2026

Golden Apex International Trading Co., Ltd

Animal Feed Mill Factory



Livestock and Livestock Products
Manufacturing Industrial Zone,
Hlaingtharya (West) Township,
Yangon Region





EIA REPORT

Prepared by

Environmental Compliance Consultancy Co., Ltd.



Animal Feed Mill Factory လုပ်ငန်းဆိုင်ရာ

EIA Report

Project Developer: **Golden Apex International Trading Co., Ltd**

Prepared by: Environmental Compliance Consultancy Co., Ltd

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EIA Report

Animal Feed Mill Factory



Chit Myo Lwin

Project Director

Environmental Compliance Consultancy Company Limited

E: chitmyolwin2010@gmail.com

M: +95 9 777006449

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Particulars	Responsible Consultant	Signature	Project Manager	Date	Version	Signature
EIA Report of Animal Feed Mill Factory	Chit Myo Lwin		Arkar Phyo	April, 2026	V0	

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LIST OF ACRONYMS AND ABBREVIATIONS

AOI	–	Area of Influence
ASEAN	–	Association of Southeast Asian Nations
AHPS	–	ASEAN Heritage Parks
BS	–	Black Smoke
CBO	–	Community Based Organizations
CO	–	Carbon Monoxide
CBB	–	Convention on Biological Diversity
CSR	–	Corporate Social Responsibility
ECD	–	Environmental Conservation Department
ECC	–	Environmental Compliance Certificate
EHS	–	Environmental Health & Safety
EIA	–	Environmental Impact Assessment
ESIA	–	Environmental and Social Impact Assessment
EMP	–	Environmental Management Plan
EMMP	–	Environmental Management and Monitoring Plan
GAD	–	General Administrative Department
GIS	–	Geographic Information System
GPS	–	Global Positioning System
HSE	–	Health, Safety and Environment
IEE	–	Initial Environmental Examination
IFC	–	International Finance Corporation
I&Aps	–	Interested and Affected Parties

IUCN	–	International Union for Conservation of Nature
INGOS	–	International Non-Governmental Organizations
KBA	–	Key Biodiversity Area
MONREC	–	Ministry of Natural Resources and Environmental Conservation
MIC	–	Myanmar Investment Commission
MOI	–	Ministry of Industry
NAAQS	–	National Ambient Air Quality Standards
NEQG	–	National Environmental Quality (Emission) Guidelines
NGOs	–	Non-Governmental Organizations
OHSA	–	Occupational Health and Safety Administration
PAPs	–	Project Affected Persons
PPE	–	Personal Protective Equipment
PM	–	Particulate Matter
TSP	–	Total Suspended Particles
TDS	–	Total Dissolved Solid
UNFCCC	–	United Nations Framework Convention on Climate Change
USEPA	–	United State Environmental Protection Agency
WHO	–	World Health Organization
YESB	–	Yangon City Electricity Supply Board
WS/WD	–	Wind Speed/Wind Direction
YCDC	–	Yangon City Development Committee

µg/m3	–	microgram per cubic meter
mg/l	–	milligram per liter
ppm	-	parts per million
%	–	percentage
ºC	–	degree Celsius
dB	–	weighted decibels

၁။ အစီရင်ခံစာအကျဉ်းချုပ်

၁။ စီမံကိန်းမိတ်ဆက်

Golden Apex International Trading Co., Ltd သည် ရာခိုင်နှုန်းပြည့် မြန်မာနိုင်ငံသားပိုင် ကုမ္ပဏီတစ်ခု ဖြစ်ပြီး စုစုပေါင်း မြေဧရိယာ ၀.၆၈၈ ဧကတွင် မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအား မြေကွက်အမှတ် (၁၀၀+၁၀၁)၊ မွေးမြူရေးနှင့် မွေးမြူရေးထုတ်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် အကောင်ထည်ဖော် ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ အဆိုပြု စီမံကိန်း၏ ရင်းနှီးမြှုပ်နှံမှုပမာဏမှာ စုစုပေါင်း မြန်မာကျပ် ၄,၉၃၉.၉၁၉ သန်း လျာထားပြီး ရင်းနှီးမြှုပ်နှံလိုသည့် သက်တမ်းမှာ ၂၂ နှစ် ဖြစ်ပါသည်။ ရင်းနှီးမြှုပ်နှံမှု အကောင်အထည်ဖော်မည့် ခန့်မှန်းကာလမှာ တည်ဆောက်ရေးကာလအား ၂ နှစ် သတ်မှတ်ထားပြီး စီးပွားဖြစ် လုပ်ငန်း စတင် လည်ပတ် ဆောင်ရွက်နိုင်မည့် အချိန်ကာလမှာ ၂၀၂၆ ခုနှစ် ဒီဇင်ဘာလ ဖြစ်ပါသည်။ လုပ်ငန်း လည်ပတ်ခြင်း ကာလတွင် အလုပ်သမားဦးရေသည် ၁၀၄ ဦး ဖြင့် စတင် လည်ပတ် လုပ်ဆောင် သွားမည်ဟု ခန့်မှန်း ထားပါသည်။

Golden Apex International Trading Co., Ltd သည် မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများကို ဖြန့်ဖြူးရောင်းချသော လုပ်ငန်းတစ်ခု ဖြစ်ပါသည်။ မြန်မာနိုင်ငံတွင် မွေးမြူရေးကဏ္ဍသည် အရေးပါသည့် အတွက် ၎င်းကဏ္ဍ၏ အဓိကသွင်းအားစုဖြစ်သည့် မွေးမြူရေးအစာလိုအပ်ချက်ကို တတ်စွမ်းသရွေ့ ဖြည့်တင်းပေးရန်၊ ထိုသို့ဖြည့်တင်းပေးရာတွင် မွေးမြူရေးထုတ်လုပ်မှုစွမ်းအား မြင့်မားရေးအတွက် အရည်အသွေးပြည့်ဝပြီး လတ်ဆတ်သန့်ရှင်းသော တိရစ္ဆာန် အစာတောင့်များကို ထုတ်လုပ်ပေးရန် ရည်ရွယ်ထားခြင်း ဖြစ်ပါသည်။ ထို့အပြင် မွေးမြူရေးလုပ်ငန်း လုပ်ကိုင်သော အသေးစားလုပ်ငန်းရှင်များ အပါအဝင် မွေးမြူရေးသမားများ အားလုံးအတွက် စျေးနှုန်းသင့်တင့်သည့် တိရစ္ဆာန်အစာနှင့် ဖြည့်စွက်စာများကို ထုတ်လုပ်ပေးသွားရန် စသည်တို့ကို ရည်ရွယ်၍ လုပ်ငန်း ဆောင်ရွက်ရခြင်း ဖြစ်ပါသည်။

ကုမ္ပဏီသည် မွေးမြူရေးအစာနှင့် ဖြည့်စွက်စာများ ပြုလုပ်ရာတွင် လိုအပ်သော ကုန်ကြမ်းများကို ပြည်တွင်း၊ ပြည်ပများမှဝယ်ယူပြီး ရရှိသော ကုန်ကြမ်းပစ္စည်းများကို သိုလှောင်ရုံထဲတွင် စနစ်တကျ ထားရှိမည် ဖြစ်ပါသည်။ ကုန်ချောအဖြစ် ထုတ်လုပ်ရာတွင် လိုအပ်သော ပမာဏများအတိုင်း အလေးချိန် များသတ်မှတ်၍ ရောွေခြင်း၊ အမှုန့်ကြိတ်စက်များ ထဲသို့ထည့်ခြင်း၊ စက်ထဲမှ ပြန်ထွက်လာသော ကုန်ချောများအား အအေးခံခြင်း၊ အအေးခံပြီးသည်နှင့် တစ်ပြိုင်နက် သတ်မှတ်ထားသော အိတ်များထဲသို့ ထည့်ပြီး အလေးချိန် စစ်ခြင်း၊ ဂိုထောင်များထဲတွင် ကုန်ချောများကို သိုလှောင်ထားခြင်း စသည်တို့ကို ဆောင်ရွက်ပါသည်။ ထို့နောက် သိုလှောင်ထားသော ကုန်ချောပစ္စည်းများကို မွေးမြူရေးလုပ်ငန်းရှင်များထံသို့ သင့်တင့်သော စျေးနှုန်းများဖြင့် ဖြန့်ဖြူးရောင်းချလျက်ရှိပါသည်။

<u>စီမံကိန်းအဆိုပြုသူ</u>

ကုမ္ပဏီအမည်	Golden Apex International Trading Co., Ltd
စီမံကိန်းအဆိုပြုသူ	ဒေါ်ကေသွယ်အောင်
ဆက်သွယ်ရန်လိပ်စာ	အမှတ်(90 A/B) ရိုးကြီး ရိုးလေး အဝိုင်းအနီး၊ အနောက်ပိုင်းတက္ကသိုလ်လမ်းနံဘေး၊ ထန်းတပင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
ဆက်သွယ်ဖုန်းနံပါတ်	+ ၉၅၉ ၅၀၉၈၀၂၈
အီးမေးလ်	goldenapexmyanmar@gmail.com

အောက်ပါ ဖော်ပြပါ ဇယားတွင် သက်ဆိုင်ရာ စီမံကိန်း အကောင်အထည် ဖော်ဆောင်သည့် အဖွဲ့အစည်းနှင့် ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ အကောင်အထည် ဖော်ဆောင်သည့် အဖွဲ့အစည်းအား ဖော်ပြထားပါသည်။

စီမံကိန်း အဆိုပြုသူ	Golden Apex International Trading Co., Ltd
ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ အကောင်အထည် ဖော်ဆောင်သည့် အဖွဲ့အစည်း	Environmental Compliance Consultancy Co., Ltd

၂။ ဥပဒေရေးရာ နှင့် စီမံခန့်ခွဲမှု မူဘောင်

ကုမ္ပဏီသည် မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်းနှင့် သက်ဆိုင်သည့် ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဆိုင်ရာ လိုအပ်ချက်များကို လိုက်နာဆောင်ရွက်မည် ဖြစ်ကြောင်း ကတိကဝတ် ပြုပါသည်။ မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး နည်းဥပဒေ (၂၀၁၄)၊ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) နှင့် ပတ်ဝန်းကျင် ဆိုင်ရာ စီမံခန့်ခွဲခြင်း နှင့် ကာကွယ်ခြင်းဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ မူဝါဒများနှင့် လမ်းညွှန်ချက်များအား လိုက်နာ ဆောင်ရွက်မည် ဖြစ်ကြောင်း ကတိကဝတ် ပြုပါသည်။

ကုမ္ပဏီသည်

- တည်ဆောက်ရေး လုပ်ငန်းများနှင့် လုပ်ငန်း လည်ပတ်ရေး ကာလများတွင် ဖြစ်ပေါ်နိုင်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများကို လျော့နည်းစေရန် အရည်အချင်းပြည့်မီသော ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ကျွမ်းကျင်သူ အကြံပေးများနှင့် တိုင်ပင်ဆွေးနွေးသွားပါမည်။
- လေထုညစ်ညမ်းမှု၊ ဆူညံသံ၊ စွန့်ပစ်အစိုင်အခဲ နှင့် စွန့်ပစ်ရေများမှ ပတ်ဝန်းကျင် ထိခိုက်မှုများကို လျော့နည်းစေရန် အတွက် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်များကို ဆောင်ရွက်သွားပါမည်။
- ဒေသနေပြည်သူများအား ထောက်ပံ့ဆောင်ရွက်ရန် နှင့် ပြန်လည် ထိန်းသိမ်းရေး လုပ်ငန်းများ ဆောင်ရွက်ရန် အတွက် ဒေသဖွံ့ဖြိုးရေး ရန်ပုံငွေ (Corporate Social Responsibility - CSR) ကို သတ်မှတ် ထားပါမည်။
- မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်းမှ ဝန်ထမ်းများအား ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု နှင့် လုပ်ငန်းခွင် လုံခြုံရေး ဆိုင်ရာ လုပ်ထုံးလုပ်နည်းများကို သိရှိနားလည်စေရန်နှင့် ကျန်းမာရေး ဘေးအန္တရာယ် ကင်းရှင်းရေး အစီအစဉ်များအား ဆောင်ရွက်နိုင်ရန်အတွက် အသိပညာပေး သင်တန်းများအား ထားရှိသွားမည် ဖြစ်ပါသည်။

၂.၁။ သက်ဆိုင်ရာ ပတ်ဝန်းကျင်ဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ စည်းမျဉ်းများနှင့် မူဝါဒများ

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထုတ်ကုန် ပစ္စည်းထုတ်လုပ်ရေးစက်မှုဇုန်တွင် တည်ရှိသော မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ် ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်း၏ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် အစီရင်ခံစာတွင် အဆိုပြုစီမံကိန်းမှ လိုက်နာမည့် မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင် ဆိုင်ရာ စီမံခန့်ခွဲခြင်း နှင့် ကာကွယ်ခြင်းဆိုင်ရာ ဥပဒေနှင့် မူဝါဒများအား ဖော်ပြထားပါသည်။ စီမံကိန်း အဆိုပြုသူ (Golden Apex International Trading Co., Ltd) မှ မြန်မာနိုင်ငံ၏ ပတ်ဝန်းကျင် ဆိုင်ရာ စီမံခန့်ခွဲခြင်း နှင့် ကာကွယ်ခြင်းဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ မူဝါဒများနှင့် လမ်းညွှန်ချက်များအား လိုက်နာ ဆောင်ရွက်မည် ဖြစ်ကြောင်း ကတိကဝတ် ပြုပါသည်။

စဉ်	ဥပဒေများ၊ အက်ဥပဒေများ (သို့) နည်းဥပဒေများ
၁	ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၂)
၂	ပတ်ဝန်းကျင်ဆိုင်ရာ နည်းဥပဒေများ (၂၀၁၄)
၃	ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း(၂၀၁၅) ၊
၄	အမျိုးသားပတ်ဝန်ကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (၂၀၁၅)

၅	မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ဥပဒေ (၂၀၁၆)
၆	မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု နည်းဥပဒေ (၂၀၁၇)
၇	ပို့ကုန်သွင်းကုန် ဥပဒေ (၂၀၁၂)
၈	ရန်ကုန်မြို့တော် စည်ပင်သာယာရေးဥပဒေ (၂၀၁၈)
၉	အလုပ်ရုံများအက် ဥပဒေ (၁၉၅၁) (ပြင်ဆင်သည့် ဥပဒေ ၂၀၁၆)
၁၀	စံချိန် စံညွှန်း သတ်မှတ်ခြင်းဆိုင်ရာ ဥပဒေ (၂၀၁၄)
၁၁	ဓာတုပစ္စည်း နှင့် ဆက်စပ်ပစ္စည်း အန္တရာယ်မှ တားဆီးကာကွယ်ရေး ဥပဒေ (၂၀၁၃)
၁၂	ရေနံနှင့် ရေနံထွက်ပစ္စည်းဆိုင်ရာဥပဒေ (၂၀၁၇)
၁၃	မီးသတ် ဥပဒေ (၂၀၁၅)
၁၄	မြန်မာ့ အာမခံ ဥပဒေ (၁၉၉၃)
၁၅	ယာဉ်အန္တရာယ်ကင်းရှင်းရေးနှင့် မော်တော်ယာဉ် စီမံခန့်ခွဲမှု ဥပဒေ (၂၀၂၀)
၁၆	ပြည်သူ့ကျန်းမာရေးဆိုင်ရာ ဥပဒေ (၁၉၇၂)
၁၇	ကူးစက်ရောဂါများ ကာကွယ်နှိမ်နင်းရေး ဥပဒေ (၁၉၉၅), ပြင်ဆင်သည့် ဥပဒေ (၂၀၁၁)
၁၈	ဆေးလိပ်နှင့်ဆေးရွက်ကြီးထွက်ပစ္စည်း သောက်သုံးမှု ထိန်းချုပ်ရေးဥပဒေ (၂၀၀၆)
၁၉	လုပ်ငန်းခွင်ဘေးအန္တရာယ်ကင်းရှင်းရေးနှင့် ကျန်းမာရေးဆိုင်ရာ ဥပဒေ (၂၀၁၉)
၂၀	ရှေးဟောင်းအဆောက်အအုံများ ကာကွယ်ထိန်းသိမ်းရေး ဥပဒေ (၂၀၁၅)
၂၁	ရှေးဟောင်းဝတ္ထုပစ္စည်းများ ကာကွယ်စောင့်ရှောက်ခြင်း ဥပဒေ (၂၀၁၅)
၂၂	တိုင်းရင်းသားလူမျိုးများ၏အခွင့်အရေး ကာကွယ်စောင့်ရှောက်ရေး ဥပဒေ (၂၀၁၅)
၂၃	ရေအရင်းအမြစ်နှင့် မြစ်ချောင်းများ ထိန်းသိမ်းရေး ဥပဒေ (၂၀၀၆)
၂၄	ရေအရင်းအမြစ်နှင့် မြစ်ချောင်းများ ထိန်းသိမ်းရေး နည်းဥပဒေ (၂၀၁၃)

၂၅	မြေအောက်ရေ အက်ဥပဒေ (၁၉၃၀)
၂၆	မြေယာသိမ်းဆည်းခြင်း အက်ဥပဒေ (၁၈၉၄)
၂၇	လယ်ယာမြေဥပဒေ (၂၀၁၂)
၂၈	မြေလွတ်၊ မြေလပ်နှင့် မြေရိုင်းများ စီမံခန့်ခွဲမှု ဥပဒေ (၂၀၁၂)
၂၉	အလုပ်အကိုင်နှင့် ကျွမ်းကျင်မှု ဖွံ့ဖြိုးတိုးတက်ရေး ဥပဒေ (၂၀၁၃)
၃၀	အလုပ်သမားရေးရာ အငြင်းပွားမှု ဖြေရှင်းရေး ဥပဒေ (၂၀၁၂)
၃၁	အလုပ်သမား လျော်ကြေးအက်ဥပဒေ (၁၉၂၃), ပြင်ဆင်သည့် ဥပဒေ (၂၀၀၅)
၃၂	အလုပ်သမား အဖွဲ့အစည်း ဥပဒေ (၂၀၁၁)
၃၃	အနည်းဆုံး အခကြေးငွေ ဥပဒေ (၂၀၁၃)
၃၄	အခကြေးငွေပေးချေရေး ဥပဒေ (၂၀၁၆)
၃၅	လူမှုဖူလုံရေး ဥပဒေ (၂၀၁၂)
၃၆	၁၉၅၁ ခွင့်နှင့်အလုပ်ပိတ်ရက် အက်ဥပဒေ
၃၇	ပုဂ္ဂလိက စက်မှုလုပ်ငန်းဥပဒေ (၁၉၉၀)
၃၈	အင်ဂျင်နီယာ ကောင်စီ ဥပဒေ (၂၀၁၃)
၃၉	လျှပ်စစ် ဥပဒေ (၂၀၁၄)
၄၀	လမ်းမကြီးများ ဥပဒေ (၂၀၀၀)
၄၁	တိရစ္ဆာန်ကျန်းမာရေးနှင့် မွေးမြူရေးလုပ်ငန်းဖွံ့ဖြိုးတိုးတက်ရေးဥပဒေ (၂၀၂၀)
၄၂	သဘာဝဘေးအန္တရာယ်ဆိုင်ရာ စီမံခန့်ခွဲမှု ဥပဒေ (၂၀၁၃)
၄၃	တိုင်းရင်းသားလူမျိုးများ၏အခွင့်အရေး ကာကွယ်စောင့်ရှောက်ရေး နည်းဥပဒေ (၂၀၁၉)

