဖြာရီမွန်း ဦးဦးဝင်း	အဓိကရုံးကွက်၊ ကျောက်တန်းမြို့	Special Branch	09266555554		36.4
၂။	ဦး ဆာဒ်ဂျုံ ဦး	သစ်တော	ဒုတိယ ဦးစီးအရာရှိ	09-459165881		36.5
၃။	ဦး ပုည အုံ	မြို့ပြ	ဒုတိယဦးစီးဌာနမှူး	09-421735180		36.5
၄။	Nang Win	မိုးကုတ်မြို့	CPD Director	77009191 4		36.4
၅။	Nay Soe					36.5
၆။	ဒေါ်ခင်ညွှိမြ	စစ်တောင်းမြို့	ဦးစီးအရာရှိ (DRD)	09250458595		36.4
၇။	ဦးတင်မြင့်နိုင်	မြို့ခံ/ဆက်	ဒါရိုက်တာ - ၂	09421711764		36.4
၈။	ဦးကျော်ဆောင်	ဌာနေ/မူလ	စက်ပြင်ပ	09420120000		36.5
၉။	ဒေါ်စန္ဒာ	အလုပ်သမားဥပဒေကြားရေး	L.O.	09.444032652		36.4
၁၀။	ဦးစောသန်းဦး	ECD	ဗျာဒုယျဦးစီးမှူး	09263243366		36.7
၁၁။	ဦးဆွမ်းမျိုးထက်	ECD	AD	09.4130 87473		36.7
၁၂။	[illegible]	[illegible]	[illegible]	CP 2501261 41		36.5

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

ဌာနဆိုင်ရာ အဖွဲ့အစည်းများ

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၁၀) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်	
၁။	မြို့တော်ဆွန့်ဝေင်	ခရိုင်ကဆွေဆွေပုဒ်မြို့နယ်	လုပ်ကိုင်ရေး	၀၉-၅၂၀၅၆၆၈၇၄		36-7
၂။	နှင်းသစ်ဝေ	ဒဂုံဆိပ်ကမ်း	ခရီးသွားကုမ္ပဏီ	၀၉-၄၆၀၃၁၁၈၆		36-5
၃။						
၄။						
၅။						
၆။						
၇။						
၈။						
၉။						
၁၀။						
၁၁။						
၁၂။						

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

အစိုးရမဟုတ်သော အဖွဲ့အစည်းများနှင့် NGOs

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၁၀) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်	
၁။	Naing Lelin	ဒိုက်ခံဒိပ်	CPD - Director	770091914		36.4
၂။	Khay Soe Khaing	ဘားအုန်းတိုင်	TRNG	094217643 18		36.5
၃။	Keyaw Nway Win	ဘားအုန်း	RSSDO	094254466451		36.5
၄။						
၅။						
၆။						
၇။						
၈။						
၉။						
၁၀။						
၁၁။						
၁၂။						

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏ အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့်
ရေနံပုစွန်မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း၏ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုဆန်းစစ်ခြင်း (EIA) ဆိုင်ရာ အများပြည်သူနှင့်
တိုင်ပင်ဆွေးနွေးခြင်းနှင့် သဘောထားရယူခြင်း အခမ်းအနား (Stakeholder Meeting) နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း (Scoping)
အခမ်းအနားသို့ တက်ရောက်လာသူများ စာရင်း

ရပ်မိရပ်ဖဒေသခံပြည်သူများ

ရက်စွဲ - ၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ (၁၀) ရက်

စဉ်	အမည်	နေရပ်လိပ်စာ	အလုပ်အကိုင်	ဖုန်းနံပါတ်	လက်မှတ်
၁။	ဦး ဇော်ဝင်းကြည်	အလယ်ဒွိန် ရွာအုပ်အိမ်	အလယ်ဒွိန်ရွာအုပ်ဦးစီးဌာနမှ ဝန်ထမ်း	[illegible]	36.3
၂။					
၃။					
၄။					
၅။					
၆။					
၇။					
၈။					
၉။					
၁၀။					
၁၁။					
၁၂။					

Appendix 19- Feedback Form

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာဆုံစုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	[illegible]
	လိပ်စာ	[illegible]
	ဆက်သွယ်ရန် ဖုန်း	09250458595
	မှတ်ပုံတင်အမှတ်	[illegible]
[illegible]		
လက်မှတ်		
ရက်စွဲ		10.11.2022

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည် : မြို့ကဝေဂျင်းမြို့	မြို့ကဝေဂျင်းမြို့
	လိပ်စာ	မန်ကောဒေးကျေးရွာ မြေသူအက်ဆံ ကျေးငယ်အုပ်စု
	ဆက်သွယ်ရန် ဖုန်း	၀၉၄၂၁၇၁၁၇၆၄
	မှတ်ပုံတင်အမှတ်	၁၁/ဖအန(နိုင်)၀၃၂၂၆၄

ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်း၊ ဈေးဝယ်ရေးအတွက် ကြိုဆိုပါသည်။
ကျွန်တော်မြေသည် ခဲဖြူသူများအား အကာ၊ ပြီးအား၊ ပေး၊ အလှမ်းအကွာ အနီးအဝေး၊ ဈေး၊
ကျွဲဆေးရေး၊ ပြီးအလေး၊ ဆေးဝင်ဆေးထုတ်၊ အရုံး၊ ရှုံး၊ ဖျက်စီး၊ မှား၊ သည့် ဒီရေကြောင့်
လို မြင်သည့်အိုင်းမျိုး၊ ပျက်၊ ဒေသခံပြည်သူများ၊ အား ပေးလိုက်၊ လွှတ် ဒုန်း-ဒိုင်း
ဖျား၊ ဖျက်ဒိုင်းမှု ကြိုက်၊ အရေး၊ ဆရာဖိုင် ခေါ်၊ ကျိုး၊ ဖျား၊ ဆေးမိပေါ်ဆေးရုံ၊
အကြပါတယ်။

လက်မှတ်	
ရက်စွဲ	၁၀-၁၂-၂၀၂၁

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	

လက်မှတ်	
ရက်စွဲ	

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	
	မှတ်ပုံတင်အမှတ်	

၁/
၂/
၃/
၄/
၅/

လက်မှတ်	
ရက်စွဲ	

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	ဖုန်းစိုး၊ ခိုင်
	လိပ်စာ	
	ဆက်သွယ်ရန် ဖုန်း	၀၉၊၄၃၁၇၆၃၁၀
	မှတ်ပုံတင်အမှတ်	၁၁/ကမန(နိုင်)၀၅၀၃၅၅

ဒေသခံတွေအနေနဲ့ ဖွံ့ဖြိုးရေး လုပ်ငန်း တွေကိုတော့ ကြိုဆိုကြတာအမှန်ပါ။ အလုပ်အကိုင်အခွင့်အလမ်းတွေ ရှိပေမဲ့၊ တစ်ဘက်မှာလည်း အလုပ်အကိုင်ဖြစ် တွေကြုံတတ်တဲ့အတွက် ပေါ့ပေါ့ဆ ဝင်ရောက်တယ်၊ သို့သော် ဒေသခံ၊ အလုပ်အကိုင် စသဖြင့် ဒေသခံတွေကို ဦးစားပေး ခေါ်ယူပေးဖို့ကိုတော့ ဒေသခံတွေရဲ့ ဖွံ့ဖြိုးရေး လုပ်ငန်းတွေ ပိုတိုးတက်လာစေရန် အကျိုးရှိမယ်လို့ ထင်ပါတယ်။ အကြံပြုတာကတော့ ဒေသခံတွေကို ဦးစားပေး ခေါ်ယူပေးဖို့ပါပဲ။

လက်မှတ်	
ရက်စွဲ	၁၀၀၇၊ ၂၁

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏

အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း

(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏

သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	ဦးမြင့်မြင့်ဦး
	လိပ်စာ	ဒုတိုင်း ပုလဲအိပ် / ကျောက်ဖြူ
	ဆက်သွယ်ရန် ဖုန်း	77009,914 / director@cpdmyanmar.org
	မှတ်ပုံတင်အမှတ်	၁၁/တကဒ (နိ) ၀၀၀၀၀၀

- ၆ဒ၁၁ခ ကယ်ကလိုင် ကဗွင်.ကလမ်း၊ ကို ကမ္ဘာ့ တကယ်
ဖြစ် ဖြောက် ကောင်း ယုယ ဝေလို ပါ၊၁၁ည်။
- ၁၁က၀ ပတ် ဝန်၊ ကွင် ဆိ ဒို ကမ္ဘာ့ ကနဲ့ ကွဲ၊ ဆုံး ဖြစ် ကောင်
ဖောင်ကွက် ဝေလို ပါ၊၁၁ည်။

director@cpdmyanmar.org

လက်မှတ်	
ရက်စွဲ	10. Dec. 2020

Myanmar Bright Prospect International Logistics Co., Ltd (MBPL) ၏
အလယ်ဒွိန်ကျေးရွာအုပ်စုတွင် ဆောင်ရွက်မည့် ရေငန်ပုစွန် မွေးမြူထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
(နယ်ပယ်အတိုင်းအတာသတ်မှတ်ခြင်း) နှင့် ပတ်သက်၍ ဒေသခံပြည်သူလူထု၏
သဘောထားမှတ်ချက်နှင့် အကြံပြုလွှာ

အကြံပြုချက် ရေးသားသူ	အမည်	Kyaw May Win
	လိပ်စာ	Ayaehait Sts
	ဆက်သွယ်ရန် ဖုန်း	09254464451
	မှတ်ပုံတင်အမှတ်	11/kaphama(N) 075321
ဒေသခံတွေရဲ့ သဘောထား ကို အရေးထား ခွင့်ပေး ပြီး local ဒေသ ဝန်းကျင် ပျိုးဆိုင် ဖျင်းစေခြင်း ; Project ကို အကောင်အထည် ဖော်ဆောင် ခွင့်ပြုပါသည်		
လက်မှတ်		
ရက်စွဲ		10 . 12 . 2021

Appendix 20- Water quality results (ISO Laboratory)

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

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WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd
Nature of Water	S3 (စီမံကိန်းဧရိယာအတွင်းရှိရေ)
Location	Project (ကျောက်ဆည်ပိုက်ဆိပ်)၊ ကျောက်ကြမ်း ရှိနိုင်ပြည်နယ်၊
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	19.12.2021

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	8.0		6.5 - 8.5
Colour (True)		TCU	15 TCU
Turbidity		NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	0.3 mg/l
Chloride (as CL)		mg/l	250 mg/l
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	500 mg/l
Total Solids		mg/l	1500 mg/l
Total Suspended Solids	22	mg/l	
Total Dissolved Solids		mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co.,Ltd.)

No.18. Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

ISO 9001:2015 Cert. No. 688600

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

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Issue Date - 01-12-2012
Effective Date - 01-12-2012
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WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	S3 (စီမံကိန်းဧရိယာအတွင်းရှိရေ)
Location	Project (ကျောက်ဆည်ပိုက်ဆိပ်)၊ ကျောက်ဖြူ၊ ရခိုင်မြည့်နယ်၊
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	19.12.2021

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)		mg/l	0.01 mg/l
Nitrate ($N.NO_3$)		mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)	640	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	20	mg/l	
Cyanide (CN)		mg/l	0.07 mg/l
Zinc (Zn)		mg/l	3 mg/l
Copper (Cu)		mg/l	2 mg/l
Calcium (Ca)		mg/l	
Magnesium (Mg)		mg/l	
Silica (SiO_2)		mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

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Signature:
Name: Zaw Hein Oo
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Sr.Chemist
ISO Tech Laboratory

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Signature:
Name: Thinzar Theint Theint
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Assistant Technical Officer
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Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
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Issue Date - 01-12-2012
Effective Date - 01-12-2012
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WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	RW (Downstream)
Location	သံစစ်မြစ်၊ ကျောက်ဖြူ ရခိုင်မြည်နယ်၊
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	19.12.2021

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)		mg/l	0.01 mg/l
Nitrate ($N.NO_3$)		mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)	320	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	10	mg/l	
Cyanide (CN)		mg/l	0.07 mg/l
Zinc (Zn)		mg/l	3 mg/l
Copper (Cu)		mg/l	2 mg/l
Calcium (Ca)		mg/l	
Magnesium (Mg)		mg/l	
Silica (SiO_2)		mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
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Name: Zaw Hein Oo
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Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
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Assistant Technical Officer
ISO Tech Laboratory

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Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

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ISO 9001:2015 Cert. No. 688600

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WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	RW (Downstream)
Location	သံစစ်မြစ်၊ ကျောက်ဖြူ၊ ရခိုင်ပြည်နယ်။
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	19.12.2021

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
pH	8.1		6.5 - 8.5
Colour (True)		TCU	15 TCU
Turbidity		NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	0.3 mg/l
Chloride (as CL)		mg/l	250 mg/l
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	500 mg/l
Total Solids		mg/l	1500 mg/l
Total Suspended Solids	16	mg/l	
Total Dissolved Solids		mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

Remark: This certificate is issued only for the receipt of the test sample.

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Signature:
Name: Zaw Hein Oo
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Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

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Issue Date - 01-12-2012
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WATER QUALITY TEST RESULTS FORM

Client: Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water: S2 (River Water)
Location: သံစစ်မြစ်နှင့်ကျောက်ခွဲမြစ်ဆုံတဲ့နေရာ၊ ကျောက်မြို့ ရခိုင်ပြည်နယ်၊
Date and Time of collection: 12.12.2021
Date and Time of arrival at Laboratory: 13.12.2021
Date and Time of commencing examination: 14.12.2021
Date and Time of completing: 19.12.2021