၃။ စီမံကိန်း အကြောင်းအရာ ဖော်ပြချက်

ရာခိုင်နှုန်းပြည့် မြန်မာနိုင်ငံသားပိုင် ကုမ္ပဏီတစ်ခုဖြစ်သော Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်း တည်နေရာသည် မြေကွက်အမှတ် (၁၀၀ +၁၀၁)၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီးတွင် တည်ရှိပါသည်။ လုပ်ငန်း စီမံကိန်း ဆောင်ရွက်ရန် မြေဧရိယာ စုစုပေါင်း ၀.၆၈၈ ဧက ကျယ်ဝန်းပါသည်။

ရင်းနှီးမြှုပ်နှံလိုသည့် မျှော်မှန်း သက်တမ်းမှာ ၂၂ နှစ် ဖြစ်ပါသည်။ အဆိုပြု မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်းလုပ်ငန်း စီမံကိန်းမှ ဖြည့်စွက်အစာ အဓိက အုပ်စုသုံးစု ထုတ်လုပ်သွားမည် ဖြစ်ပြီး ၎င်းတို့မှာ ဝက်အစာ၊ ငါးအစာနှင့် ကြက်အစာတို့ ဖြစ်ပါသည်။ စုစုပေါင်း တစ်ရက်လျှင် (၇၂၆.၁၄) မက်ထရစ်တန် ထုတ်လုပ်ရန် နှင့် တစ်နှစ်လျှင် ၂၁၇၈၄၂ မက်ထရစ်တန် ထုတ်လုပ်ရန် မျှော်မှန်းထားပါသည်။

၃.၁။ မွေးမြူရေးအစာ ထုတ်လုပ်သည့်အမျိုးအစားများ

<u>မွေးမြူရေးအစာ ထုတ်စက်ရုံမှ ထုတ်ကုန်အမျိုးအစားစာရင်း</u>

စဉ်	အမျိုးအစားအုပ်စု	ထုတ်ကုန်အမျိုးအစားစာရင်း
၁	ကြက်အစာ	ဥစားကြက်လတ်စာ (၁၆ ပတ် မှ ၁၉ ပတ်အထိ)
		ဥစားကြက်ကြီးစာ (၁၉ ပတ် မှ ၄၅ ပတ်အထိ)
		ဥစားကြက်ကြီးစာ (၄၅ ပတ် နှင့် အထက်)
		အသားတိုးကြက်ငယ်စာ (0 days – 20 days)
		အသားတိုးကြက်လတ်စာ (21 days – 40 days)
		အသားတိုးကြက်ကြီးစာ (40 days – MKT)
၂	ဝက်အစာ	ဝက်ငယ်စာ (၅ ကီလို မှ ၃၀ ကီလို)
		ဝက်လတ်စာ (၃၀ ကီလို မှ ၇၀ ကီလို)
		ဝက်ကြီးစာ (၇၀ ကီလို အထက်)
၃	ငါးအစာ	ငါးစာ (အသားဓာတ် ၂၅%)

၃.၂။ မွေးမြူရေးအစာ ထုတ်လုပ်မှု လုပ်ငန်းစဉ်

မွေးမြူရေးအစာနှင့် ဖြည့်စွက်စာများ ပြုလုပ်ရာတွင် လိုအပ်သော ကုန်ကြမ်းများကို ပြည်တွင်း၊ ပြည်ပများမှ ဝယ်ယူတင်သွင်းသွားမည် ဖြစ်သည်။ ရရှိလာသော ကုန်ကြမ်းပစ္စည်းများကို သိုလှောင်ရုံ ထဲတွင် စနစ်တကျ ထားရှိမည်ဖြစ်ပါသည်။ ကုန်ချောအဖြစ် ထုတ်လုပ်ရာတွင် အဆိုပါကုန်ကြမ်း ပစ္စည်းများအား လိုအပ်သော ပမာဏများအတိုင်း အလေးချိန် များသတ်မှတ်၍ ရောမွှေခြင်း၊ အမှုန့်ကြိတ်စက်များ (Grinding/ Mixing Machine) များထဲသို့ ထည့်ခြင်း၊ စက်ထဲမှ ပြန်ထွက်လာသော ကုန်ချောများအား အအေးခံခြင်း၊ အအေးခံပြီးသည်နှင့်တစ်ပြိုင်နက် သတ်မှတ်ထားသော အိတ်များထဲသို့ ထည့်ပြီး အလေးချိန် စစ်ခြင်း၊ ဂိုထောင်များထဲတွင် ကုန်ချောများကို သိုလှောင်ထားခြင်း စသည်တို့ကို ဆောင်ရွက်ပါသည်။ သိုလှောင်ထားသော ကုန်ချောပစ္စည်းများကို မွေးမြူရေးလုပ်ငန်းရှင်များထံသို့ သင့်တင့်သော ဈေးနှုန်းများဖြင့် ဖြန့်ဖြူးရောင်းချသွားမည်ဖြစ်ပါသည်။

<u>မွေးမြူရေးအစာ ထုတ်လုပ်မှု လုပ်ငန်းစဉ်</u>

၁။ ကုန်ကြမ်းများကိုတင်သွင်းခြင်း

၂။ ကုန်ကြမ်းများကို Conveyor ဖြင့်သယ်ယူခြင်း

၃။ အလေးချိန် စစ်ဆေးခြင်း

၄။ ကုန်ကြမ်းများအား ရောမွှေခြင်း

၅။ ကုန်ကြမ်းများအား Grinding Machine ထဲသို့ထည့်ခြင်း

၆။ ကုန်ကြမ်းများအား Butterfly conveyor ထဲသို့ထည့်ခြင်း

၇။ ကုန်ကြမ်းများအား Shaking Machine ထဲသို့ထည့်ခြင်း

၃.၃။ လျှပ်စစ်သုံးစွဲမှု

အဆိုပြု စီမံကိန်းမှ သုံးစွဲရန် လိုအပ်သော လျှပ်စစ်ဓာတ်အားကို Yangon City Electricity Supply Board (YESB) မှ ရယူမည်ဖြစ်ပြီး 315 KVA transformer ဖြင့် ဖြန့်ဖြူး အသုံးပြုမည် ဖြစ်ပါသည်။ လျှပ်စစ်မရရှိနိုင်သော အရေးပေါ် အခြေအနေများတွင် အသုံးပြုရန်အတွက် 500 KVA မီးစက် နှင့် 300 KVA မီးစက်များကိုလည်း အရေးပေါ် အသုံးပြုရန် အတွက် ထားရှိမည် ဖြစ်ပါသည်။ လစဉ် အသုံးပြုမည့် ခန့်မှန်း လျှပ်စစ် အသုံးပြုမှု ပမာဏမှာ ၄၀ မဂ္ဂါဝပ် (40,000 kWh) ခန့် ဖြစ်ပါသည်။ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်းလုပ်ငန်း စီမံကိန်း စက်ရုံ၏ နှစ်စဉ် လောင်စာ အသုံးပြုမှုမှာ ဒီဇယ် ၆၀၀၀ ဂါလန်၊ ဓါတ်ဆီ ၉၀၀ ဂါလန် နှင့် ချောဆီ ၁၂ ဂါလန် ခန့် ဖြစ်ပါသည်။

၃.၄။ ရေသုံးစွဲမှု

အဆိုပြု စီမံကိန်းမှ ရေသုံးစွဲရန် အတွက် စီမံကိန်းဧရိယာအတွင်းတွင် ၁၅၀ အနက် ရှိသော ရေတွင်း ၂ တွင်းမှ ရေများကို ၁.၅ လက်မရှိသော submersible pump ကိုအသုံးပြု၍ ရေကိုစုပ်ယူ အသုံးပြုသွားမည် ဖြစ်ပါသည်။ စီမံကိန်း အတွင်းတွင် fiber tank ၃ လုံး နှင့် ကွန်ကရစ်ရေကန် ၁ ကန် ထားရှိမည် ဖြစ်ပါသည်။ လုပ်ငန်း လည်ပတ်စဉ်ကာလအတွင်း အသုံးပြုမည့် ရေဂါလန် ပမာဏမှာ တစ်နှစ်လျှင် ၉၆၀၀၀ ကျပေ ခန့်မှန်း ထားပါသည်။ သောက်သုံးရေ အတွက် ပြင်ပမှ ဝယ်ယူအသုံးပြုမည် ဖြစ်ပါသည်။

၃.၅။ အခြားရွေးချယ်စရာနည်းလမ်းများ

အခြား ရွေးချယ်စရာနည်းလမ်းများ ဆန်းစစ်ခြင်းသည် နိုင်ငံတော်မှ ပြဋ္ဌာန်းထားသည်များနှင့် ကိုက်ညီသော အကောင်းဆုံးသော ရွေးချယ်စရာများအား သတ်မှတ်ရန် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ နှင့် အခြားရွေးချယ်နိုင်သော တည်နေရာ၊ နည်းပညာများနှင့် လုပ်ငန်း လည်ပတ်မှုများ ပါဝင်သည့် လျော့ချရေး နည်းလမ်းများအား နှိုင်းယှဉ်သည့် လုပ်ငန်းစဉ် ဖြစ်ပါသည်။ အဆိုပါ အခြားရွေးချယ်စရာ နည်းလမ်းများတွင် သင့်တော်သည့် ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုစနစ် နှင့် ဘေးအန္တရာယ် စီမံခန့်ခွဲမှုစနစ်တို့ အားလုပ်ဆောင်ရာတွင် စီမံကိန်း တည်နေရာ၊ ထုတ်လုပ်မှု လုပ်ငန်းစဉ် အမျိုးမျိုး၊ ကြိတ်ခွဲခြင်း လုပ်ငန်းစဉ်များ နှင့် ကုန်ကြမ်း ပစ္စည်း သယ်ယူမှု နည်းလမ်းများ စသဖြင့် အချက်များ စဉ်းစားရန် ပါဝင်ပါသည်။

Golden Apex International Trading Co., Ltd မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ် ရောင်းချခြင်း လုပ်ငန်းစီမံကိန်းသည် မြေကွက်အမှတ် (၁၀၀+၁၀၁)၊ မွေးမြူရေးနှင့် မွေးမြူရေး ထုတ်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်း ဒေသကြီးတွင် တည်ရှိပြီး မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများအား မြန်မာနိုင်ငံအတွင်း ဖြန့်ဖြူး ရောင်းချသွားမည် ဖြစ်သည်။ မြန်မာနိုင်ငံတွင် မွေးမြူရေးကဏ္ဍသည် အရေးပါသည့်အတွက် ၎င်းကဏ္ဍ၏ အဓိက သွင်းအားစုဖြစ်သည့် မွေးမြူရေးအစာလိုအပ်ချက်ကို တတ်စွမ်းသရွေ့ ဖြည့်တင်းပေးရန်၊ ထိုသို့ဖြည့်တင်းပေးရာတွင် မွေးမြူရေးထုတ်လုပ်မှုစွမ်းအား မြင့်မားရေးအတွက် အရည်အသွေးပြည့်ဝ၍ အာဟာရပြည့်ဝပြီး လတ်ဆတ်သန့်ရှင်းသော တိရစ္ဆာန်အစာတောင့်များကို ထုတ်လုပ်ပေးရန် ရည်ရွယ်ထားခြင်း ဖြစ်ပါသည်။ မွေးမြူရေးလုပ်ငန်း လုပ်ကိုင်သော အသေးစား လုပ်ငန်းရှင်များ အပါအဝင် မွေးမြူရေးသမားများ အားလုံးအတွက် စျေးနှုန်းသင့်တင့်သည့် တိရစ္ဆာန် အစာနှင့် ဖြည့်စွက်စာများကို ထုတ်လုပ်ပေးသွားရန်နှင့် ဖြန့်ဖြူးရောင်းချပေးသွားရန် ဖြစ်သည်။

ကွင်းဆင်း လေ့လာမှုကိုအခြေခံသည့် အခြား ရွေးချယ်စရာနည်းလမ်းများ နှင့် နည်းပညာများ ခွဲခြမ်းစိတ်ဖြာမှုအား အောက်တွင် ဖော်ပြထားပါသည်။

က) အခြားရွေးချယ်စရာ တည်နေရာများ

ခ) အခြားရွေးချယ်စရာ နည်းပညာများ

ဂ) စီမံကိန်းမဆောင်ရွက်မှု

၄။ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဖော်ပြချက်

အောက်ဖော်ပြပါ အခန်းသည် လက်ရှိစီမံကိန်း လွှမ်းမိုးခံရနိုင်သည့် ဝန်းကျင်ရှိ ရူပဝန်းကျင်ဆိုင်ရာ၊ ဇီဝဝန်းကျင်ဆိုင်ရာနှင့် လူမှုစီးပွားအခြေအနေများကို အကျဉ်းချုပ်ဖော်ပြပါသည်။

၄.၁။ ရူပဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ

ရာသီဥတုနှင့် ဧလေဝေ	လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်သည် အပူပိုင်းမုတ်သုံရာသီဥတုဇုန်တွင် တည်ရှိပြီး မေလ မှ အောက်တိုဘာလအထိ မိုးရာသီ နှင့် နိုဝင်ဘာလမှ ဧပြီလအထိ ခြောက်သွေ့သော ရာသီဥတုကို ရရှိပါသည်။ ထိုဧရိယာသည် တစ်နှစ်ပတ်လုံး စိုထိုင်းဆမြင့်ပြီး ပူနွေးသော အပူချိန်ကို ခံစားရသည်။ နှစ်စဉ်ပျမ်းမျှ အပူချိန်သည် ၂၃ ဒီဂရီစင်တီဂရိတ်မှ ၃၃ ဒီဂရီ စင်တီဂရိတ် အထိရှိပြီး အပူဆုံးလများမှာ မတ်လမှ မေလအထိဖြစ်ပြီး အပူချိန်မှာ ၃၄ ဒီဂရီ စင်တီဂရိတ်ထက် ကျော်လွန်ပါသည်။ ရန်ကုန်တိုင်းဒေသကြီးသည် နှစ်စဉ် ပျမ်းမျှမိုးရေချိန် ၂၆၁၁ မီလီမီတာခန့် ရရှိပြီး မုတ်သုံရာသီ (ဇွန်မှ အောက်တိုဘာလ) အတွင်း မိုးရေချိန် ၈၀% ကျော် ဖြစ်ပေါ်သည်။ မိုးရွာသွန်းမှု အများစုသည် ဇူလိုင်လနှင့် သြဂုတ်လ ဖြစ်ပြီး ပျမ်းမျှမှာ ၅၀၀-၆၀၀ မီလီမီတာ ဖြစ်သည်။ ပျမ်းမျှစိုထိုင်းဆသည် တစ်နှစ်ပတ်လုံး မြင့်မားနေဆဲဖြစ်ပြီး မုတ်သုံရာသီတွင် ပျမ်းမျှ ၈၀-၈၅% ရှိပါသည်။ ခြောက်သွေ့ရာသီတွင် အရှေ့မြောက်မှ လေပြင်းများတိုက်ခတ်ပြီး မုတ်သုံလေသည် အနောက်တောင်ဘက်သို့ ရွေ့လျားကာ ဒေသအလိုက် မုတ်သုံလေလည်ပတ်မှုပုံစံနှင့် ကိုက်ညီသည်ကို တွေ့ရသည်။
မြေမျက်နှာသွင်ပြင်	လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်သည် မြေပြန့်နှင့် မြေနိမ့်လွင်ပြင် လက္ခဏာရပ် ရှိပါသည်။ လှိုင်သာယာ အပါအဝင် ရန်ကုန်တိုင်းဒေသကြီးသည် ကျယ်ပြန့်သော မြစ်ဝကျွန်းပေါ်လွင်ပြင် ပေါ်တွင် တည်ရှိပြီး ပျမ်းမျှအမြင့်မှာ ပင်လယ်ရေမျက်နှာပြင်အထက် ၃ မီတာ မှ ၁၀ မီတာအထိ ရှိသည်။ မြေမျက်နှာသွင်ပြင်မှာ အများအားဖြင့် မြေပြန့်ဖြစ်ပြီး မြစ်ချောင်းများဆီသို့

	အလွန်ပြေပြစ်သော ဆင်ခြေလျှောများ ရှိသည်။ စီမံကိန်း ဧရိယာသည် မြေပြန့်နိမ့်ပါးဖြစ်ပြီး ယေဘုယျအားဖြင့် အမြင့် ၅ မီတာမှ ၈ မီတာအကြားရှိသည်။
ဘူမိဗေဒအခြေအနေ	လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်သည် ဧရာဝတီမြစ်ဝှမ်းနှင့် ၎င်း၏ မြစ်ခွဲများဖြစ်သော လှိုင်မြစ်နှင့် ပန်းလှိုင်မြစ်တို့၏ အနည်ကျခြင်း လုပ်ငန်းစဉ်များကြောင့် ဖြစ်ပေါ်လာသည့် ကျယ်ပြန့်သော နုန်းတင်မြေနုများနှင့် မြစ်ဝကျွန်းပေါ်ဒေသ အနည်အနှစ်များဖြင့် ထူးခြားစွာ ဖွဲ့စည်းတည်ရှိပါသည်။ ဤဒေသ၏ ဘူမိဗေဒဆိုင်ရာ အခြေအနေမှာ ရှေးကျသော နီယိုဂျင်း (Neogene) အနည်ကျကျောက်လွှာများအပေါ်တွင် ဖုံးလွှမ်းနေသည့် (Quaternary) အနည်အနှစ်များဖြင့် အဓိက ဖွဲ့စည်းထားခြင်း ဖြစ်သည်။ အဆိုပါ အနည်အနှစ်များတွင် မြစ်ကြောင်းဆိုင်ရာနှင့် ဒီရေတက်ရာမှ ဖြစ်ပေါ်လာသော ခိုင်မာမှုမရှိသေးသည့် (သို့မဟုတ်) တပိုင်းတစခိုင်မာနေပြီဖြစ်သော ရွှံ့စေး၊ နုန်းမြေ၊ သဲနုများနှင့် တစ်ခါတစ်ရံတွင် အော်ဂဲနစ်ဩဇာဓာတ်များ ကြွယ်ဝသော အလွှာများ ပါဝင်သည်။
ဇလဗေဒအခြေအနေ	လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်သည် ရန်ကုန်မြို့၏ အနောက်ဘက်ခြမ်းတွင် တည်ရှိပြီး ရန်ကုန်မြစ်၏ ဒီရေရောက်မြစ်ဝ (Tidal estuary) စနစ်တွင် ပါဝင်သော လှိုင်မြစ် (ရန်ကုန်မြစ်)၏ ရေဆင်းလွှမ်းမိုးမှု အောက်တွင် တည်ရှိသည်။ လှိုင်မြစ်၏ ရေမျက်နှာပြင် အနိမ့်အမြင့်သည် ဒီရေအတက်အကျ (Tidal fluctuations) ပေါ်တွင် မူတည်သည်။ ဤဒေသသည် ထင်ရှားသော မိုးရာသီနှင့် နွေရာသီရှိသည့် အပူပိုင်း မုတ်သုံရာသီဥတု (Tropical monsoon climate) ကို ရရှိသည်။ ရန်ကုန်မြို့၏ တစ်နှစ်တာ ပျမ်းမျှ မိုးရေချိန်မှာ ၂,၆၈၁ မီလီမီတာ ခန့် ရှိပြီး၊ စုစုပေါင်း မိုးရေချိန်၏ ၈၀ ရာခိုင်နှုန်း ကျော်သည် အနောက်တောင်မုတ်သုံလေ တိုက်ခတ်ရာ ဇွန်လမှ အောက်တိုဘာလအတွင်း ရွာသွန်းခြင်း ဖြစ်သည်။ မိုးအများဆုံး ရွာသွန်းသည့်လများမှာ ဇူလိုင်လနှင့် သြဂုတ်လတို့ဖြစ်ပြီး၊ ထိုလများတွင် တစ်လတာ ပျမ်းမျှမိုးရေချိန်သည် ၆၀၀ မီလီမီတာ ထက် ကျော်လွန်နိုင်ပါသည်။

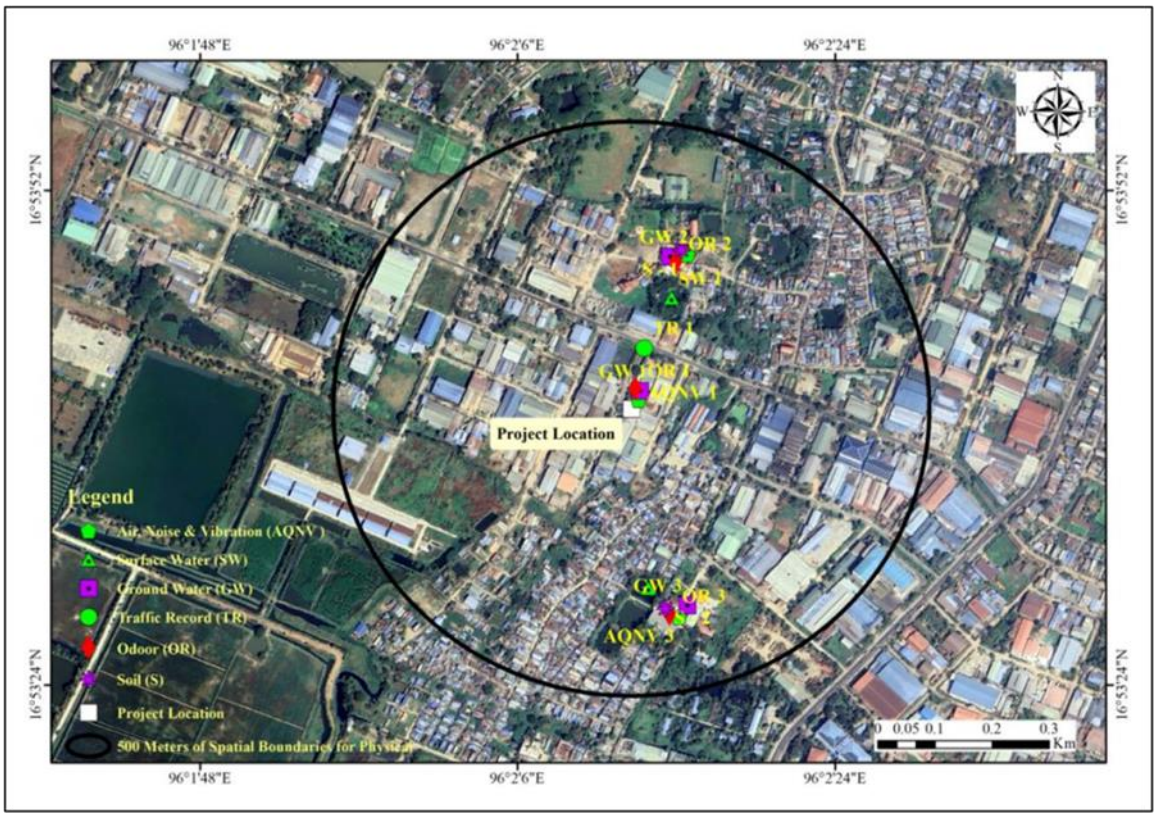
ရုပဝန်းကျင်ဆိုင်ရာ အခြေခံအချက်အလက်များ လေ့လာမှု အကျဉ်းချုပ်

လေထုအရည်အသွေး နှင့် မိုးလေဝသ	နမူနာအရေအတွက်	နေရာ ၃ နေရာ
	အတိုင်းအတာ	SO2, NO2, Ozone, PM 2.5, PM 10, Relative Humidity, Temperature, Wind speed and Wind direction
	ကာလ	တစ်ကြိမ်လျှင် လေ့လာသည့်ကာလ (၂၄နာရီ)
	ထိတွေ့ဝန်းကျင် လေထုအရည်အသွေးအား လေ့လာထားသည့် ပျမ်းမျှ တန်ဖိုးများကို အခန်း (၅)တွင် ဖော်ပြထားပါသည်။ တိုင်းတာသည့် ရလဒ်များ အရ PM2.5၊ PM10 နှင့် SO2 ပါဝင်မှုမှာ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် အတွင်းတွင် သာရှိပါသည်။နေ့စဉ် ၈ နာရီ အမြင့်ဆုံး အိုဇုန်းအဆင့်သည် 100 ug/m3 စံနှုန်းအတွင်း ဖြစ်ပါသည်။ နိုက်ထရိုဂျင် အောက်ဆိုက်ကို ၂၄ နာရီ စံနှုန်း သတ်မှတ်ထားခြင်း မရှိပါ။ သို့သော် နိုက်ထရိုဂျင် အောက်ဆိုက်၏ ပါဝင်မှုကို အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် အတွင်းရှိ တစ်နာရီကြာ စံနှုန်းဖြင့် ရည်ညွှန်းထားပါသည်။ နာရီအလိုက်ရလဒ်များအရ နိုက်ထရိုဂျင် အောက်ဆိုက်၏ ပါဝင်မှုသည် သတ်မှတ်ထားသော စံနှုန်းထက် နည်းပါးသည်ကို လေ့လာတွေ့ရှိ ရပါသည်။	
ဆူညံသံအဆင့်	နမူနာအရေအတွက်	နေရာ ၃ နေရာ
	အတိုင်းအတာ	LAeq (A-weighted loudness equivalent)
	ကာလ	တစ်ကြိမ်လျှင် လေ့လာသည့်ကာလ (၂၄နာရီ)
	ဆူညံသံအဆင့် ရလဒ်များကို မြန်မာနိုင်ငံ အမျိုးသား ပတ်ဝန်းကျင် အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်၏ “Industrial, commercial” ပတ်ဝန်းကျင် နှင့် နှိုင်းယှဉ်ထားပါသည်။ တွက်ချက်ထားသော ရလဒ်များအရ N-1, N-2 နှင့် N-3 တို့၏ နေ့ဘက်နှင့် ညဘက် ဆူညံသံအဆင့် ရလဒ်များသည် အသုံးပြုထားသော စံနှုန်းထက် နိမ့်ကျနေသည်ကို လေ့လာ တွေ့ရှိရပါသည်။	
မြေပေါ်ရေအရည်အသွေး	နမူနာအရေအတွက်	နေရာ ၂ နေရာ
	အတိုင်းအတာ	pH, DO, EC, TDS, Turbidity, TSS, BOD, COD, Oil & Grease, Total Nitrogen, Total Phosphorus

	ကာလ	တစ်ကြိမ်
	ကွင်းဆင်းလေ့လာချက် ရလဒ်များအရ မြေပေါ်ရေ၏ အရည်အသွေးမှာ လမ်းညွှန်ချက်များ အတွင်း ကောင်းမွန်စွာ ရှိပါသည်။.	
မြေအောက်ရေအရည်အသွေး	နမူနာအရေအတွက်	၃ နေရာ
	အတိုင်းအတာ	pH, Color, Turbidity, TDS, TSS, Total Solids, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Sodium Chloride, Iron, Manganese, Total Alkalinity, Carbonate, Bi-Carbonate, Sulfate, Salinity, Arsenic, Dissolved Oxygen
	ကာလ	တစ်ကြိမ်
	ကွင်းဆင်းလေ့လာချက် ရလဒ်များအရ မြေအောက်ရေ၏ အရည်အသွေးမှာ လမ်းညွှန်ချက်များအတွင်း ကောင်းမွန်စွာ ရှိပါသည်။	
မြေအရည်အသွေး	နမူနာအရေအတွက်	၂ နေရာ
	အတိုင်းအတာ	pH, Cadmium, Copper, Zinc, Manganese, Lead, Chromium, Nickel, Iron
	ကာလ	တစ်ကြိမ်
	မြေဆီလွှာအတွက် ဓာတုဂုဏ်သတ္တိများကို ရုန်ကုန်တိုင်းဒေသကြီး စိုက်ပျိုးရေး ဦးစီးဌာန (မြေအသုံးချမှု) ဓာတ်ခွဲခန်းတွင် ခွဲခြမ်း စိတ်ဖြာခဲ့ပါသည်။ မြေဆီလွှာ အရည်အသွေး စစ်တမ်း၏ ရလဒ်များသည် လိုက်နာရမည့် လမ်းညွှန်ချက် အောက်လျော့နည်းပါသည်။	
တုန်ခါမှု	နမူနာအရေအတွက်	၃ နေရာ
	အတိုင်းအတာ	တုန်ခါမှု
	ကာလ	တစ်ကြိမ်

	တိုင်းတာမှုရလဒ်များအရ V1, V2 နှင့် V3 ၏ တုန်ခါမှု သတ်မှတ်ချက်အဆင့် အားလုံးသည် လမ်းညွှန်ချက်အောက် လျော့နည်းပါသည်။	
အနှံ့	နမူနာအရေအတွက်	၃ နေရာ
	အတိုင်းအတာ	အနှံ့
	ကာလ	တစ်ကြိမ်
	တိုင်းတာမှုရလဒ်များအရ OR 1, OR 2 နှင့် OR3 ၏ အနှံ့ သတ်မှတ်ချက်အဆင့် အားလုံးသည် လမ်းညွှန်ချက်အောက် လျော့နည်းပါသည်။	

ရုပဝန်းကျင်ဆိုင်ရာ အခြေခံအချက်အလက်များ တည်နေရာ အကျဉ်းချုပ်



၄.၂။ ဇီဝဆိုင်ရာအစိတ်အပိုင်းများ

အပင်	စီမံကိန်းနေရာသည် ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ်၊ မွေးမြူရေးနှင့် မွေးမြူရေးထုတ်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန် အတွင်းတွင် တည်ရှိပါသည်။ စီမံကိန်းနေရာနှင့် အနီးအနားဒေသများမှာ စက်ရုံများ၊ အဆောက်အဦများနှင့် ကွန်ကရစ်လမ်းများဖြင့် တည်ရှိနေပါသည်။ သဘာဝ ဒေသရင်းမြစ်များ မတွေ့ရှိရပါ။ သို့သော် တစ်ချို့နေရာများတွင် သစ်ပင်များ၊ လမ်းဘေးတွင်စိုက်ပျိုးထားသော အပင်များ၊ ပေါင်းပင်များ၊ မြက်များ နှင့် လူများပြုလုပ်ထားသော ရေကန်များကိုသာ တွေ့ရှိရပါသည်။ ကွင်းဆင်းလေ့လာသည့် ဇရိယာ ပတ်လည်ရှိ အပင်မျိုးစိတ်များ လေ့လာရာတွင် စုစုပေါင်း အပင်မျိုးစိတ် ၃၆ မျိုးအား လေ့လာတွေ့ရှိ ခဲ့ပါသည်။
သတ္တဝါ	ကွင်းဆင်းလေ့လာသည့် ကာလအတွင်း နို့တိုက်သတ္တဝါ (၃) မျိုး၊ တွားသွား သတ္တဝါ (၁၇) မျိုး၊ လိပ်ပြာမျိုးစိတ် (၈) မျိုး နှင့် ငှက်မျိုးစိတ် (၂၂) မျိုးတို့အား လေ့လာသည့် ဇရိယာအတွင်း တွေ့ရှိခဲ့ပါသည်။ ကမ္ဘာလုံးဆိုင်ရာ မျိုးတုန်း အန္တရာယ်ရှိ မျိုးစိတ်စာရင်း IUCN Red List (2022) အရ မျိုးတုန်းအန္တရာယ်ရှိ သတ္တဝါမျိုးစိတ်များ မတွေ့ရပါ။

၄.၃။ လူမှုစီးပွားရေး

စီမံကိန်းဇရိယာသည် ရန်ကုန်တိုင်းဒေသကြီး လှိုင်သာယာ(အနောက်ပိုင်း) မြို့နယ် တွင် တည်ရှိသည်။ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်သည် မြောက်လတ္တီတွဒ် ၁၆°၄၇"နှင့် ၂၀°၁၂" ကြားနှင့် အရှေ့လောင်ဂျီကျူ ဂ၆°၁၂"နှင့် ၁၀၀°၁၃" ကြားတွင် တည်ရှိပြီး စုစုပေါင်းဇရိယာသည် ၁၂.၂၄ စတုရန်းမိုင် ဖြစ်ပါသည်။ အထွေထွေ အုပ်ချုပ်ရေး ဦးစီးဌာန၏ ၂၀၂၃ ခုနှစ် မြို့နယ်စာရင်း အချက်အလက်များ အရ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်တွင် ရပ်ကွက် (၁၁) ရပ်ကွက်၊ ကျေးရွာအုပ်စု လေးခုနှင့် ကျေးရွာ ကိုးရွာတို့ ပါဝင်ပါသည်။

စီမံကိန်း၏ လေ့လာမှု ဇရိယာ ၅၀၀ မီတာအတွင်းရှိ ကန်လှကျေးရွာ နှင့် ကျံုစုကျေးရွာ တို့ကို လူမှုရေးနှင့် စီးပွားရေး ဆိုင်ရာ အစိတ်အပိုင်းများကိုလေ့လာရန် သတ်မှတ်ထားပါသည်။

လူမှုရေး	
လေ့လာထားသောဇရိယာအတွင်း လူဦးရေအခြေအနေ	စစ်တမ်းရလဒ်များအရ ကန်လှ နှင့် ကျံုစု ကျေးရွာတို့တွင် စုစုပေါင်း အိမ်ထောင်စု ၇,၄၂၉ ခု ရှိပါသည်။ ထိုအထဲတွင် ကန်လှကျေးရွာတွင် အိမ်ထောင်စု ၃,၄၈၈ ခု ရှိပြီး ကျံုစုကျေးရွာတွင် ၃,၉၄၁ ခု ရှိကာ အနည်းငယ် ပိုမိုများပြားပါသည်။ ထို့ကြောင့် ကျံုစုကျေးရွာသည် အိမ်ထောင်စုအရေအတွက်အနေဖြင့် နှစ်ရွာအနက် ပိုမိုကြီးမားသော

	အချိုးအစားကို ကိုယ်စားပြုနေပြီး စုစုပေါင်း၏ တစ်ဝက်ကျော်ကို ပါဝင်ထားကြောင်း တွေ့ရှိရပါသည်။
အင်တာဗျူးဖြေဆိုသူများ၏ အိမ်ထောင်ရေး အခြေအနေ	အင်တာဗျူးဖြေဆိုသူ စုစုပေါင်း ၇၄ ဦးအနက် အများစုမှာ အိမ်ထောင်ရှိသူများဖြစ်ပြီး ၆၁ ဦးရှိပါသည်။ တစ်ဦးတည်း အဖြစ်ရှိသူများမှာ ၄ ဦးသာ ပါဝင်ပြီး မုဆိုး/မုဆိုးမ ဖြစ်သူများမှာ ၉ ဦးရှိပါသည်။ ဤအချက်အလက်များအရ စစ်တမ်းတွင် ပါဝင်သော အင်တာဗျူးဖြေဆိုသူအများစုမှာ အိမ်ထောင်ရှိသူများ ဖြစ်ပါသည်။
အင်တာဗျူးဖြေဆိုသူများ၏ ဘာသာရေး	အင်တာဗျူးဖြေဆိုသူ စုစုပေါင်း ၇၄ ဦးအနက် အများစုသည် ဗုဒ္ဓဘာသာဝင်များ ဖြစ်ပြီး ၇၁ ဦး (၉၅.၉%) ကို ကိုယ်စားပြုပါသည်။ ခရစ်ယာန်ဘာသာဝင်များမှာ ၃ ဦး (၄.၁%)သာ ပါဝင်ပါသည်။ ဤအချက်အလက်များ အရ စစ်တမ်းတွင် ပါဝင်သော အင်တာဗျူးဖြေဆိုသူများ အနက် ဗုဒ္ဓဘာသာသည် အဓိကဖြစ်ကြောင်း တွေ့ရပါသည်။
စီးပွားရေးအခြေအနေ	
အလုပ်အကိုင်အခြေအနေ	ကွင်းဆင်းလေ့လာမှု ရလဒ်များအရ အင်တာဗျူးဖြေဆိုသူများ၏ အလုပ်အကိုင် အမျိုးအစားများမှာ မတူညီသော လုပ်ငန်းမျိုးစုံ ပါဝင်နေပါသည်။ “အခြား” အမျိုးအစားသည် အများဆုံး (၄၈.၆%) ဖြစ်ပြီး အသေးစား စီးပွားရေးလုပ်ငန်းရှင်များ (၃၂.၄%) သည် ဒုတိယအများဆုံးဖြစ်သည်။ ထို့အပြင် နေ့စားလုပ်သား (၈.၁%)၊ ကျွမ်းကျင်လုပ်သား (၄.၁%) နှင့် အထည်ချုပ်လုပ်ငန်း (၂.၇%)၊ စိုက်ပျိုးရေး၊ အစိုးရဝန်ထမ်းနှင့် ပုဂ္ဂလိကဝန်ထမ်းများမှာ တစ်ခုချင်းစီ (၁.၄%) သာ ပါဝင်ပါသည်။
လစဉ် အိမ်ထောင်စု အသုံးစရိတ်အဆင့်	အင်တာဗျူးဖြေဆိုသူများ၏ လစဉ်အသုံးစရိတ်မှာ ၄၀၀,၀၀၁ မှ ၆၀၀,၀၀၀ ကျပ်အတွင်း သုံးစွဲသူများသည် အများဆုံးဖြစ်ပြီး စုစုပေါင်း၏ ၃၇.၈% ကို ကိုယ်စားပြုပါသည်။ ထို့နောက် ၂၀၀,၀၀၁ မှ ၄၀၀,၀၀၀ ကျပ်အတွင်း သုံးစွဲသူများ (၂၅.၇%) နှင့် ၈၀၀,၀၀၁ ကျပ်နှင့် အထက် သုံးစွဲသူများ (၂၁.၆%) တို့ ဖြစ်ပါသည်။ ၆၀၀,၀၀၁ မှ ၈၀၀,၀၀၀ ကျပ်အတွင်း သုံးစွဲသူများမှာ ၉.၅%သာ ပါဝင်ပြီး ၂၀၀,၀၀၀ ကျပ်အောက် သုံးစွဲသူများမှာ ၅.၄%သာ ရှိပါသည်။ စုစုပေါင်းအနေဖြင့်