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.9		6.5 - 8.5
Colour (True)		TCU	15 TCU
Turbidity		NTU	5 NTU
Conductivity		micro S/cm	
Total Hardness		mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness		mg/l as $CaCO_3$	
Magnesium Hardness		mg/l as $CaCO_3$	
Total Alkalinity		mg/l as $CaCO_3$	
Phenolphthalein Alkalinity		mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)		mg/l as $CaCO_3$	
Bicarbonate (HCO_3)		mg/l as $CaCO_3$	
Iron		mg/l	0.3 mg/l
Chloride (as CL)		mg/l	250 mg/l
Sodium Chloride (as NaCL)		mg/l	
Sulphate (as SO_4)		mg/l	500 mg/l
Total Solids		mg/l	1500 mg/l
Total Suspended Solids	14	mg/l	
Total Dissolved Solids		mg/l	1000 mg/l
Manganese		mg/l	0.05 mg/l
Phosphate		mg/l	
Phenolphthalein Acidity		mg/l	
Methyl Orange Acidity		mg/l	
Salinity		ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

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WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	RW (Downstream)
Location	သံစစ်မြစ်နှင့်ကျောက်ခွဲမြစ်ဆုံတဲ့နေရာ၊ ကျောက်မြို့ ရခိုင်ပြည်နယ်။
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	19.12.2021

Results of Water Analysis			WHO Drinking Water Guideline (Geneva - 1993)
Temperature (°C)	25.0	°C	
Fluoride (F)		mg/l	1.5 mg/l
Lead (as Pb)		mg/l	0.01 mg/l
Arsenic (As)		mg/l	0.01 mg/l
Nitrate ($N.NO_3$)		mg/l	50 mg/l
Chlorine (Residual)		mg/l	
Ammonia Nitrogen (NH_3)		mg/l	
Ammonium Nitrogen (NH_4)		mg/l	
Dissolved Oxygen (DO)		mg/l	
Chemical Oxygen Demand (COD)	512	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	18	mg/l	
Cyanide (CN)		mg/l	0.07 mg/l
Zinc (Zn)		mg/l	3 mg/l
Copper (Cu)		mg/l	2 mg/l
Calcium (Ca)		mg/l	
Magnesium (Mg)		mg/l	
Silica (SiO_2)		mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co.,Ltd.)
No.18. Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W1221 281

WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	G5 (သုံးရေကန်)
Location	ကျောက်ဆည်ကျေးရွာ။ ကျောက်မြို့ ရခိုင်ပြည်နယ်။
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	16.12.2021

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.1		6.5 - 8.5
Colour (True)	5	TCU	15 TCU
Turbidity	12	NTU	5 NTU
Conductivity	94	micro S/cm	
Total Hardness	22	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	16	mg/l as $CaCO_3$	
Magnesium Hardness	6	mg/l as $CaCO_3$	
Total Alkalinity	28	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	28	mg/l as $CaCO_3$	
Iron	0.63	mg/l	0.3 mg/l
Chloride (as CL)	4	mg/l	250 mg/l
Sodium Chloride (as NaCL)	7	mg/l	
Sulphate (as SO_4)	Nil	mg/l	500 mg/l
Total Solids	63	mg/l	1500 mg/l
Total Suspended Solids	16	mg/l	
Total Dissolved Solids	47	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	2	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.1	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co.,Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ISO TECH LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E(Delft) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 1 of 1

W1221 280

WATER QUALITY TEST RESULTS FORM

Client	Myanmar Bright Prosett International Logistics Co.,Ltd.
Nature of Water	G4 (Tube Well Water)
Location	တောင်ပေါ်ရွာ၊ ကျောက်ဖြူ ရုံးဝင်ပြည်နယ်၊
Date and Time of collection	12.12.2021
Date and Time of arrival at Laboratory	13.12.2021
Date and Time of commencing examination	14.12.2021
Date and Time of completing	16.12.2021

Results of Water Analysis

			WHO Drinking Water Guideline (Geneva - 1993)
pH	7.2		6.5 - 8.5
Colour (True)	5	TCU	15 TCU
Turbidity	9	NTU	5 NTU
Conductivity	116	micro S/cm	
Total Hardness	18	mg/l as $CaCO_3$	500 mg/l as $CaCO_3$
Calcium Hardness	14	mg/l as $CaCO_3$	
Magnesium Hardness	4	mg/l as $CaCO_3$	
Total Alkalinity	32	mg/l as $CaCO_3$	
Phenolphthalein Alkalinity	Nil	mg/l as $CaCO_3$	
Carbonate ($CaCO_3$)	Nil	mg/l as $CaCO_3$	
Bicarbonate (HCO_3)	32	mg/l as $CaCO_3$	
Iron	0.46	mg/l	0.3 mg/l
Chloride (as CL)	7	mg/l	250 mg/l
Sodium Chloride (as NaCL)	12	mg/l	
Sulphate (as SO_4)	Nil	mg/l	500 mg/l
Total Solids	70	mg/l	1500 mg/l
Total Suspended Solids	12	mg/l	
Total Dissolved Solids	58	mg/l	1000 mg/l
Manganese	Nil	mg/l	0.05 mg/l
Phosphate	Nil	mg/l	
Phenolphthalein Acidity	2	mg/l	
Methyl Orange Acidity	Nil	mg/l	
Salinity	0.1	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by
Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by
Signature:
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

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No.18. Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-73225175, 09-30339681, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

Appendix 21- Water quality results (SGS Laboratory)

ORIGINAL

SGS

Report No. : 21520-00049
Job Ref. : 5000076
Date : 17-Dec-21
Page 1 of 1

TEST REPORT

CLIENT NAME : **MYANMAR BRIGHT PRASETT INTERNATIONAL LOGISTICS COMAPNY LIMITED**

ADDRESS : **HLAING MYINT MO HOUSING**

The following sample was submitted and identified by client and analysed at our lab with the following results.