	အများစုသည် အလယ်အလတ်မှ မြင့်မားသော အသုံးစရိတ် အဆင့်တွင် တည်ရှိနေကြောင်း တွေ့ရှိရပါသည်။
အင်တာဗျူး ဖြေဆိုသူများ၏ လစဉ် ဝင်ငွေအခြေအနေ	အင်တာဗျူးဖြေဆိုသူ စုစုပေါင်း ၇၄ ဦး၏ ဝင်ငွေဖြန့်ဝေမှုအရ ၄၀၀,၀၀၁ မှ ၆၀၀,၀၀၀ ကျပ်အတွင်း ဝင်ငွေရရှိသူများသည် အများဆုံးဖြစ်ပြီး ၄၅.၉% ရှိပါသည်။ ထို့နောက် ၈၀၀,၀၀၁ ကျပ်နှင့် အထက် ဝင်ငွေရရှိသူများ (၂၁.၆%) နှင့် ၂၀၀,၀၀၁ မှ ၄၀၀,၀၀၀ ကျပ်အတွင်း ဝင်ငွေရရှိသူများ (၂၀.၃%)ရှိသည်။ ၆၀၀,၀၀၁ မှ ၈၀၀,၀၀၀ ကျပ်အတွင်း ဝင်ငွေရရှိသူများမှာ ၉.၅%သာ ရှိပြီး ၂၀၀,၀၀၀ ကျပ်အောက် ဝင်ငွေရရှိသူများမှာ ၂.၇% သာရှိပါသည်။
အိမ်ခြံမြေ ပိုင်ဆိုင်မှုအခြေအနေ	ကွင်းဆင်းလေ့လာမှုရလဒ်အရ အင်တာဗျူးဖြေဆိုသူအများစုသည် ကိုယ်ပိုင်အိမ်တွင် နေထိုင်ကြောင်း ဖော်ပြနေပါသည်။ စုစုပေါင်း ၇၄ ဦးအနက် ၄၈ အိမ်ထောင်စု (၆၄.၉%) သည် ကိုယ်ပိုင်အိမ်ရှိကြောင်း တုံ့ပြန်ထားပြီး၊ ၂၆ ဦး (၃၅.၁%) သည် ငှားရမ်းနေထိုင်ကြောင်း တွေ့ရှိရပါသည်။
မီးအလင်းရရှိမှုအရင်းအမြစ်	လေ့လာမှုအရ စုစုပေါင်း အိမ်ထောင်စုများ (၁၀၀%) သည် အစိုးရ လျှပ်စစ်မီးကို အဓိကအသုံးပြု ကြပါသည်။
ချက်ပြုတ်ရန် စွမ်းအင်ရရှိမှုအရင်းအမြစ်	လေ့လာမှုအရ အိမ်ထောင်စုအများစု (၉၇.၃%) သည် ချက်ပြုတ်ရန် အဓိကအရင်းအမြစ်အဖြစ် အစိုးရလျှပ်စစ်မီးကို အသုံးပြုကြပြီး အိမ်ထောင်စု(၂.၇%) သာလျှင်ထင်းမီးကိုအသုံးပြုကြသည်။
ပညာရေးအခြေအနေ	
အင်တာဗျူးဖြေဆိုသူများ၏ ပညာအရည်အချင်း	အင်တာဗျူးဖြေဆိုသူအများစုသည် အခြေခံပညာ ကိုသာပြီးမြောက်ထားပြီး ၂၇ ဦး (၃၆.၅%) ရှိပါသည်။ ထို့နောက် အလယ်တန်းကျောင်း ၂၅ ဦး (၃၃.၈%) နှင့် အထက်တန်းကျောင်း ပြီးမြောက်ထားသူ ၁၃ ဦး (၁၇.၆%) ရှိပါသည်။ ဘုန်းတော်ကြီးကျောင်းသာတက်ခဲ့ဖူးသူ ၅ ဦးရှိပြီး တက္ကသိုလ်ဘွဲ့ရရှိသူ တစ်ဦးသာ ရှိပါသည်။ ထို့အပြင် လက်ရှိ တက္ကသိုလ် တက်နေသူများ နှစ်ဦးရှိပါသည်။ စုစုပေါင်း အချက်အလက်များ အရ အင်တာဗျူး ဖြေဆိုသူများ၏ ပညာ အရည်အချင်းမှာ အခြေခံနှင့် အလယ်တန်းပညာ အဆင့်အထိ အများဆုံး ရောက်ရှိထားကြောင်း တွေ့ရှိရပါသည်။

ကျန်းမာရေးအခြေအနေ	
ကျန်းမာရေးစောင့်ရှောက်မှု အခြေအနေ	လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်တွင် ပုဂ္ဂလိကဆေးရုံ နှစ်ရုံ၊ ဆေးခန်း ၈၆ ခန်းနှင့် ကျေးလက်ကျန်းမာရေးစောင့်ရှောက်မှု ဌာန ၄ ခု တည်ရှိပါသည်။
အိမ်သုံးရေအသုံးပြုမှု	အိမ်ထောင်စုအများစု (၈၆.၅%) သည် တွင်းရေကိုအသုံးပြုကြပြီး (9.5%) သိုလှောင်ကန်ရေ နှင့် ၁.၄ ရာခိုင်နှုန်းခန့်သည် အခြားရင်းမြစ်များကို အသုံးပြုကြသည်။
သောက်သုံးရေရရှိမှုအရင်းအမြစ်	ကွင်းဆင်း လေ့လာမှုအရ အိမ်ထောင်စုအများစုသည် သန့်ရှင်းသောက်သုံးရေကို ဝယ်ယူသောက်သုံးကြသည်။ အနည်းငယ်သာ (၂.၇%) သည် မိုးရေ ကို သောက်သုံးကြသည်။
ယဉ်ကျေးမှုဆိုင်ရာ လက္ခဏာများ	
၁၉၈၉ ခုနှစ်တွင် လှိုင်သာယာ မြို့နယ်ကို စတင်တည်ထောင်ခဲ့ပြီး ၁၉၉၁ ခုနှစ်နောက်ပိုင်းတွင် လှိုင်သာယာ စက်မှုဇုန် (Hlaingtharya Industrial Zone) နှင့် FMI City အိမ်ရာတို့ဖွံ့ဖြိုးလာခဲ့သည်။ စီမံကိန်းဧရိယာအနီးတွင် ရွှေရင်အေးအဘုရား၊ ဆယ့်တစ်မီးဘုရားနှင့် ထိန်ပင်သချိုင်း တို့ရှိသော်လည်း သမိုင်းအမွေအနှစ်စာရင်း တွင် မတွေ့ရှိရသေးပေ။	

၅။ သဘာဝပတ်ဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများ နှင့် လျော့ပါးစေရေး နည်းလမ်းများ

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	ဖြစ်နိုင်ချေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေး နည်းလမ်းများ	ကြွင်းကျန် သက်ရောက်မှုများ
အကြိုတည်ဆောက်ရေးအဆင့် နှင့် တည်ဆောက်ရေးအဆင့်			
လေထုအရည်အသွေး	▪ ရွှေ့လျားသွားလာသော ယာဉ်များမှ ထွက်ရှိလာသော မီးခိုးငွေ့များနှင့် ဖုန်/အမှုန်များ	▪ ဆောက်လုပ်ရေး လုပ်ငန်းခွင်အတွင်း မြေသားလမ်းများ/ မြေတူးဖော်မှုများမှ ထွက်ရှိလာသော ဖုန်/ အမှုန်များကို ထိန်းသိမ်းရန် အတွက် ပုံမှန် ရေဖြန်းပေးခြင်း။	သိသာထင်ရှားမှု မရှိ

		▪ စီမံကိန်း ဧရိယာသို့ ဝင်ရောက်သည့် ကုန်ကားများ နှင့် ယာဉ်များ၏ အရှိန်ကို ကန့်သတ်ထားခြင်း။ ▪ ဆောက်လုပ်ရေးလုပ်ငန်းများ အတွက် အသုံးပြုလျှက်ရှိသော စက်ပစ္စည်းများနှင့် ယာဉ်များ အား ပုံမှန် ပြုပြင် ထိန်းသိမ်းပေးခြင်း။	
ဆူညံသံနှင့်တုန်ခါမှု	▪ ဆောက်လုပ်ရေး လုပ်ငန်းများမှ ထွက်ပေါ်လာသော ဆူညံသံနှင့် တုန်ခါမှု	▪ ဆောက်လုပ်ရေးလုပ်ငန်းများ အတွက် အသုံးပြုလျှက်ရှိသော စက်ပစ္စည်းများနှင့် ယာဉ်များအား ပုံမှန် ပြုပြင် ထိန်းသိမ်းခြင်း။ ▪ အသံဆူညံသော နေရာများတွင် လုပ်ကိုင်သော အလုပ်သမားများ အား နားကြပ်များ တပ်ဆင်စေခြင်း။ ▪ ဆောက်လုပ်ရေး လုပ်ငန်းများ ကြောင့် ဆူညံသံများ ဖြစ်ပေါ်နိုင်သဖြင့် နေ့အချိန်၌သာ ပြုလုပ်စေခြင်း။	သိသာထင်ရှားမှု မရှိ
အပင်ပေါက်ရောက်မှု	▪ ဆောက်လုပ်ရေး လုပ်ငန်း အတွင်းရှိ ဒေသရင်း မျိုးစိတ်များ အနှောက်အယှက် ဖြစ်စေခြင်း။	▪ ပတ်ဝန်းကျင်တွင် ရှိသော ဒေသတွင်း မျိုးစိတ်များအား အန္တရာယ်မဖြစ်စေရန် ရှောင်ရှားစေခြင်း။ ▪ စီမံကိန်း ဧရိယာအတွင်း စိမ်းလန်းစိုပြေရန်နှင့် သဘာဝပတ်ဝန်းကျင် တိုးတက်ကောင်းမွန်စေရန် စီမံကိန်း ဧရိယာ ပတ်ဝန်းကျင် တွင် ဒေသရင်း သစ်ပင် မျိုးစိတ်များ စိုက်ပျိုးပေးခြင်း။ ▪ ဒေသတွင်း ဇီဝမျိုးစုံမျိုးကွဲများ ကာကွယ်ရန်နှင့်	သိသာထင်ရှားမှု မရှိ

		မလိုလားအပ်သော အနှောက်အယှက် မဖြစ်စေရန် ဝန်ထမ်းများအား အသိပညာပေးခြင်းအား ဆောင်ရွက်စေခြင်း။	
လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့်			
လေထု အရည်အသွေး နှင့် အနံ့	▪ အနီးပတ်ဝန်းကျင် အပေါ်ဖုန်မှုန့်နှင့် အနံ့ အသက် ထွက်ပေါ်မှုများမှ သက်ရောက်မှု။ ▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း (ကုန်ကြမ်းများအား သိုလှောင်ခြင်း၊ သယ်ပို့ခြင်း၊ ကြိတ်ခွဲခြင်း၊ ချိန်တွယ်ခြင်း နှင့် ရောနှောခြင်း) လုပ်ဆောင်နေစဉ် ဘေးပတ်ဝန်းကျင် အပေါ် ဖုန်/အမှုန် ထွက်ရှိမှုများကြောင့် ဖြစ်နိုင်ခြေ ရှိသော ထိခိုက်မှုများ။	▪ မွေးမြူရေးအစာ ကြိတ်ခွဲခြင်း လုပ်ငန်းတွင် ဖုန်/အမှုန် ထွက်ရှိမှုအား လျှော့ချစေရန် လေစုပ်စနစ်များ တပ်ဆင် ထားရှိရန်။ ▪ ကုန်ကြမ်းနှင့် feed additive များအား စနစ်တကျ သိုလှောင် ထားရှိရန်။ ▪ ကုန်ကြမ်းများ၊ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ သယ်ယူပို့ဆောင်ရာတွင် ဖုန်/အမှုန်ထွက်ရှိမှုကို လျော့ချရန်အတွက် Butterfly Conveyor များအသုံးပြုစေခြင်း။ ▪ အရေးပေါ် မီးစက်များ၊ ရွှေ့လျားသွားလာသော ယာဉ်များကို ပုံမှန်စစ်ဆေး ထိန်းသိမ်းခြင်း။ ▪ လုပ်ငန်းခွင်အတွင်း ဖုန်/အမှုန်ထွက်ရှိမှုများ လျော့နည်းစေရန် အတွက် လုပ်ငန်းခွင်အား သန့်ရှင်းစွာ စီစဉ်ဆောင်ရွက်ထားရန်။ ▪ စက်ရုံအတွင်း အလုပ်သမားများအား လုပ်ငန်း ဆောင်ရွက်စဉ်တွင်	သိသာထင်ရှားမှု မရှိ

		သင့်လျော်သော တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ ပေးဆောင်ခြင်းနှင့် ဝတ်ဆင်စေခြင်း။	
ဆူညံသံနှင့်တုန်ခါမှု	▪ ဆူညံမှုနှင့် တုန်ခါမှုမှ ဖြစ်ပေါ်နိုင်သော ထိခိုက်မှုများ	▪ စက်ယန္တရားများအားပုံမှန် ပြုပြင် ထိန်းသိမ်းပေးခြင်း၊ ▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းအား နေ့အချိန်တွင်သာ ပြုလုပ်စေခြင်း၊ ▪ အသံဆူညံသော နေရာများတွင် အလုပ်သမားများ အား နားကြပ်နှင့် အခြားသော လုပ်ငန်းခွင် ဘေးအန္တရာယ် ကာကွယ်ရေး ပစ္စည်း(PPE)များကို ထောက်ပံ့ပေးခြင်းနှင့် မဖြစ်မနေ အသုံးပြု စေခြင်း။	သိသာထင်ရှားမှု မရှိ
ရေအရည်အသွေး	▪ ဝန်ထမ်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ရေများ	▪ ရုံးများ၊ ထမင်းစားဆောင်များမှ ထွက်ရှိလာမည့် ရေဆိုးများအား မိလ္လာကန်စနစ်ဖြင့် သန့်စင်ခြင်း။ ▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်သည့်စက်ရုံတွင် သန့်ရှင်းရေး ပြုလုပ်ရာ၌ ရေမလိုဘဲ သန့်ရှင်းသည့် နည်းလမ်း အသုံးပြုပြီးမှသာ ရေဖြင့်ဆေးကြောစေခြင်း၊ ▪ ချောဆီ/ စက်ဆီများအတွက် သီးခြား သိုလှောင်နေရာများ ထားရှိခြင်း။ ▪ ချောဆီနှင့် စက်ဆီများ သိုလှောင်ထားရှိမည့် နေရာအား	သိသာထင်ရှားမှု မရှိ

		ကြမ်းခင်းများခင်း၍ စနစ်တကျ သေချာ သိုလှောင် ထားရှိစေခြင်း။	
အမှိုက် /စွန့်ပစ်ပစ္စည်း	▪ ကုန်ကြမ်းပစ္စည်းများမှ အပိုင်းအစများ၊ ထုတ်ပိုး အိတ်များ၊ ထုတ်ပိုး ပစ္စည်းများနှင့် ဝန်ထမ်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ပစ္စည်းများကြောင့် ဖြစ်ပေါ်လာသော သက်ရောက်မှုများ၊	▪ ထွက်ရှိလာသော အမှိုက်များကို ခွဲခြား၍ စနစ်တကျ စွန့်ပစ်စေခြင်း။ ▪ ပြန်လည်အသုံးပြုနိုင်သော အမှိုက်များကို စုဆောင်းခြင်း၊ ▪ စက်ရုံ ဝန်ထမ်းများအားလုံးသည် အမှိုက် လျှော့ချခြင်း၊ ပြန်လည်အသုံးပြုခြင်း၊ နှင့် ပြန်လည်ရယူခြင်း နိယာမကို လိုက်နာ ကျင့်သုံးခြင်း၊ ▪ ရန်ကုန်မြို့တော် စည်ပင်သာယာရေး ကော်မတီနှင့် ညှိနှိုင်း၍ ဆောင်ရွက်စေခြင်း၊	သိသာထင်ရှားမှု မရှိ
ဇီဝမျိုးစုံမျိုးကွဲ	▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းကြောင့် အပင်၊ သတ္တဝါနှင့် နေရင်းဒေသများ အပေါ် ထိခိုက်မှုများ	▪ စီမံကိန်းဧရိယာ ပြင်ပရှိနေရာများမှ သစ်ပင်များနှင့် တိရစ္ဆာန်များအား အနှောင့်အယှက် ဖြစ်စေခြင်းအား တားမြစ်ထားစေခြင်း၊ ▪ စီမံကိန်းအတွင်း သစ်ပင်များ စိုက်ပျိုးထားစေခြင်း။ ▪ တိရစ္ဆာန်များ ကာကွယ်ရန်နှင့် မလိုလားအပ်သော အနှောက်အယှက်မဖြစ်စေရန် ဝန်ထမ်းများအား အသိပညာပေးခြင်းအား ဆောင်ရွက်စေခြင်း၊	သိသာထင်ရှားမှု မရှိ
လူမှုစီးပွားရေး	▪ မြေယာအခြေအနေ ▪ ဒေသတွင်း စီးပွားရေး	▪ စီမံကိန်း လိုအပ်ချက်များနှင့် ကိုက်ညီသော ဒေသခံ အလုပ်သမားများကို အသုံးပြုနိုင်ရန် အတွက်	

	▪ အခြေခံအဆောက်အဦများ တိုးတက်လာခြင်း ▪ ယဉ်ကျေးမှု ဆိုင်ရာ အစိတ်အပိုင်းများ ▪ မြင်ကွင်းဆိုင်ရာ အစိတ်အပိုင်းများ ▪ လူမှုရေးဆိုင်ရာ စိုးရိမ်ပူပန်မှုများ	ရှင်းလင်းသော သတ်မှတ်ချက်များ ချမှတ်ပေးထားရန် ▪ အလုပ်အကိုင် ခန့်အပ်ခြင်းနှင့် ပက်သက်၍ စီမံကိန်းဘက်မှ တာဝန်ရှိသူများနှင့် ကျေးရွာ တာဝန်ခံများညှိနှိုင်းပြီး ဆောင်ရွက်ရန် ▪ ဒေသခံများအား အလုပ်အကိုင် အခွင့်အလမ်းများအား ပြောကြားပေးရန် ▪ ဒေသနေပြည်သူများ၏ တောင်းဆိုချက်များအပေါ် အခြေခံ၍ ကျေးရွာ ဖွံ့ဖြိုးတိုးတက်ရေးကို အထောက်အကူပြုမည့် CSR အစီအစဉ်များကို ပြင်ဆင်ဆောင်ရွက်ရန် ▪ လူမှုရေးဆိုင်ရာ စိုးရိမ်ပူပန်မှုများနှင့် တိုင်ကြားချက်များကို နားထောင်ပြီး ပြန်လည်ဖြေကြားနိုင်ရန် ဆက်သွယ်ရေးတာဝန်ခံ (Communication Officer) တစ်ဦး ခန့်အပ်ထားရှိရန်။	

၆။ လူထုတွေ့ဆုံဆွေးနွေးခြင်းနှင့် စီမံကိန်းဆိုင်ရာ သတင်းအချက်အလက် ဖြန့်ဝေခြင်း

၆.၁။ လူထုတွေ့ဆုံဆွေးနွေးခြင်း

ပတ်ဝန်းကျင် သက်ရောက်မှု လေ့လာဆန်းစစ်ခြင်းအား ပြင်ဆင်ရာတွင် အများပြည်သူကို ပါဝင်စေခြင်းမှာ စီမံကိန်းသည် ၄င်းတို့၏ နေထိုင်မှုအခြေအနေကို မည်သို့တိုးတက်စေ၊ သက်ရောက်မှုဖြစ်စေသည်များကို ပိုမိုနားလည်နိုင်ပြီး စီမံကိန်းကို လေ့လာသုံးသပ်နိုင်ရန် အတွက်ဖြစ်ပါသည်။ ထိုသို့လုပ်ဆောင်ခြင်းသည် ပတ်ဝန်းကျင် သက်ရောက်မှု လေ့လာဆန်းစစ်သည့် အဖွဲ့အနေဖြင့် သိသာထင်ရှားစွာ မြင်သာခြင်းမရှိသော သက်ရောက်မှုများ၊ ပြဿနာများကို ဖော်ထုတ်ရန် နည်းလမ်းတစ်ခုလည်း ဖြစ်ပါသည်။

<u>စီမံကိန်းကြောင့်ထိခိုက်ခံစားရသူများ</u>

မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်း တည်နေရာသည် မွေးမြူရေးနှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် တည်ရှိပါသည်။ စီမံကိန်းကြောင့် ဖြစ်ပေါ်နိုင်သော လူမှုရေးဆိုင်ရာ သက်ရောက်မှု လေ့လာဆန်းစစ်ရန် အတွက် စီမံကိန်းမှ ၅၀၀ မီတာအတွင်းရှိ ကျေးရွာများကို လေ့လာဆန်းစစ်ရန် သတ်မှတ်ထားပါသည်။

စဉ်	မြို့နယ်	ကျေးရွာအုပ်စု	ကျေးရွာ
၁	လှိုင်သာယာ (အနောက်ပိုင်း)	ကုလားကြီးစု	ကန်လှ
၂	လှိုင်သာယာ (အရှေ့ပိုင်း)	ရွှေလင်ဗန်း	ကျုံစု

၆.၂။ လူထုတွေ့ဆုံဆွေးနွေးခြင်းလုပ်ငန်းစဉ် အကျဉ်းချုပ်

(က) နယ်ပယ်တိုင်းတာသတ်မှတ်ခြင်း အဆင့် လူထုတွေ့ဆုံဆွေးနွေးခြင်းလုပ်ငန်းစဉ် အကျဉ်းချုပ်

Golden Apex International Trading Co., Ltd သည် မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအား စုစုပေါင်း မြေဧရိယာ ၀.၆၈၈ ဧက၊ မြေကွက်အမှတ် (၁၀၀+၁၀၁)၊ မွေးမြူရေးနှင့် မွေးမြူရေးထုတ်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီးတွင် အကောင်ထည်ဖော် ဆောင်ရွက်သွားမည်ဖြစ်ပါသည်။ နယ်ပယ်တိုင်းတာ သတ်မှတ်ခြင်း အဆင့် လူထုတွေ့ဆုံဆွေးနွေးပွဲကို ၂၀၂၅ ခုနှစ်၊ ဩဂုတ်လ ၂၁ ရက်တွင် လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ် အထွေထွေ အုပ်ချုပ်ရေးဦးစီးဌာန အစည်းအဝေးခန်းမတွင် ကျင်းပခဲ့ပါသည်။

လူထုတွေ့ဆုံဆွေးနွေးပွဲသို့ ဒေသနေပြည်သူများ၊ သက်ဆိုင်ရာ ကျေးရွာမှ ရပ်မိရပ်ဖများ နှင့် ကျေးရွာ အုပ်ချုပ်ရေးမှူးများ တက်ရောက် ခဲ့ကြပါသည်။ အထွေထွေ အုပ်ချုပ်ရေး ဦးစီးဌာန၊ သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန၊ ပြည်သူ့ကျန်းမာရေး ဦးစီးဌာန၊ မွေးမြူရေးနှင့် ကုသရေးဦးစီးဌာန၊ မြို့နယ်ရဲတပ်ဖွဲ့၊ မြို့နယ်မီးသတ်တပ်ဖွဲ့၊ မြို့နယ်စည်ပင်သာယာရေးကော်မတီ ၊ စက်မှုဇုန်ကော်မတီနှင့် စီမံကိန်းဧရိယာအနီး စိတ်ဝင်စားသူများ တက်ရောက်ခဲ့ကြသည်။

(ခ) ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် လူထုတွေ့ဆုံ ဆွေးနွေးခြင်း လုပ်ငန်းစဉ် အကျဉ်းချုပ်

Golden Apex International Trading Co., Ltd သည် ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် လူထုတွေ့ဆုံပွဲကို ၂၀၂၆ ခုနှစ် မတ်လ ၃၁ ရက်နေ့တွင် လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ် အထွေထွေ အုပ်ချုပ်ရေးဦးစီးဌာန အစည်းအဝေးခန်းမတွင် ကျင်းပခဲ့ပါသည်။

လူထုတွေ့ဆုံဆွေးနွေးပွဲသို့ ဒေသနေပြည်သူများ၊ သက်ဆိုင်ရာ ကျေးရွာမှ ရပ်မိရပ်ဖများ နှင့် ကျေးရွာ အုပ်ချုပ်ရေးမှူးများ တက်ရောက် ခဲ့ကြပါသည်။ အထွေထွေ အုပ်ချုပ်ရေး ဦးစီးဌာန၊ သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန၊ ပြည်သူ့ကျန်းမာရေး ဦးစီးဌာန၊ မွေးမြူရေးနှင့် ကုသရေးဦးစီးဌာန၊ မြို့နယ်ရဲတပ်ဖွဲ့၊ မြို့နယ်မီးသတ်တပ်ဖွဲ့၊ မြို့နယ်စည်ပင်သာယာရေးကော်မတီနှင့် စီမံကိန်းဧရိယာအနီး စိတ်ဝင်စားသူများ တက်ရောက်ခဲ့ကြသည်။

သဘာဝပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းနှင့် စီမံခန့်ခွဲမှုအစီအစဉ်ကို တတိယအဖွဲ့အစည်းမှ လူမှုရေး အတိုင်ပင်ခံမှ ရှင်းလင်းတင်ပြခဲ့ပါသည်။ မကျေနပ်ချက်များ၊ သဘော ထားများ၊ အကြံပြုချက်များကို ဆောင်ရွက်နိုင်ကြောင်း အစည်းအဝေးတွင် ထည့်သွင်း ဆွေးနွေးခဲ့ပါသည်။ အစိုးရအာဏာပိုင် အဖွဲ့အစည်းများ၊ ဒေသနေ ပြည်သူများ၊ စီမံကိန်းကို အဆိုပြုသူနှင့် တတိယအဖွဲ့အစည်းများ အစည်းအဝေးတွင် ပါဝင်ခဲ့ကြသည်။ အစည်းဝေးများမှ ထင်မြင်ချက်အားလုံးကို မှတ်တမ်းတင်ခဲ့သည်။

၇။ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်

Golden Apex International Trading ကုမ္ပဏီသည် အဆိုပြုထားသော စီမံကိန်း ဧရိယာအတွင်း သဘာဝပတ်ဝန်းကျင်ကို အပြည့်အဝ ကာကွယ်ရန် ကတိကဝတ် ပြုထားပြီး လုပ်ငန်းဆောင်ရွက်မှု ကာလအတွင်း အလားအလာရှိသော ဆိုးကျိုးများကို လျော့ပါးသက်သာစေရန်နှင့် စီမံကိန်းနှင့် ဆက်စပ်သော အကျိုးရှိသောသက်ရောက်မှုများကို မြှင့်တင်ရန် သဘာဝပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်ကို ရေးဆွဲ အကောင်အထည်ဖော် ဆောင်ရွက်မည် ဖြစ်ပါသည်။

၇.၁။ ပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အကျဉ်းချုပ်

အကြောင်းအရာ	စီမံခန့်ခွဲမှုအစီအစဉ်	အကောင်ထည်ဖော်ဆောင်ရွက်မှု အချိန်ဇယား
လေထုအရည်အသွေး နှင့် အနှံ့	**<u>ဖုန်/အမှုန် ထိန်းချုပ်ခြင်းနှင့် လေဝင်လေထွက်စနစ်</u>** ▪ မွေးမြူရေးအစာ ကြိတ်ခွဲခြင်း လုပ်ငန်းတွင် ဖုန်/အမှုန် ထွက်ရှိမှုအား လျှော့ချစေရန် လေစုပ်စနစ်များ တပ်ဆင်သွားပါမည်။ ▪ ကုန်ကြမ်းနှင့် feed additive များအား စနစ်တကျ သိုလှောင် ထားရှိမည် ဖြစ်ပါသည်။ ▪ ကုန်ကြမ်းများ၊ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ သယ်ယူပို့ဆောင်ရာတွင် ဖုန်/အမှုန်ထွက်ရှိမှုကို လျော့ချရန်အတွက် Butterfly Conveyor များအသုံးပြုသွားမည်။ ▪ အရေးပေါ် မီးစက်များ၊ ရွှေ့လျား သွားလာသော ယာဉ်များကို ပုံမှန်စစ်ဆေး ထိန်းသိမ်းသွားမည်။ ▪ လုပ်ငန်းခွင်အတွင်း ဖုန်/အမှုန်ထွက်ရှိမှုများ လျော့နည်းစေရန် အတွက် လုပ်ငန်းခွင်အား သန့်ရှင်းစွာ စီစဉ်ဆောင်ရွက်ထားရှိသွားမည် ဖြစ်ပါသည်။ ▪ စက်ရုံအတွင်း အလုပ်သမားများအား လုပ်ငန်းဆောင်ရွက်စဉ်တွင် သင့်လျော်သော တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ ပေးအပ်သွားမည် ဖြစ်ပါသည်။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်
ဆူညံသံနှင့်တုန်ခါမှု	▪ စက်ယန္တရားများအားပုံမှန် ပြုပြင် ထိန်းသိမ်းပေးသွားမည်။ ▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းအား နေ့အချိန်တွင်သာ သယ်ဆောင်သွားမည် ဖြစ်သည်။ ▪ အသံဆူညံသော နေရာများတွင် အလုပ်သမားများ အား နားကြပ်နှင့် အခြားသော လုပ်ငန်းခွင် ဘေးအန္တရာယ် ကာကွယ်ရေး ပစ္စည်း(PPE)များကို ထောက်ပံ့ပေးသွားမည်။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်

	အမျိုးသားပတ်ဝန်းကျင် အရည်အသွေး လမ်းညွှန်ချက်များ အတိုင်း လိုက်နာ ဆောင်ရွက် သွားပါမည်။	
ရေအရည်အသွေး	▪ စီမံကိန်းမှ စွန့်ပစ်ရည်များ ထွက်ရှိမှု မရှိပါ။ ▪ ရုံးများ၊ ထမင်းစားဆောင်များမှ ထွက်ရှိလာမည့် ရေဆိုးများအား မိလ္လာကန်စနစ်ဖြင့် သန့်စင်ခြင်းဖြင့် ဆောင်ရွက်သွားပါမည်။ ▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်သည့်စက်ရုံတွင် သန့်ရှင်းရေး ပြုလုပ်ရာ၌ ရေမလိုဘဲ သန့်ရှင်းသည့် နည်းလမ်း အသုံးပြုပြီးမှသာ ရေဖြင့်ဆေးကြောစေခြင်းအား ဆောင်ရွက်သွားပါမည်။ ▪ ချောဆီ/ စက်ဆီများအတွက် သီးခြား သိုလှောင်နေရာများ ထားရှိ သွားမည်ဖြစ်ပြီး သိုလှောင်ထားရှိမည့် နေရာအား ကြမ်းခင်းများခင်း၍ စနစ်တကျ သေချာ သိုလှောင် ထားရှိမည် ဖြစ်ပါသည်။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်
အမှိုက်/စွန့်ပစ်ပစ္စည်း	▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းမှ ထွက်ရှိလာသော ကုန်ကြမ်း အလေအလွင့်များအား ပြန်လည်အသုံးပြုခြင်း သို့မဟုတ် ပြင်ပသို့ ပြန်လည်ရောင်းချခြင်းအား လုပ်ဆောင် သွားပါမည်။ ▪ ထွက်ရှိလာသော အမှိုက်များကို ခွဲခြား၍ စနစ်တကျ စွန့်ပစ်စေခြင်း။ ▪ စက်ရုံ ဝန်ထမ်းများအားလုံးသည် အမှိုက် လျှော့ချခြင်း၊ ပြန်လည်အသုံးပြုခြင်း၊ နှင့် ပြန်လည်ရယူခြင်း နိယာမကို လိုက်နာ ကျင့်သုံးခြင်း၊ ▪ ပြန်လည်အသုံးပြုနိုင်သော အမှိုက်များကို စုဆောင်းခြင်း၊ ပြန်လည်အသုံးမပြုနိုင်သော အမှိုက်များအား မွေးမြူရေးနှင့် မွေးမြူရေး ထုတ်ကုန်ပစ္စည်း	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်

	ထုတ်လုပ်ရေး စက်မှုဇုန် နှင့် မြို့နယ်စည်ပင်သာယာရေး ကော်မတီဖြင့် ညှိနှိုင်း၍ သတ်မှတ်ထားသော နေရာများသို့ စွန့်ပစ်စေခြင်း။	
ဓိဝမျိုးစုံမျိုးကွဲ	▪ စီမံကိန်းဧရိယာ ပြင်ပရှိနေရာများမှ သစ်ပင်များ နှင့် တိရစ္ဆာန်များအား အနှောင့်အယှက် ဖြစ်စေခြင်းအား တားမြစ်ထားစေခြင်း။ ▪ စီမံကိန်းအတွင်း သစ်ပင်များ စိုက်ပျိုးထားစေခြင်း။ ▪ တိရစ္ဆာန်များ ကာကွယ်ရန်နှင့် မလိုလားအပ်သော အနှောက်အယှက် မဖြစ်စေရန် ဝန်ထမ်းများအား အသိပညာပေးခြင်းအား ဆောင်ရွက်စေခြင်း။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်
သယ်ယူ ပို့ဆောင်ရေး စီမံခန့်ခွဲမှု အစီအစဉ်	▪ ယာဉ်မောင်းများအား ယာဉ်အန္တရာယ် ကင်းရှင်းရေးနှင့် လမ်းအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာ သင်တန်းများ ပို့ချပေးခြင်း။ ▪ မွေးမြူရေးနှင့် မွေးမြူရေး ထုတ်ကုန်ပစ္စည်း ထုတ်လုပ်ရေး စက်မှုဇုန် အတွင်း လမ်းဆုံများတွင် လမ်းညွှန် ဆိုင်းဘုတ်များအား တပ်ဆင်ထားခြင်း။ ▪ သတ်မှတ်အမြန်နှုန်း သတိပေး ဆိုင်းဘုတ်များ တပ်ဆင်ထားခြင်း။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း အဆင့်
ဒေသခံ ပြည်သူများ ချိတ်ဆက် ပါဝင်စေခြင်းနှင့် ဒေသဖွံ့ဖြိုးရေး	▪ နစ်နာမှုဖြေရှင်းပေးရေး လုပ်ငန်းစဉ် ▪ အလုပ်အကိုင် ▪ ဒေသတွင်း စီးပွားရေးဖွံ့ဖြိုးတိုးတက်မှု ▪ ဒေသဖွံ့ဖြိုးရေးစီမံချက်/CSR	လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း
လုပ်ငန်းခွင် ကျန်းမာရေး နှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး	Golden Apex International Trading ကုမ္ပဏီသည် လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး အစီအမံများကို အကောင်အထည်ဖော် ဆောင်ရွက်နိုင်ရန် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး ကော်မတီကို ဖွဲ့စည်းစေခြင်း။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း အဆင့်

ဒေသခံ ပြည်သူများ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး	လုပ်ငန်းခွင်တွင် ရောဂါ တွေ့ရှိပါက သို့မဟုတ် ကူးစက်ရောဂါ ဖြစ်ပွားပါက ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာမြို့နယ် ကျန်းမာရေး ဦးစီးဌာနသို့ အကြောင်းကြားပြီး ညွှန်ကြားချက် များနှင့် အညီ ပူးပေါင်း ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။	တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ် ဆောင်ရွက်ခြင်း အဆင့်

၇.၂။ ပတ်ဝန်းကျင် အရည်အသွေး စောင့်ကြပ်ကြည့်ရှုရေး အချိန်ဇယား

စဉ်	ပတ်ဝန်းကျင်ဆိုင်ရာ အချက်များ	အချက်အလက် ကောက်ယူမည့် နေရာ	အကြိမ် အရေအတွက်	ဆောင်ရွက်မည့် အဖွဲ့အစည်း
တည်ဆောက်ခြင်း၊ လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်း နှင့် ပိတ်သိမ်းခြင်း				
၁	လေထုအရည်အသွေး	▪ ၁ နေရာ (စီမံကိန်း ဧရိယာအတွင်း) ▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	တစ်နှစ်လျှင် (၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၂	ဆူညံသံ	▪ ၁ နေရာ (စီမံကိန်း ဧရိယာအတွင်း) ▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	တစ်နှစ်လျှင် (၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၃	တုန်ခါမှု	▪ ၁ နေရာ (စီမံကိန်း ဧရိယာအတွင်း) ▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	တစ်နှစ်လျှင် (၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၄	မြေပေါ်ရေအရည်အသွေး	▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	(၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း

စဉ်	ပတ်ဝန်းကျင်ဆိုင်ရာ အချက်များ	အချက်အလက် ကောက်ယူမည့် နေရာ	အကြိမ် အရေအတွက်	ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၅	မြေအောက်ရေ အရည်အသွေး	▪ ၁ နေရာ (စီမံကိန်း ဧရိယာအတွင်း) ▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	(၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၆	အနှံ့	▪ ၁ နေရာ (စီမံကိန်း ဧရိယာအတွင်း) ▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	(၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၇	မြေအရည်အသွေး	▪ ၁ နေရာ (ကျုံစုကျေးရွာ) ▪ ၁ နေရာ (ကန်လှကျေးရွာ)	တစ်နှစ်လျှင် (၂) ကြိမ်	သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၈	စွန့်ပစ်အစိုင်အခဲ စီမံခန့်ခွဲမှု	စီမံကိန်းနေရာအတွင်း	ပုံမှန်/နေ့စဉ်	ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး ဌာန
၉	ဇီဝမျိုးစုံမျိုးကွဲ	စီမံကိန်းနေရာအတွင်း	တစ်နှစ်လျှင် (၂) ကြိမ်	ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး ဌာန(သို့) သဘာဝပတ်ဝန်းကျင် ဆိုင်ရာ ဆောင်ရွက်မည့် အဖွဲ့အစည်း
၁၀	နစ်နာမှုဖြေရှင်းပေးရေး လုပ်ငန်းစဉ်		နေ့စဉ် စောင့်ကြည့် မှတ်တမ်း တင်ခြင်း။	ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး ဌာန