Sample Description : Than Sit River (Project downstream) (Rakhine, kyaukphyu)
Sampling Date & Time : 12-Dec-21 & 10:30

Sample Condition : Plastic Bottle at Ambient Temperature

Lab Code : W-85

Date Sample(s) Received : 13-Dec-21

Testing Period : 14-Dec-21 TO 15-Dec-21

No.	Test Items	Methods	Results	Units
1	Nitrogen(Kjeldahl)	APHA 4500-NorgB (Macro Kjeldahl Method) (23rd Edition) (In-house Method)	<1	mg/L
2	Phosphorus	APHA 4500-P E (Ascorbic Acid Method) (23rd Edition)	<0.01	mg/L
3	Oil & Grease	APHA 5520 B (Partition-Gravimetric Method) (23rd Edition)	<5	mg/L

********** End of Report **********

MCZ

SGS (Myanmar) Limited
(T[illegible] Thin Maw)
Laboratory Manager

SGS (Myanmar) Limited | Oil, Gas & Chemicals Services, 79/D, Bo Chein Street, 6 ½ Mile, Hlaing Township, Yangon, Myanmar
t +95(1) 654 795, 654 796, 654 864, 654 865 e sgs.myanmar@sgs.com
Member of SGS Group(SGS SA)

ORIGINAL

SGS

Report No. : 21520-00050
Job Ref. : 5000076
Date : 17-Dec-21
Page 1 of 1

TEST REPORT

CLIENT NAME : **MYANMAR BRIGHT PRASETT INTERNATIONAL LOGISTICS COMAPNY LIMITED**

ADDRESS : **HLAING MYINT MO HOUSING**

The following sample was submitted and identified by client and analysed at our lab with the following results.

Sample Description : Than Sit River (Project upstream) (Rakhine, kyaukphyu)
Sampling Date & Time : 12-Dec-21 & 11:00

Sample Condition : Plastic Bottle at Ambient Temperature

Lab Code : W-86

Date Sample(s) Received : 13-Dec-21

Testing Period : 14-Dec-21 TO 15-Dec-21

No.	Test Items	Methods	Results	Units
1	Nitrogen(Kjeldahl)	APHA 4500-NorgB (Macro Kjeldahl Method) (23rd Edition) (In-house Method)	<1	mg/L
2	Phosphorus	APHA 4500-P E (Ascorbic Acid Method) (23rd Edition)	<0.01	mg/L
3	Oil & Grease	APHA 5520 B (Partition-Gravimetric Method) (23rd Edition)	<5	mg/L

********** End of Report **********

M.C.Z

SGS (Myanmar) Limited
(Thin Thin Maw)
Laboratory Manager

SGS (Myanmar) Limited | Oil, Gas & Chemicals Services, 79/D, Bo Chein Street, 6 ½ Mile, Hlaing Township, Yangon, Myanmar
t +95(1) 654 795, 654 796, 654 864, 654 865 e sgs.myanmar@sgs.com
Member of SGS Group(SGS SA)

ORIGINAL

SGS

Report No. : 21520-00051
Job Ref. : 5000076
Date : 17-Dec-21
Page 1 of 1

TEST REPORT

CLIENT NAME : **MYANMAR BRIGHT PRASETT INTERNATIONAL LOGISTICS COMAPNY LIMITED**

ADDRESS : **HLAING MYINT MO HOUSING**

The following sample was submitted and identified by client and analysed at our lab with the following results.

Sample Description : Water from project area
Sampling Date & Time : 12-Dec-21 & 12:00
Sample Condition : Plastic Bottle at Ambient Temperature
Lab Code : W-87
Date Sample(s) Received : 13-Dec-21
Testing Period : 14-Dec-21 TO 15-Dec-21

No.	Test Items	Methods	Results	Units
1	Nitrogen(Kjeldahl)	APHA 4500-NorgB (Macro Kjeldahl Method) (23rd Edition) (In-house Method)	<1	mg/L
2	Phosphorus	APHA 4500-P E (Ascorbic Acid Method) (23rd Edition)	<0.01	mg/L
3	Oil & Grease	APHA 5520 B (Partition-Gravimetric Method) (23rd Edition)	<5	mg/L

********** End of Report **********

M.C.Z

SGS (Myanmar) Limited
(Thin Thin Maw)
Laboratory Manager

SGS (Myanmar) Limited | Oil, Gas & Chemicals Services, 79/D, Bo Chein Street, 6 ½ Mile, Hlaing Township, Yangon, Myanmar
t +95(1) 654 795, 654 796, 654 864, 654 865 e sgs.myanmar@sgs.com
Member of SGS Group(SGS SA)

Appendix 21- CSR Records

မဒေးပညာရေးဖောင်ဒေးရှင်း

MAday

ဂုဏ်ပြုမှတ်တမ်းလွှာ

မဒေးပညာရေးဖောင်ဒေးရှင်းသို့အလှူငွေ ၁၀၀၀၀၀ (ဒါးသိန်း) ကျပ်

ကို ထည့်ဝင်လှူဒါန်းသည့် အလှူရှင် MBBL Co.,Ltd

MD ခိုးမိန်ယဉ်နိုး တို့အား မဒေးပညာရေးဖောင်ဒေးရှင်းမှ

လို့က်လဲစွာ ကျေးဇူးတင်ဝမ်းမြောက်ပါကြောင်း ထာဝရဂုဏ်ပြုမှတ်တမ်းတင်အပ်ပါသည်။

ဥက္ကဋ္ဌ

မဒေးပညာရေးဖောင်ဒေးရှင်း

ရက်စွဲ၊ ၂၀၂၀ ခုနှစ် ဇန်နဝါရီ လ (၃) ရက်


မဒေးကျွန်းကျေးရွာအုပ်စု၊ အုပ်ချုပ်ရေးမှူးရုံး
ကျောက်ဖြူမြို့နယ်
ဂုဏ်ပြုမှတ်တမ်းလွှာ
ကျောက်ဖြူမြို့နယ် ၊ မဒေးကျွန်းကျေးရွာအုပ်စု၊ ပြိန်ကျေးရွာ၊ ကျေးရွာချင်းဆက်လမ်း ပြုပြင်နိုင်ရန်အတွက် Myanmar Bright Prospect International Logistics Co,Ltd (MBPL)၊ မန်နေဂျာ ဦးစော်လင်းဦးမှ အလှူငွေ(၂၀၀၀၀၀၀)ကျပ် (ကျပ်သိန်းနှစ်ဆယ်တိတိ)အား လှူဒါန်းပေးပါသဖြင့် မဒေးကျွန်းကျေးရွာသူ၊ ကျေးရွာသားများကိုယ်စား မဒေးကျွန်းကျေးရွာအုပ်စု၊ အုပ်ချုပ်ရေးမှူးမှ ဂုဏ်ယူဝမ်းမြောက်ပါကြောင်းနှင့်နိုင်ငံအကျိုး၊ ပြည်သူအကျိုးကို ဆထက်ထမ်းပိုးတိုးချဲ့ဆောင်ရွက်နိုင်ပါစေကြောင်းဆုမွန်ကောင်းတောင်းလျက် ဤဂုဏ်ပြုမှတ်တမ်းလွှာဖြင့် ဂုဏ်ပြုအပ်ပါသည်။
အုပ်ချုပ်ရေးမှူးရုံး
ရက်နှံ.....
မဒေးကျွန်းကျေးရွာအုပ်စု ကျောက်ဖြူမြို့နယ်
အုပ်ချုပ်ရေးမှူး
မဒေးကျွန်းကျေးရွာအုပ်စု
ကျောက်ဖြူမြို့နယ်
ရက်ခွဲ၊ ၂၀၁၈ ခုနှစ်၊ ဒီဇင်ဘာလ (၅) ရက်
www.watphaloet.net

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သယ်ဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရခိုင်ပြည်နယ်၊ ကျောက်ဖြူခရိုင်

ဂုဏ်ပြုမှတ်တမ်းလွှာ

၂၀၂၂ ခုနှစ်၊ဇွန်လ ၅ ရက်နေ့၊ ကမ္ဘာ့ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးနေ့အထိမ်းအမှတ်အခမ်းအနားတွင် အထွေထွေသုံးစွဲရန်အတွက် ၃၀၀,၀၀၀/-(ကျပ်သုံးသိန်းတိတိ)အား Myanmar Bright Prospect Internationa Logistics Co;Lt(MBPL) မှ လှူဒါန်းခြင်းအတွက် ဤဂုဏ်ပြုလက်မှတ်ဖြင့် မှတ်တမ်းတင်အပ်ပါသည်။

လက်ထောက်ညွှန်ကြားရေးမှူး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ကျောက်ဖြူခရိုင်