Golden Apex International Trading ကုမ္ပဏီသည် သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဝန်ကြီးဌာန (MONREC) သို့ စောင့်ကြပ်ကြည့်ရှုမှုဆိုင်ရာ အစီရင်ခံစာအား တင်သွင်းသွားမည် ဖြစ်ပါသည်။

<u>စောင့်ကြပ်ကြည့်ရှုရေး အချက်အလက်ကောက်ယူရာ နေရာများ၏ ကိုဩဒိနိတ်များ</u>

စဉ်	အချက်အလက် ကောက်ယူမည့် နေရာ	လတ္တီကျူ	လောင်ဂျီကျူ
၁	AQNV 1	16°53'40.14"N	96° 2'12.86"E
၂	AQNV 2	16°53'48.37"N	96° 2'15.64"E
၃	AQNV 3	16°53'27.85"N	96° 2'15.15"E
၄	SW 1	16°53'45.92"N	96° 2'14.73"E
၅	SW 2	16°53'29.48"N	96° 2'13.40"E
၆	GW 1	16°53'40.66"N	96° 2'12.96"E
၇	GW 2	16°53'48.26"N	96° 2'14.66"E
၈	GW 3	16°53'28.51"N	96° 2'15.64"E
၉	OR 1	16°53'40.78"N	96° 2'12.68"E
၁၀	OR 2	16°53'47.97"N	96° 2'15.00"E
၁၁	OR 3	16°53'28.00"N	96° 2'14.64"E
၁၂	S 1	16°53'48.62"N	96° 2'15.30"E
၁၃	S 2	16°53'28.33"N	96° 2'14.40"E

၇.၃။ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုနှင့် စောင့်ကြပ်ကြည့်ရှုရေးစီမံချက်များ အတွက် ကုန်ကျစရိတ်

Golden Apex International Trading ကုမ္ပဏီသည် ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်အတွက် နှစ်စဉ် ကုန်ကျစရိတ် စုစုပေါင်း မြန်မာကျပ်ငွေ ၂၁,၇၀၀,၀၀၀ ကျပ် (ခန့်မှန်းကုန်ကျစရိတ်) နှင့် ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်အတွက် နှစ်စဉ် ကုန်ကျစရိတ် စုစုပေါင်း မြန်မာကျပ်ငွေ ၂၉,၃၀၀,၀၀၀

ကျပ်(ခန့်မှန်းကုန်ကျစရိတ်) အား အသုံးပြုသွားမည် ဖြစ်ပါသည်။ ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှုနှင့် စောင့်ကြပ် ကြည့်ရှုရေး စီမံချက်များ အကောင်အထည် ဖော်ရာတွင် ခန့်မှန်း ကုန်ကျစရိတ် မလုံလောက်ပါက ဘတ်ဂျက်ကို ထပ်မံပြင်ဆင်သွားမည် ဖြစ်ပါသည်။

<u>ပတ်ဝန်းကျင်ဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ်အတွက် နှစ်စဉ် ကုန်ကျစရိတ်</u>

အကြောင်းအရာ	ကုန်ကျစရိတ် (မြန်မာကျပ်ငွေ)
လေထုအရည်အသွေးနှင့် အနံ့ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၂,၄၀၀,၀၀၀
ဆူညံသံနှင့် တုန်ခါမှု စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၂,၄၀၀,၀၀၀
မြေဆီလွှာနှင့် ဘူမိဗေဒ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် ကုန်ကျစရိတ်	၈၀၀,၀၀၀
ရေအရည်အသွေး စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၂,၁၀၀,၀၀၀
စွန့်ပစ်အစိုင်အခဲ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၅၀၀,၀၀၀
ဇီဝမျိုးစုံမျိုးကွဲများ (အပင်နှင့်အကောင်)စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် ကုန်ကျစရိတ်	၁,၀၀၀,၀၀၀
သယ်ယူပို့ဆောင်ရေးစီမံခန့်ခွဲမှုအစီအစဉ်	၅၀၀,၀၀၀
ဒေသခံပြည်သူများ ချိတ်ဆက် ပါဝင်စေခြင်းနှင့် ဒေသဖွံ့ဖြိုးရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၅၀၀,၀၀၀
လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် ကုန်ကျစရိတ်	၂,၀၀၀,၀၀၀
အများပြည်သူ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၁,၀၀၀,၀၀၀
အရေးပေါ်တုံ့ပြန်ရေးနှင့် ကယ်ဆယ်ရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် ကုန်ကျစရိတ်	၅၀၀,၀၀၀
ဒေသဖွံ့ဖြိုးရေး CSR	၃,၀၀၀,၀၀၀
ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာဌာန အတွက် ကုန်ကျစရိတ်	၅,၀၀၀,၀၀၀
စုစုပေါင်း	**၂၁,၇၀၀,၀၀၀**

ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ်အတွက် နှစ်စဉ် ကုန်ကျစရိတ်

အကြောင်းအရာ	ကုန်ကျစရိတ် (မြန်မာကျပ်ငွေ)
လေထုအရည်အသွေးနှင့် အနံ့ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၆,၀၀၀,၀၀၀
ဆူညံသံနှင့် တုန်ခါမှု စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၄,၈၀၀,၀၀၀
မြေအရည်အသွေး စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၂,၀၀၀,၀၀၀
ရေအရည်အသွေး စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၇,၀၀၀,၀၀၀
စွန့်ပစ်အစိုင်အခဲ စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၅၀၀,၀၀၀
ပြန်လည်ကုစားရေးအစီအစဉ် စောင့်ကြပ်ကြည့်ရှုရေး အတွက် ကုန်ကျစရိတ် (ဇီဝမျိုးစုံမျိုးကွဲများ စီမံခန့်ခွဲမှု အစီအစဉ် အပါအဝင်)	၃,၀၀၀,၀၀၀
သယ်ယူပို့ဆောင်ရေးအစီအစဉ် စောင့်ကြပ်ကြည့်ရှုရေးအတွက် ကုန်ကျစရိတ်	၅၀၀,၀၀၀
နစ်နာမှုဖြေရှင်းပေးရေး လုပ်ငန်းစဉ် စောင့်ကြပ်ကြည့်ရှုရေး အစီအစဉ် အတွက်ကုန်ကျစရိတ်	၅၀၀,၀၀၀
လုပ်ငန်းခွင် ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် စောင့်ကြည့်ကုန်ကျစရိတ်	၂,၀၀၀,၀၀၀
အများပြည်သူ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာ စီမံခန့်ခွဲမှု အစီအစဉ် အတွက် စောင့်ကြည့်ကုန်ကျစရိတ်	၁,၀၀၀,၀၀၀
အရေးပေါ်တုံ့ပြန်ရေးနှင့် ကယ်ဆယ်ရေးဆိုင်ရာ အစီအစဉ် အတွက် စောင့်ကြည့် ကုန်ကျစရိတ်	၅၀၀,၀၀၀
ဒေသဖွံ့ဖြိုးရေး CSR အတွက် စောင့်ကြည့် ကုန်ကျစရိတ်	၁,၀၀၀,၀၀၀
ပတ်ဝန်းကျင်၊ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေးဆိုင်ရာဌာန အတွက် ကုန်ကျစရိတ်	၅၀၀,၀၀၀
စုစုပေါင်း	**၂၉,၃၀၀,၀၀၀**

၈။ နိဂုံးချုပ်နှင့် အကြံပြုချက်များ

မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်း၏ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာ အား မြန်မာနိုင်ငံ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၂၀၁၅) ပါ လမ်းညွှန်ချက်များအတိုင်း ပြုစုထားပါသည်။ စီမံကိန်း လုပ်ဆောင်ချက်များကို စနစ်တကျ ခြုံငုံသုံးသပ်ခြင်းဖြင့် ဖြစ်နိုင်ချေရှိသော သက်ရောက်မှုများ သတ်မှတ်ဖော်ထုတ်ထားသော ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ချက်တွင် စီမံကိန်း လုပ်ဆောင်ချက်များ၊ သဘာဝပတ်ဝန်းကျင်နှင့် လူမှုဝန်းကျင်ဆိုင်ရာ အရင်းအမြစ်များ (သို့) သက်ရောက်ခံများ နှင့် အပြန်အလှန်သက်ရောက်များကိုပါ ထည့်သွင်း စဉ်းစားထားပါသည်။

စီမံကိန်း ဆောင်ရွက်ချိန်တွင် ဖြစ်ပေါ်နိုင်သော လူမှုဝန်းကျင်ဆိုင်ရာ သက်ရောက်မှုများမှာလည်း အနည်းငယ်သော သက်ရာက်မှုထက် မပိုနိုင်သည့်အပြင် အကြံပြုထားသော လျော့ပါးစေရေး နည်းလမ်းများကို ကောင်းမွန်စွာ အကောင်အထည်ဖော် ဆောင်ရွက်စေခြင်းဖြင့် ပတ်ဝန်းကျင်ထိခိုက် မှုဆန်းစစ်ခြင်း အစီရင်ခံစာကို အဆုံးသတ်ထားပါသည်။

1. EXECUTIVE SUMMARY

1. Introduction

Golden Apex International Trading Co., Ltd, a 100% Myanmar citizen-owned company, proposes to establish and operate an animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The expected total investment for this project is 4,939.919 million kyat and expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026. During the operational phase, the facility is expected to employ a total of 104 workers to support production and related activities.

Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Its operations focus on producing nutritionally balanced, hygienic, and fresh feed pellets that contribute to increased productivity in livestock farming. In addition to maintaining high standards of quality, the company is committed to offering its products at affordable prices to serve not only commercial livestock producers but also small-scale livestock farmers throughout the country.

Golden Apex International Trading Co., Ltd sources the raw materials required for the production of animal nutrition feed and feed additive both locally and internationally. These materials are systematically stored in designated warehouses and are processed according to predetermined formulations using grinding and mixing machines. The resulting semi-finished feed is subsequently cooled, weighed, and packed into standardized bags before being stored in company warehouses. These finished products are then distributed and sold to livestock farmers across the country at reasonable prices.

Project Proponent

Proponent Name:	**Golden Apex International Trading Co., Ltd**
Contact Person:	Daw Kay Thwe Aung Director
Address:	No. (90 A/B), Near Yoe Gyi Yoe Lay Roundabout, West University Road, Htantapin Township, Yangon Region.
Telephone Number:	+95 9 5098028
E mail:	goldenapexmyanmar@gmail.com

Following Table shows relevant organization of project implementation and implementation organizations of EIA.

Project proponent	Golden Apex International Trading Co., Ltd
Implementation organizations of EIA	Environmental Compliance Consultancy Co., Ltd

2. Policy, Legal and Institutional Framework

The Company hereby formally undertakes to comply with all environmental protection requirements in relation to its animal feed mill factory. This commitment is made in accordance with the Environmental Conservation Law (2012), the Environmental Conservation Rules (2014), the Environmental Impact Assessment (EIA) Procedure (2015), and all applicable rules, regulations and guidelines of the Republic of the Union of Myanmar.

The company shall-

- Consult with qualified environmental conservation specialists in order to prevent any potential environmental impacts arising from construction activities and subsequent operations.
- Implement effective environmental management practices to minimize potential environmental impacts, including air emissions, noise, solid waste, and wastewater generation for pollution prevention.

- Allocate Corporate Social Responsibility (CSR) fund for environmental conservation activities to support local environmental protection and rehabilitation programs.
- Conduct training programs and awareness sessions for its employees to ensure that all staff are knowledgeable about best practices in environmental management and workplace safety and to reduce potential occupational health risks.

2.1 Related Environmental laws, Rules, Regulations and Policies

Related Laws and policies on environmental management and protection in Myanmar that are applicable to the present Animal Feed Mill Factory (Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region) are presented in the following. The project proponent (Golden Apex International Trading Co., Ltd) commits to comply the following laws, rules, regulations, and guidelines.

No	Law, Act or Regulation
1	The Environmental Conservation Law (2012)
2	The Environmental Conservation Rules (2014)
3	Environmental Impact Assessment Procedures (2015)
4	National Environmental Quality (Emissions) Guidelines (2015)
5	Myanmar Investment Law (2016)
6	Myanmar Investment Rules (2017)
7	Export Import Law (2012)
8	Yangon City Development Law 2018
9	Factory Act (1951) (Amended in 2016)
10	The Standardization Law (2014)
11	Prevention of Hazard from Chemicals and Related Substances Law (2013)
12	The Petroleum and The Petroleum Product law (2017)

13	Myanmar Fire Brigade Law (2015)
14	Myanmar Insurance Law (1993)
15	Traffic Safety and Motor Vehicle Management Law (2020)
16	Public Health Law (1972)
17	The Prevention and Control of Communicable Diseases Law (1995), Amendment in (2011)
18	The Control of Smoking and Consumption of Tobacco Product Law (2006)
19	Occupational Health and Safety Law (2019)
20	The Protection and Preservation of Ancient Monuments Law (2015)
21	The Protection and Preservation of Antique Objects Law (2015)
22	The Ethnic Rights Protection Law (2015)
23	Conservation of Water Resources and Rivers Law (2006)
24	Conservation of Water Resources and Rivers Rule (2013)
25	Underground Water Act, 1930
26	The Land Acquisition Act (1894)
27	The Farmland Law (2012)
28	Vacant, Fallow, Virgin Land Management Law
29	Employment and Skill Development Law (2013)
30	The Settlement of Labour Dispute Law (2012)
31	Workmen's Compensation Act (1923), Amendment in (2005)
32	Labour Organization Law (2011)
33	Minimum Wages Law, 2013

34	The Payment of wages Law (2016)
35	Social Security Law, 2012
36	Leaves and Holidays Act, 1951
37	The Private Industrial Enterprise Law (1990)
38	Myanmar Engineering Council Law (2013)
39	The Electricity Law (2014)
40	The Highways Law (2000)
41	Animal Health and Livestock Development Law (2020)
42	Natural Disaster Management Law (2013)
43	The Ethnic Rights Protection Rules (2019)

3. Project Description and Alternatives

Golden Apex International Trading Co., Ltd, a 100% Myanmar citizen-owned company, proposes to establish and operate an animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The expected investment period is 22 years.

The proposed project of animal feed mill factory will produce three main group feed product types such as poultry, pig/swine and fish feed. The estimated production tonnage for poultry, pig/swine and fish feed are 726.14 tons per day and 217,842 tons per year.

3.1 Type of Animal Feed Products

Product list of Animal Feed Mill Factory

No	Group of Product	Product List
1	Poultry	Laying Feed Starter (16 weeks to 19 weeks)
		Laying Feed Grower (19 weeks to 45 weeks)
		Laying Feed Finisher (>45 weeks)
		Broiler Feed Starter (0 day to 20 days)
		Broiler Feed Grower (21 days to 40 days)
		Broiler Feed Finisher (40 days to MKT)
2	Pig/swine	Pig/Swine Feed Starter (5 kilograms to 30 kilograms)
		Pig/Swine Feed Grower (30 kilograms to 70 kilograms)
		Pig/Swine Feed Finisher (> 70 kilograms)
3	Fish Feed	Aqua Feed (Fish) (25% Protein)

3.2 Production Process of Animal Feed Mill

Requirements for the raw materials for the production of animal nutrition feed and feed additives are met by imports from both local and international sources. Upon receipt, these materials are systematically stored in designated warehouses. During the feed production process, precise quantities of raw ingredients are measured and mixed according to predetermined formulations, then processed using grinding and mixing machines. The resulting semi-finished feed is subsequently cooled, weighed, and packed into standardized bags before being stored in warehouses. These finished products are then distributed and sold to livestock farmers across the country at reasonable prices.

Procedure for Animal Feed Mill Products

Raw materials stored in warehouses I and II are sent to the production building. The following steps outline the production stages of the animal feed mill process:

1. Import Raw Material
2. Conveying Raw Material
3. Weighting
4. Mixing
5. Grinding
6. Conveying with Butterfly conveyor
7. Shaking

3.3 Electricity and Fuel Equipment

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 KVA transformer. Another source of energy 500 KVA generator and 300 KVA generator will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Estimate electricity usage is 40 Mega Watt (40000 kwh) per month. Annual fuel consumption for the animal feed mill factory is 6,000 gallons of diesel per year, 900 gallons of gasoline per year, and 12 gallons of lubricant per year.

3.4 Water Requirement

Two tube well water supplies will be used for this project which is located in the project areas. Its depth is 120 ft with 1.5 inches submersible pump and the water is stored at the overhead fiber 3 tank and one concrete tank. According to the MIC proposal, approximately water used for operation process is 96,000 cubic feet per year which is the total water consumption production of animal nutrition feed. Drinking water will be provided by outsource suppliers.

3.5 Consideration of Alternatives

The analysis of alternative is the process of comparing potential impacts and mitigation options of a series of alternative location, technologies, operation to identify optimal alternatives that meets national legislation. These alternatives can include variations in layout, alternative engineering process, grinding process, and raw material handling, those with appropriate environmental and risk management system.

The animal feed mill factory is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Golden Apex International Trading Co., Ltd, is committed to offering its products at affordable prices to serve not only commercial livestock producers but also small-scale livestock farmers throughout the country.

Analysis of alternatives based on site and technology are given below:

a) Alternative Location
b) Alternative Technologies
c) No project alternatives

4. Description Of Natural and Social Environment

The following section briefly describes the surrounding environments such as physical environment, biological environment and socioeconomic profile that characterize the potential area of influence of the present project.

4.1 Physical Components

Climate and Meteorology	Hlaingtharya (west) Township is located in a tropical monsoon climate zone, characterized by a distinct wet season from May to October and a dry season from November to April. The area experiences high humidity and warm temperatures throughout the year. The annual average temperature ranges from 23°C to 33°C, with the hottest months being March to May, during which temperatures can exceed 34°C. Yangon receives an average annual rainfall of approximately 2,681 mm, with over 70% of the rainfall occurring during the monsoon season (June to October). The peak rainfall months are July and August, each averaging 500-600 mm. Relative humidity remains high year-round, averaging 70-85%, peaking during the monsoon season. Prevailing winds during the dry season blow from the northeast, while during the monsoon, they shift to the southwest, consistent with regional monsoon circulation patterns.
Topography	Hlaingtharya (West) Township is characterized by flat and low-lying terrain. Yangon Region, including Hlaingtharya, is situated on an extensive deltaic plain, with average elevations ranging from 3 to 10 meters above mean sea level. The landscape is largely flat, with very gentle slopes toward tidal rivers and creeks. The project area in Hlaingtharya is almost level, with elevation generally between 5 and 8 meters.