၂၀၂၂ ခုနှစ်၊ ဇွန်လ ၃ ရက်။

မြို့နယ်အဆင့် COVID-19 ကာကွယ်ထိန်းချုပ်ရေးနှင့် အရေးပေါ်တုံ့ပြန်ရေးကော်မတီ

‘‘ ဂုဏ်ပြုမှတ်တမ်းလွှာ ’’

ကျောက်ဖြူမြို့နယ်အတွင်းရှိ ပြည်သူများထံသို့ Covid-19 ရောဂါ (တတိယလှိုင်း) ရောဂါကူးစက်ပြန့်ပွားမှုမှ ကာကွယ်ထိန်းချုပ်နိုင်ရန်နှင့် ကုသနိုင်ရန်အတွက် အောက်စီဂျင် လေထုတ်စက် (၃)လုံး၊ အောက်စီဂျင် လေအိုး (၁၂)လုံး ၊ Oxygen Flow Meter (၁၂)စုံ ၊ အောက်စီဂျင် လေအိတ်(၁၀၀)အိတ် ၊ N 95 Mask (၂၀၀)ခု၊တစ်ခါသုံး Surgical Mask(၁၀၀၀၀)ခုနှင့် PPE ဝတ်စုံ(၂၀၀)တို့ကို လှူဒါန်းပေးပါသော ပါသော Myanmar Bright Prospect International Logistics Co.,Ltd (MBPL) အား မြို့နယ်အဆင့် Covid-19 ထိန်းချုပ်ရေးနှင့် အရေးပေါ်တုံ့ပြန်ရေးကော်မတီမှ ဤဂုဏ်ပြုမှတ်တမ်းလွှာဖြင့် မှတ်တမ်းတင် ဂုဏ်ပြုအပ်ပါသည်။

ဥက္ကဋ္ဌ(ကိုယ်စား)
မြို့နယ် Covid-19 ထိန်းချုပ်ရေးနှင့်
အရေးပေါ်တုံ့ပြန်ရေးကော်မတီ
ကျောက်ဖြူမြို့

ရက်စွဲ၊ ၂၀၂၁ ခုနှစ်၊ ဩဂုတ်လ(၁၃)ရက်

Government of the Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation
Environmental Conservation Department
Rakhine State , KyaukPhyu District

Certificate of Honour

We would like to pay tribute to the Myanmar Bright Prospect International Logistics(MBPL) Co; Ltd. for its support to Cash 300,000/- (Three Hundred Thousand Kyats) of Ceremony for 10th Anniversary of establishing ECD.

Assistant Director
Environmental ConservationDepartment
KyaukPhyu District

14th October 2022

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရခိုင်ပြည်နယ်၊ ကျောက်ဖြူခရိုင်

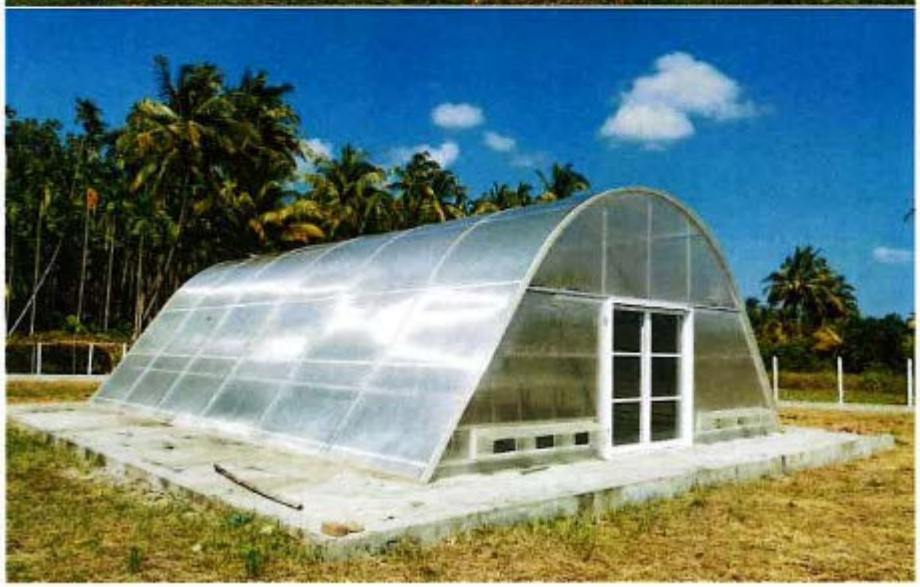
ဂုဏ်ပြုမှတ်တမ်းလွှာ

၂၀၂၁ - ၂၀၂၂ ဘဏ္ဍာနှစ်အတွင်း ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ ဦးဆောင်ဖွင့်လှစ်သော ဒေသအဆင့် ရာသီဥတုပြောင်းလဲမှု ခံနိုင်ရည်ရှိစေရေး စွမ်းဆောင်ရည်တည်ဆောက်ခြင်းဆိုင်ရာသင်တန်းတွင်လိုအပ်သောအထွေထွေ ကိစ္စရပ်များအားသုံးစွဲရန်အတွက် Myanmar Bright Prospect International Logistics Co; Ltd. မှ ကျပ်- ၅၀၀,၀၀၀/- လှူဒါန်းခြင်းအတွက် ဤဂုဏ်ပြုလက်မှတ်ဖြင့် မှတ်တမ်းတင်အပ်ပါသည်။