Regional Geology Setting	Hlaingtharya (west) Township is characterized by extensive alluvial and deltaic deposits derived from sedimentation processes of the Ayeyarwady River system and its distributaries, including the Hlaing and Pan Hlaing Rivers. The geological framework of this area consists primarily of Quaternary deposits (Holocene to Recent age) overlying older Neogene sediments. These deposits include unconsolidated to semi-consolidated clay, silt, fine sand, and occasional organic-rich layers formed by riverine and tidal.
Hydrology	Hlaingtharya (west) Township is located on the western side of Yangon and is hydrologically influenced by the Hlaing (Yangon) River, which is part of the tidal estuary system of the Yangon River. The water level of the Hlaing River is subject to tidal fluctuations. The region experiences a tropical monsoon climate with distinct wet and dry seasons. The annual average rainfall in Yangon is approximately 2,681 mm, with more than 80% of precipitation occurring between June and October during the southwest monsoon. The heaviest rainfall typically occurs in July and August, when monthly averages can exceed 600 mm.

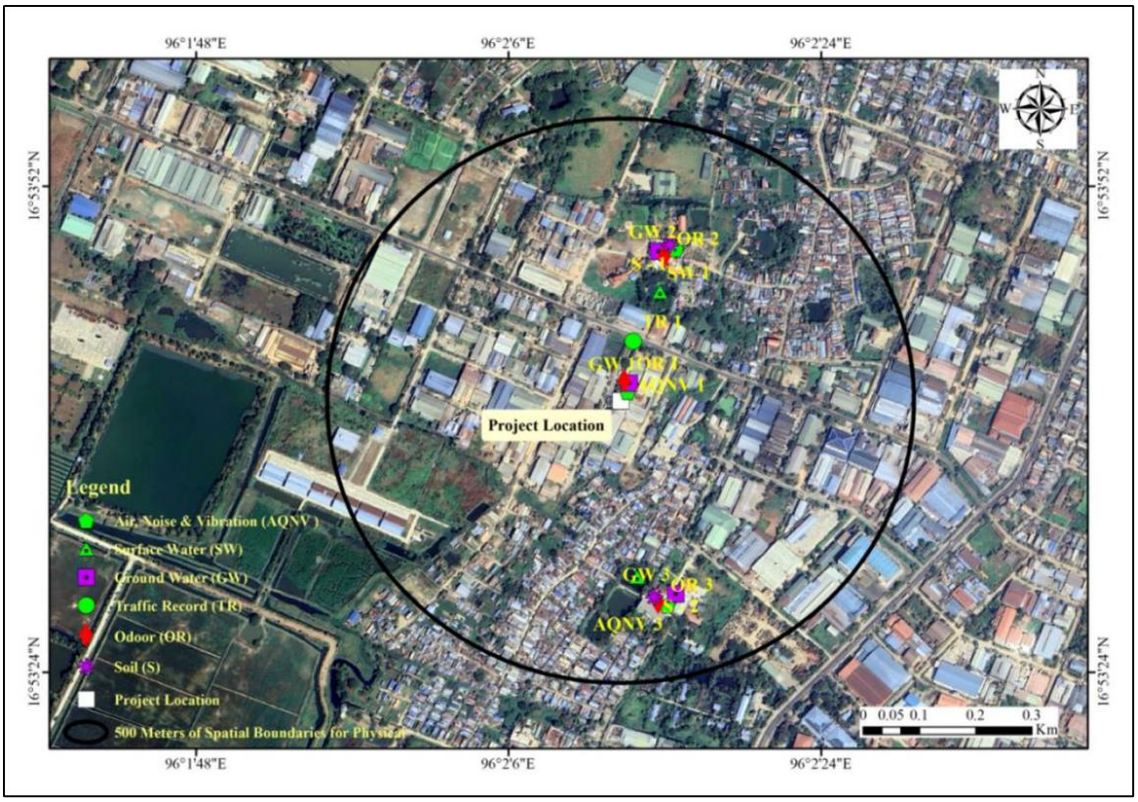
Summary of Physical Environmental Survey

Air Quality & Meteorology	Number of samples	Three points
	Parameter	SO_2, NO_2, Ozone, PM 2.5, PM 10, Relative Humidity, Temperature, Wind speed and Wind direction
	Period	For 24 hours duration at one time
	The average values of ambient gaseous levels for 24 hours air quality monitoring is shown in Section 5. According to the survey results, the average 24-hour period for PM2.5, PM10 and SO2 concentrations are within the National Environmental	

	Quality (emission) Guideline. The daily 8-hour maximum ozone level is within the 100 ug/m^3 standard. 24-hour concentrations of NO_2 are not controlled by the applied standard. But the concentration of NO_2 was referred to by the one-hour standard in NEQG. According to the hourly results, the concentration of NO_2 is lower than the applied standard.	
Noise Level	Number of samples	Three points
	Parameter	LAeq (A-weighted loudness equivalent)
	Period	For 24 hours duration at one time
	The results are compared with "Industrial, commercial" environment of Myanmar National Environmental Quality (Emission) Guideline. By means of the calculated results, daytime and nighttime noise level result of N-1, N-2, and N-3 are lower than the applied standard within the survey period.	
Surface Water Quality	Number of samples	Two points
	Parameter	pH, DO, EC, TDS, Turbidity, TSS, BOD, COD, Oil & Grease, Total Nitrogen, Total Phosphorus
	Period	One time
	The survey results of the surface water is well within the NEQG guideline.	
Groundwater Quality	Number of samples	Three points
	Parameter	pH, Color, Turbidity, TDS, TSS, Total Solids, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Sodium Chloride, Iron, Manganese, Total Alkalinity, Carbonate, Bi-Carbonate, Sulfate, Salinity, Arsenic, Dissolved Oxygen
	Period	One time
	The survey results of the groundwater is well within the NEQG guideline.	

Soil Quality	Number of samples	Two points
	Parameter	pH, Cadmium, Copper, Zinc, Manganese, Lead, Chromium, Nickel, Iron
	Period	One time
	Chemical properties for soil was analyzed in the laboratory of Land Use Department of Yangon Region. The results of soil quality survey are lower than the applicable guideline.	
Vibration	Number of samples	Three Points
	Parameter	Lvmax
	Period	For 24 hours duration at one time
	According to the calculated results, all vibration level (Lvmax) V1, V2, and V3 are lower than the applied standard.	
Odor	Number of samples	Three Points
	Parameter	Odor
	Period	One Time
	According to the calculated results, all Odor level OR 1, OR 2, and OR3 are lower than the applied standard.	

Location of Physical Environmental Survey



4.2 Biological Components

Flora	The project site is situated within the Livestock and Livestock Products Manufacturing Industrial Zone of Hlaingtharya Township, Yangon Region. The project site and nearby areas are heavily developed, with many factories, buildings, and concrete roads. No natural habitats remain. There are some few scattered natural trees, roadside planted trees, planted trees, shrubs, grasses, and small patches of man-made habitats such as manmade ponds and swampy area covering with shrubs, herbs and grass provide limited habitats. A total of 36 flora species were recorded within the AOI of the project site. It includes 19 species of planted trees, 9 species of natural plants and 8 species of herb, shrubs and grass.
Fauna	During the survey period, 22 species of Bird, 17 amphibians and reptiles, 3 small mammals, and 8 butterfly and dragonfly species in the survey area. Based on the Globally Threatened species IUCN Red List (2022), there were no threatened species in this area.

4.3 Socio Economic Components

The project area is located in Hlaingtharya (West) Township, Yangon Region. The township is between North Latitude between 16° 47" and 20° 12" and East Longitude between 96° 12" and 100° 13". The total area is 12.24 square miles. According to the 2023 township profile data of the General Administration Department, Hlaingtharya (West) Township consisted of eleven wards, four village tracts, and nine villages. The villages adjacent to the project site within a 500-meter radius is included in the Social AOI such as Kan Hla and Kyon Su village.	
Social Profile	
Population in the Studied Area	According to the survey results, Kan Hla and Kyon Su villages have a combined total of 7,429 households. Among them, Kan Hla Village accounts for 3,488 households, while Kyon Su Village has a slightly higher number with 3,941 households. This means Kyon Su represents the larger share of households between the two villages, contributing just over half of the total.
Distribution of Marital Status among Respondents	Among the 74 respondents, the majority were married, accounting for 61 respondents (82.4%). Single respondents represented a small proportion with 4 respondents (5.4%), while 9 respondents (12.2%) were widowed. This distribution shows that most participants in the survey were married.
Religion of respondents	Among the 74 respondents, the vast majority were Buddhist, with 71 respondents accounting for 95.9% of the total. A small proportion of respondents, 3 individuals (4.1%), identified as Christian. This indicates that Buddhism is the predominant religion among the survey participants.

Economic Condition	
Occupation Status in the Studied Area	The occupational profile of the respondents shows a diverse range of livelihoods. Nearly half of the respondents (48.6%) fall under the "Other" category, indicating engagement in occupations not specifically listed in the survey. Small business owners form the second-largest group, accounting for 32.4% of respondents, highlighting the importance of self-employment in the study area. Casual laborers represent 8.1%, followed by skilled laborers at 4.1%. A small proportion of respondents are engaged in tailoring (2.7%). Occupations such as agriculture, government service, and private employment each account for 1.4% of the total respondents. Overall, the results suggest that informal and self-employed occupations dominate the local economic structure.
Monthly Household Expenditure Level of Respondents	The expenditure pattern of respondents shows that the largest proportion falls within the 400,001–600,000 range, accounting for 37.8% of the total respondents. This is followed by those spending 200,001–400,000 (25.7%) and 800,001 and above (21.6%). A smaller share of respondents spend 600,001–800,000 (9.5%), while only 5.4% report expenditures below 200,000.
Respondents' Monthly Income	The income distribution of the 74 respondents shows that the majority earn between 400,001 and 600,000 MMK, accounting for 45.9% of the total. This is followed by respondents earning 800,001 MMK and above (21.6%) and those in the 200,001–400,000 MMK range (20.3%). Only a small proportion of respondents earn below 200,000 MMK (2.7%) or between 600,001–800,000 MMK (9.5%).

Ownership of housing unit	The results indicate that the majority of respondents live in owner-occupied housing. Out of the total 74 respondents, 48 households (64.9%) reported that they own their housing units. In contrast, 26 respondents (35.1%) live in rented accommodations.
Sources of Lighting	All surveyed households (100%) reported using government electricity as their main source of energy for lighting. This indicates that electricity supply in the studied area is universal for lighting purposes, and alternative energy sources such as solar or kerosene are not used by the respondents for this purpose.
Sources of Energy for Cooking	The majority of households (97.3%) reported using government electricity as their main source of energy for cooking, while a small minority (2.7%) rely on firewood. This indicates that electricity is the dominant energy source for cooking in the studied area, with very few households depending on traditional fuels.
Education	
Education Level of Respondents	Regarding educational attainment, the largest proportion of respondents had completed primary education, accounting for 27 respondents (36.5%). This was followed by middle school education with 25 respondents (33.8%) and high school education with 13 respondents (17.6%). A smaller number of respondents had attended monastic schools (5 respondents, 6.8%). Very few respondents reported no formal schooling or graduate-level education, each representing 1 respondent (1.4%), while 2 respondents (2.7%) were currently attending university. Overall, the findings indicate that most respondents had attained education up to the primary and middle school levels.

Public Health Condition	
Health Care Condition of Hlaingtharya (West) Township	Two private hospital, 86 clinic, and four rural health care center are located in the township, but there is not public hospital in Hlaingtharya (west) Township.
Domestic Water Supply in the Studied Area	The survey results show that the majority of households (86.5%) rely on wells as their main source of domestic water. A smaller proportion uses lakes (9.5%), while only a few households depend on municipal supply, rivers/streams, or other sources (1.4% each). This indicates that groundwater is the predominant source of domestic water in the studied area, with very limited access to municipal or surface water supplies.
Sources of Drinking Water	The majority of households (97.3%) use purified water as their main source of drinking water, while a small minority (2.7%) rely on rainwater. This indicates that purified water is the dominant source for safe drinking in the studied area, reflecting a high level of awareness and access to potable water among the respondents.
Cultural Characteristic	
Hlaingtharya Township was established in 1989 to resettle squatters, becoming a major industrial center and home to the Hlaingtharya Industrial Zone and the FMI City housing development after 1991. In 2020, the Hlaingtharya Township was split into two townships- Hlaingtharya (east) Township and Hlaingtharya (west) Township. Shwe Yin Aye Pagoda and Sat Ta Mee Pagoda are located around the project. The history of the Hteinbin cemetery and two pagodas weren't long and their established period were nearly same with Hlaingtharya (west) Township. There is no heritage site in Hlaingtharya Township. Two pagodas, 134 monasteries and five nun schools are located in the study township.	

5. Impact Assessment and Mitigation Measure

Environmental Components	Potential Impacts	Mitigation Measures	Residual Impact Significance
Pre-Construction and Construction Phase			
Air Quality	▪ Vehicle emissions and fugitive dust	▪ Apply regular water spraying on active excavation areas, unpaved internal roads, and soil stockpiles to suppress fugitive dust. ▪ Limited the speed of trucks and other vehicles accessing the project area. ▪ Perform regular maintenance for all construction machinery and generators to ensure fuel efficiency and reduce exhaust smoke.	Insignificant
Noise and Vibration	▪ Noise and vibration from construction activities	▪ Maintain all construction machinery and vehicles regularly. ▪ Provide earplugs or earmuffs for workers exposed to high noise levels. ▪ Limit high-noise construction activities to daytime working hours.	Insignificant
Vegetation	▪ Disturbance of natural habitats in the construction site areas	▪ To avoid accidental harm to animals moving in the surrounding environment, ▪ To promote local greening and habitat enhancement - planting native or locally adapted trees and shrubs around the project boundary can provide shade, improve air quality, support common urban fauna (birds, butterflies, and insects), thereby	Insignificant

		enhancing the limited ecological value of the industrial zone, and ▪ To raise environmental awareness to the workers for the protection of local biodiversity.	
Operation Phase			
Air Quality and Odor	▪ Potential Impact from Dust and Odor Emissions on Surrounding Environment. ▪ Dust and Odor Emission from raw material storage, handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material	▪ Install bag filter or collector to capture dust from handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material. ▪ To control dust and odor release, raw materials and feed additives will be stored in sealed containers or covered storage areas. ▪ Butterfly conveyors (lower-capacity) will be used to limit material transfer rates and reduce dust generation. Transfer points will be covered, and drop heights minimized. ▪ Maintain and service all transport vehicles and machinery regularly to minimize exhaust emissions. ▪ Keep the animal feed mill factory area dry and well-ventilated; will be implemented to prevent fugitive dust emissions. ▪ Provide respiratory masks and proper PPE for animal feed mill factory workers.	Insignificant
Noise and Vibration	▪ Potential Impacts on	▪ Regularly maintain all operational machinery such as grinding, hammer,	Insignificant

	Noise and Vibration	fans, and generators to prevent excessive noise. ▪ Restrict transportation of raw material and feed additives to daytime hours. ▪ Provide mandatory Personal Protective Equipment (PPE), such as earplugs or earmuffs, for all workers stationed in the production and utility areas.	
Water Quality	▪ Water Quality Degradation ▪ Runoff Water	▪ Wastewater generated from offices, canteens, and staff accommodation is treated by septic-seepage system ▪ Implement a dry-cleaning method (vacuuming or sweeping) for the production floor to minimize the need for water-based washing and reduce wastewater volume. ▪ Create a special storage for lubricants and oil ▪ To take care not to spill the fuel, engine oil and grease to prevent the surface runoff water bodies pollution,	Insignificant
Solid Waste	▪ Organic waste such as crushed cereal grain dust, and rejected raw materials and Domestic waste are generated from animal feed mill factory	▪ Follow the 5Rs principles for solid waste: reduce, reuse, recover, recycle, and redesign, where possible. ▪ Provide clearly labeled, color-coded bins throughout the facility for the segregation of organic, recyclable (plastic/paper), and non-recyclable wastes. ▪ Coordinate with Livestock and Livestock Products Manufacturing Industrial Zone and Hlaingtharya	Insignificant

		(West) Township Development Committee for domestic and sewage disposal	
Biodiversity	▪ Impact on Flora and Fauna	▪ Do not disturb the vegetation and animals outside the designated area, ▪ Maintain all mature trees within the project development area, and ▪ Raise environmental awareness to the workers for the protection of local biodiversity.	Insignificant
Socioeconomic	▪ Land Acquisition ▪ Local Economy ▪ Existing Social Infrastructure and Service ▪ Cultural Components ▪ Aesthetic views ▪ Social Concerns	▪ To have clear stipulation of using local labour in accordance with the needs of the project ▪ To ensure that the project site responsibilities liaise closely with local village leaders and local government authorities to agree on appropriate procedures for recruitment and hiring ▪ Inform local villagers of job opportunities in a timely manner ▪ To track and monitor concerns associated with project employment or workforce recruitment ▪ Recruitment should be prioritized on local sources based on the needs of project activities. ▪ The project should prepare CSR programs to support the village developments asked by the villagers. ▪ The project should appoint a communication officer to listen and reply social concerns and complaints.	

6. Public Consultation and Disclosure

6.1 Public Consultation

Involving the public in the EIA preparation is fundamental to increasing the understanding on how the project may affect or improve their living conditions and acceptance of the project. It is also a way to identify and act upon impacts and issues that are not immediately obvious to the EIA preparation team.

Project Affected Person

The project area is located within the Livestock and Livestock Products Manufacturing Industrial Zone of Hlaingtharya (west) Township. The project-affected persons are defined within a radius of 500 meters area form the project site. The people who lives adject the project site will be included in Social AOI because it is potential to be affected by the activities of work site. Other villages which have economic activities affected by the project will be considered for AOI of social environment.

No	Township	Village Tract	Village
1	Hlaingtharya (West)	Ku Lar Gyi Su	Kan Hla
2	Hlaingtharya (East)	Shwe Lin Ban	Kyon Su

6.2 Summary of consultations activities

a) Summary of consultation activities undertaken during Scoping Stage

Golden Apex International Trading Co., Ltd conducted consultation meeting concerning with the animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The public consultation meeting was carried out at Meeting Hall of the General Administrative Department in Hlaingtharya (West) Township, 21st August 2025.

As local public, village heads in respected villages, and representatives of the village's elder persons participated in the consultation meeting. As government authorities, the General Administrative Department, Environmental Conservation Department, the Department of Public Health, Livestock Breeding and Veterinary Department, Township Police, Township

Fire Force, Yangon City Development Committee (YCDC), Livestock and Livestock Products Manufacturing Industrial Zone Committee, Local Public communities, and Interested persons around the project area participated in the consultation meeting.

b) Summary of consultation activities undertaken during ESIA Investigation Stage

At EIA Investigation stage, a public consultation meeting of Golden Apex International Trading Co., Ltd was conducted a consultation meeting at the township administrative department in Hlaingtharya (West) Township on 31st March 2026. Local people from Kan Hla and Kyon Su Village attended the consultation meeting.

As government authorities, the General Administration Department, the Environmental Conservation Department, the Department of Public Health, the Livestock Breeding and Veterinary Department, the Township Fire Force, the Township Municipal Council, the Township Police, the Township Management Committees, the Local Public communities, and interested persons around the project area participated in the consultation meeting.