လက်ထောက်ညွှန်ကြားရေးမှူး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ကျောက်ဖြူခရိုင်

၂၀၂၁ ခုနှစ်၊ ဖေဖော်ဝါရီလ ၂၃ ရက်။


NOKIA | ZEISS



နီသောင်းလိပ်ကလပ်
ကျောက်ခြုံဖြို့

ဂုဏ်ပြုမှတ်တမ်းလွှာ

ရုပ်ဝိပ္ပညာနှင့်၊ ကျောက်ခြုံဖြို့၊ နီသောင်းလိပ်ကလပ်အတွက်
Green ခြုတ်စတ်(၂)လုံးအတွက် ထန်ဒိုး (၁၂၀၀၀၀၀ /)တွင်တိတိအား
လှူဒါန်းပေးပါသော
MD ဦးဒိန်ဝိန်း၊
(Myanmar Bright Prospect International Logistic Co., ltd)
အား 'နီသောင်းလိပ်ကလပ်' မှ အထူးကျေးဇူးတင်လွှာတ် ဤဂုဏ်ပြုမှတ်တမ်းလွှာဖြင့်
ဂုဏ်တင်းတင်အပ်ပါသည်။

ဒါရိုက်တာ
နီသောင်းလိပ်ကလပ်
ကျောက်ခြုံဖြို့

မြို့နယ်အဆင့် COVID-19 ကာကွယ်ထိန်းချုပ်ရေးနှင့် အရေးပေါ်တုံ့ပြန်ရေးကော်မတီ

‘‘ ဂုဏ်ပြုမှတ်တမ်းလွှာ ’’

ကျောက်ဖြူမြို့နယ်အတွင်းရှိ ပြည်သူများထံသို့ Covid-19 ရောဂါ (တတိယလှိုင်း) ရောဂါကူးစက်ပြန့်ပွားမှုမှ ကာကွယ်ထိန်းချုပ်နိုင်ရန်နှင့် ကုသနိုင်ရန်အတွက် အောက်စီဂျင်လေထုတ်စက်(၁)လုံး၊Oxygen Mask (၂၀၀၀)ခု၊ Covid-19 Test Kit (၆၄၀)ခု တို့ကိုလှူဒါန်းပေးပါသော ပါသော Myanmar Bright Prospect International Logistics Co.,Ltd (MBPL) အား မြို့နယ်အဆင့် Covid-19 ထိန်းချုပ်ရေးနှင့် အရေးပေါ်တုံ့ပြန်ရေးကော်မတီမှ ဤဂုဏ်ပြုမှတ်တမ်းလွှာဖြင့် မှတ်တမ်းတင် ဂုဏ်ပြုအပ်ပါသည်။

ဦးထွန်မြ(ကိုယ်စား)
မြို့နယ် Covid-19 ထိန်းချုပ်ရေးနှင့်
အရေးပေါ်တုံ့ပြန်ရေးကော်မတီ
ကျောက်ဖြူမြို့

ရက်စွဲ၊ ၂၀၂၁ ခုနှစ်၊ စက်တင်ဘာလ(၂၈)ရက်

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
သယံဇာတနှင့်သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ရခိုင်ပြည်နယ်၊ ကျောက်ဖြူခရိုင်

ဂုဏ်ပြုမှတ်တမ်းလွှာ

၂၀၂၁ - ၂၀၂၂ ဘဏ္ဍာနှစ်အတွင်း ကျောက်ဖြူမြို့ ပင်လယ်ကမ်းခြေ တစ်လျှောက် စုပေါင်းသန့်ရှင်းရေး (အမှိုက်ကောက်ပွဲ) ပြုလုပ်ရာတွင် လိုအပ်သော အထွေထွေကိစ္စရပ်များအား သုံးစွဲရန်အတွက် Myanmar Bright Prospect International Logistics Co; Ltd. မှ ကျပ်- ၁,၀၀၀,၀၀၀/- လှူဒါန်းခြင်းအတွက် ဤဂုဏ်ပြုလက်မှတ်ဖြင့် မှတ်တမ်းတင်အပ်ပါသည်။

လှည်းဆောက်ညွှန်ကြားရေးမှူး
ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန
ကျောက်ဖြူခရိုင်

၂၀၂၁ ခုနှစ်၊ ဒီဇင်ဘာလ ၂၉ ရက်။