The project proponent discussed about the project and third party expressed the works of Environmental Impact Assessments. At the meeting, village development, creation of job opportunities for local community, complying laws, rules and policy, using understandable usage of words for local people in the presentation, and undertaking village-level public consultation. All the opinions in the meetings were recorded.

7. Environmental and Social Management Plan

Golden Apex International Trading Co., Ltd, has committed to fully protection the environment in the proposed project area by developing and implementing of environmental management plan which will act as an adequate tool to mitigate the potential adverse impact and enhance the beneficial impacts associated with the project during the operation phase.

7.1 Summary of Environmental and Social Management Sub-plans

Component	Management Plan	Implementation Schedule
Air Quality and Odor	**Dust Control and Ventilation** ▪ Install bag filter or collector to capture dust from handling, grinding, crushing, weighting, and mixing of premix, feed additive and raw material. ▪ Store raw materials and feed additives in sealed containers or covered storage areas. ▪ Utilize lower-capacity butterfly conveyors to limit material transfer rates and reduce dust generation; cover transfer points and minimize drop heights. ▪ Maintain and service all transport vehicles and machinery regularly to minimize exhaust emissions. ▪ Keep the animal feed mill factory area dry and well-ventilated to prevent fugitive dust emissions. ▪ Provide respiratory masks and proper PPE for animal feed mill factory workers.	During Construction, Operation and Closure phase
Noise and Vibration	▪ Regularly maintain all operational machinery such as grinding, hammer, fans, and generators to prevent excessive noise.	During Construction, Operation and Closure phase

	▪ Restrict transportation of raw material and feed additives to daytime hours. ▪ Provide Personal Protective Equipment (PPE), such as earplugs or earmuffs, for all workers stationed in production and utility areas. Ensure compliance with the Myanmar National Environmental Quality (Emission) Guidelines (NEQEG).	
Water Quality	There is no generation of effluent from the project activities. Treat wastewater generated from offices, canteens, and staff facilities is treated by the sewage system. Sewage from the offices, canteens, and staff facilities must be collected using a pit system and disposed of by municipal sewage trucks. Implement a dry-cleaning method (vacuuming or sweeping) for the production floor to minimize the need for water-based washing and reduce wastewater volume. The storage for fuel and lubricants/oil is a closed building, and it is protected from rainwater.	During Construction, Operation and Closure phase
Solid Waste	**Organic Waste** ▪ Most organic by-products from feed milling are recyclable or can be sold. **Domestic Waste** ▪ Recyclable waste e.g., plastic, food scraps, paper etc. should reused/recycled as much as possible. ▪ Follow the 5Rs principles for solid waste: reduce, reuse, recover, recycle, and redesign, where possible.	During Construction, Operation and Closure phase

	▪ Placing containers for collection of solid wastes and garbage at office and residence. ▪ Maintaining hygienic conditions in canteens and toilets. Non-recyclable wastes will be transported, in coordination with relevant authorities, to a landfill site approved by the Livestock and Livestock Products Manufacturing Industrial Zone and the Hlaingtharya (West) Township Development Committee.	
Biodiversity	▪ Do not disturb the vegetation and animals outside the designated area. ▪ Maintain all mature trees within the project development area. ▪ Raise environmental awareness among workers for the protection of local biodiversity.	During Construction, Operation and Closure phase
Transportation Management Plan	▪ Adequate training on traffic and road safety operations will be provided to the drivers. ▪ Appropriate signage will be displayed at important traffic junctions in the Livestock and Livestock Products Manufacturing Industrial Zone. ▪ Signage for the speed limit will be placed and maintained.	During Construction, Operation and Closure phase
Community Engagement and Development Plan	Grievance Mechanism Management Employment Plan Local Economic Development Corporate Social Responsibility (CSR) Program	Operation Phase
Occupational Health and Safety	Golden Apex International Trading Co., Ltd. organized the Health and Safety Committee to	During Construction, and Operation phase

	implement the Occupational Health and Safety Management Measure.	
Community Health and Safety	If the occupational disease is found in the workers or there are outbreaks of infectious disease, the public health department, Hlaingtharya Township, Yangon Region will be notified, and the project will cooperate by the instructions.	During Construction, and Operation phase

7.2 Monitoring Schedule for Environmental Parameters

No	Indicator	Location of Data Collection	Frequency	Responsible Institution
Construction, Operation and Closure phase				
1	Air Quality and Meteorology data	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Two times per year	Environmental Contractor
2	Noise	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Two times per year	Environmental Contractor
3	Vibration	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village)	Two times per year	Environmental Contractor

		▪ 1 Point (At Kan Hla village)		
4	Surface Water Pollution Monitoring	▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	2 times	Environmental Contractor
5	Ground Water Pollution Monitoring	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	2 times	Environmental Contractor
6	Odor	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	2 times	Environmental Contractor
7	Soil Quality	▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Two times per year	Environmental Contractor
8	Solid Waste Management	Project Area	Regularly	EHS Department
9	Terrestrial Biodiversity	Within the project area	Two times per year	HSE Department or Environmental Contractor
10	Grievance Mechanism		Daily monitoring and documenting	EHS Department

Golden Apex International Trading Co., Ltd. will submit the monitoring report to Ministry of Natural Recourses and Environmental Conservation (MONREC).

Coordinates of Monitoring Points

No	Sampling Point	Latitude	Longitude
1	AQNV 1	16°53'40.14"N	96° 2'12.86"E
2	AQNV 2	16°53'48.37"N	96° 2'15.64"E
3	AQNV 3	16°53'27.85"N	96° 2'15.15"E
4	SW 1	16°53'45.92"N	96° 2'14.73"E
5	SW 2	16°53'29.48"N	96° 2'13.40"E
6	GW 1	16°53'40.66"N	96° 2'12.96"E
7	GW 2	16°53'48.26"N	96° 2'14.66"E
8	GW 3	16°53'28.51"N	96° 2'15.64"E
9	OR 1	16°53'40.78"N	96° 2'12.68"E
10	OR 2	16°53'47.97"N	96° 2'15.00"E
11	OR 3	16°53'28.00"N	96° 2'14.64"E
12	S 1	16°53'48.62"N	96° 2'15.30"E
13	S 2	16°53'28.33"N	96° 2'14.40"E

7.3 EMP and Monitoring Cost

Golden Apex International Trading Co., Ltd. shall be used 21,700,000.00 kyat (estimated cost) for Environmental Management Plan (Annual) and 29,300,000.00 kyat (estimated cost) for Environmental Monitoring Plan (Annual). The amounts may be increased in the future as per the actual requirements from time to time. If the estimated cost is not sufficient for the implementation of Environmental Management and Monitoring Plans, the budget will be set up again.

Estimated Cost for Environmental Management Plan (Annual)

Item	Cost (MMK)
Air Quality and Odor Management Plan	2,400,000
Noise & Vibration Management Plan	2,400,000
Soil and Geology Management Plan	800,000
Water Quality Management Plan	2,100,000
Solid Waste Management Plan	500,000
Flora and Fauna Management Plan	1,000,000
Transportation Management Plan	500,000
Community Engagement and Development Plan	500,000
Occupational Health and Safety Management Plan	2,000,000
Community Health and Safety Management Plan	1,000,000
Emergency Response and Rescue Management Plan	500,000
CSR	3,000,000
Cost for EHS Department (Including Salary)	5,000,000
Total	**21,700,000**

Estimated Cost for Monitoring Plan (Annual)

Item	Cost (MMK)
Air Quality and Odor Monitoring	6,000,000
Noise & Vibration Monitoring	4,800,000
Soil Quality Monitoring	2,000,000
Water Quality Monitoring	7,000,000
Monitoring Cost for Solid Waste Management	500,000
Monitoring Cost for Terrestrial Biodiversity (including flora and fauna management)	3,000,000
Monitoring Cost for Transportation Activities	500,000
Monitoring Cost for Grievance Mechanism (Community Engagement and Management)	500,000
Monitoring Cost for Occupational Health and Safety Management	2,000,000
Monitoring Cost for Community Health and Safety Management	1,000,000
Monitoring Cost for Emergency Response and Rescue Plan	500,000
Monitoring Cost for CSR Activities	1,000,000
Monitoring Cost for EHS Department (General Expenses)	500,000
Total	**29,300,000**

8. Conclusion and Recommendation

An EIA report for Animal Feed Mill Factory has been prepared for the Project in accordance with Myanmar EIA Procedures 2015. The EIA identified potential impacts through a systematic scoping process whereby the activities associated with the Project have been considered with respect to their potential to interact with environmental and social resources or receptors.

It is concluded in the EIA that with proper implementation of the recommended mitigation measure and social impacts causing by the operation of the Project would be no larger than low significance.

2. INTRODUCTION

2.1 Project Background and History

Golden Apex International Trading Co., Ltd, a 100% Myanmar citizen-owned company, proposes to establish and operate an animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The expected total investment for this project is 4,939.919 million kyat and expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026. During the operational phase, the facility is expected to employ a total of 104 workers to support production and related activities.

Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Its operations focus on producing nutritionally balanced, hygienic, and fresh feed pellets that contribute to increased productivity in livestock farming. In addition to maintaining high standards of quality, the company is committed to offering its products at affordable prices to serve not only commercial livestock producers but also small-scale livestock farmers throughout the country.

Golden Apex International Trading Co., Ltd sources the raw materials required for the production of animal nutrition feed and feed additive both locally and internationally. These materials are systematically stored in designated warehouses and are processed according to predetermined formulations using grinding and mixing machines. The resulting semi-finished feed is subsequently cooled, weighed, and packed into standardized bags before being stored in company warehouses. These finished products are then distributed and sold to livestock farmers across the country at reasonable prices.

2.1.1 Project period

For distribution and production of animal nutrition feed and feed additive in Myanmar, the company's expected total investment for this project is 4,939.919 million kyat and expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026.

2.1.2 Project Location

The proposed project of the animal feed mill factory is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region.

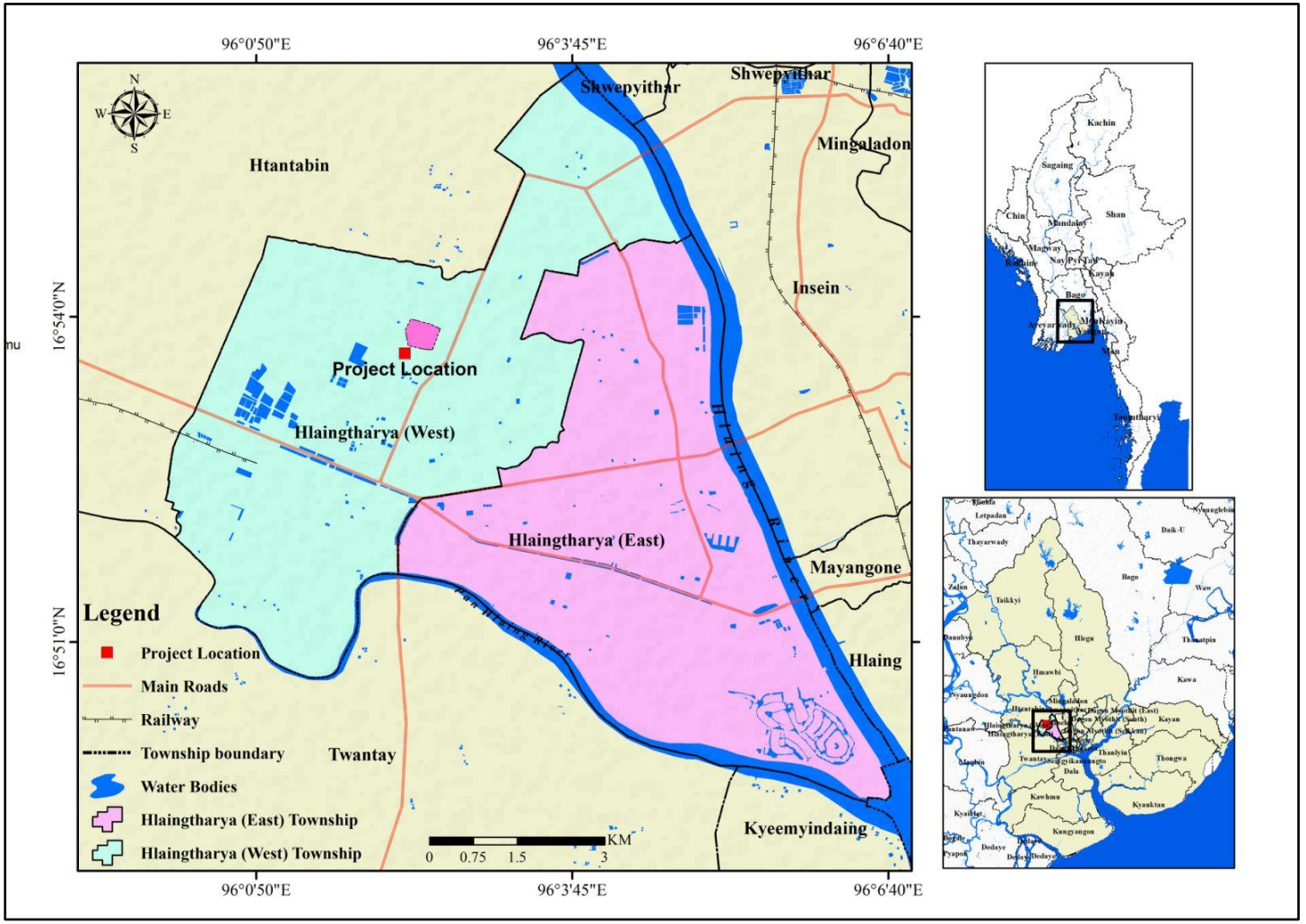


Figure 2.1 Location of Project Area

2.2 Presentation of the Project Proponent

2.2.1 Project Proponent

GOLDEN APEX INTERNATIONAL TRADING CO., LTD	**Project Proponent**	**Daw Kay Thwe Aung**
	Contact Person	**Director**
	Address	**No. (90 A/B), Near Yoe Gyi Yoe Lay Roundabout, West University Road, Htantapin Township, Yangon Region.**
	Telephone Number	**+95 9 5098028**
	E mail	**goldenapexmyanmar@gmail.com**

2.3 Presentation of the Environmental and Social Experts

The field investigations will be undertaken by the Environmental Compliance Consultancy Co., Ltd Team, which possesses extensive experience in the implementation of Environmental Impact Assessment (EIA) projects within Myanmar. The EIA team conducted a preliminary assessment to identify and evaluate potential environmental and social impacts during the Pre-construction, Construction, and Operation phases. The significance of anticipated impacts was analyzed based on baseline conditions and project activities. Where adverse impacts were identified, appropriate and feasible mitigation measures were proposed to ensure compliance with applicable environmental standards and regulatory requirement.

2.3.1 Members of ESIA Preparation

Name of Expert	Position	Organization	Background	Years of Experience	Registration / License No. by ECD (if applied)	Area of Expertise
U Arkar Phyo	Environmental Expert (Team Leader)	Environmental Compliance Consultancy Co., Ltd	Bachelor of Engineering (Mining), West Yangon Technology University Bachelor of Technology (Mining), West Yangon Technology University Certificate in Occupational Safety and Health Specialist (Win OSHE Safety Academy) Technical Writing (ICML Institute for Communication Management and Leadership) Conducting and Writing Environmental Impact	13 years	**EIA-C 059/2024**	**(၁) ဘေးအန္တရာယ်ရှိမှု ဆန်းစစ်ခြင်းနှင့် ဘေးအန္တရာယ် စီမံခန့်ခွဲခြင်း**

			Assessment Reports for EIA Practitioners in Myanmar (United Nations Development Programme Myanmar and Myanmar Koei International Ltd.)			
U Chit Myo Lwin	Environmental Expert (Deputy Team Leader)	Environmental Compliance Consultancy Co., Ltd	Master of Engineering in Photogrammetry and Remote Sensing (Wuhan University, China) MSc (Geo-Informatics, Burapha University, Thailand) Bachelor of Science (B.Sc.), Geology, West Yangon University Dip. in Geographic Information Systems, University of Yangon Dip. in Environmental Studies, University of Yangon	15 years	**EIA-C 010/2023**	**(၁) ဇလဗေဒ၊ မြေပေါ်ရေနှင့် မြေအောက်ရေထိန်းသိမ်းခြင်း** **(၂) ဘူမိဗေဒဆိုင်ရာ ဆန်းစစ်လေ့လာခြင်း**

			Dip. in Project Management (Institute of Commercial Management, UK) Cert. in Environmental and Social Impact Assessment AIT-VT, Vietnam Occupational Health and Safety management System, BS OHSAS 18001, Singapore Environmental Studies, Myanmar Environmental Institute, Myanmar Hydrology Modeling at the Landscape Scale _SWAT & GIS analysis, Gmap & Yangon Technological University, Myanmar Sustainable Utilization of Natural Resources in Karst Areas (I): Remote Sensing and Monitoring, International Research Centre on			

			Karst (IRCK) under the auspices of UNESCO, Institute of Karst Geology, Chinese Academy of Geological Sciences, China			
Dr Sandar Hlaing	Health and Social Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Ph D (Environmental Geography), Yangon University Master of Arts, Geography, Geography, Mawlemyaine University Bachelor of Arts (Hons.), Geography, Mawlemyaine University Health Impact Assessment, AITVN, Ho Chi Minh City. Vietnam Certificate of Health Impact Assessment, International Finance Corporation (IFC) World Bank Group and Myanmar	15 years	**EIA-C 058/2024**	**(၁) လူမှုရေးဆိုင်ရာ လေ့လာခြင်းနှင့် သရုပ်ခွဲဆန်းစစ်ခြင်း**

			Environmental Assessment Association(MEAA)			
Daw Than Than Htay	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Master of Science (Qualified) Zoology, Dagon University Bachelor of Science (Honours:) (Zoology), Dagon University Certificate in Biodiversity Impact Assessment (A.I.T. Vietnam)	15 years	**EIA-C 045/2023**	**(၁) ဂေဟစနစ်နှင့် ဇီဝမျိုးစုံမျိုးကွဲများ**
Daw Soe Moe Nwe	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	M.Sc. (Agro-environmental Science), Kyushu University, Japan B.Sc. (Forestry), University of Forestry, Yezin Certificate of JICA Development Studies Certificate of Statistical Analysis	7 years	**EIA-C 030/2023**	**(၁) လူမှုရေးဆိုင်ရာ လေ့လာခြင်းနှင့် သရုပ်ခွဲဆန်းစစ်ခြင်း** **(၂) ဂေဟစနစ်နှင့် ဇီဝမျိုးစုံမျိုး** **(၃) စွန့်ပစ်အစိုင်အခဲနှင့် ဘေးအန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်း စီမံခန့်ခွဲခြင်း**

U Chit Bo Bo Win	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	MSc (Civil: Water resources) B.E (Port and Harbor Engineering), MMU Dip (Civil: Water resources)	8 years	**EIA-AC 118/2024**	**(၁) ရေထုညစ်ညမ်းမှု ကြိုတင်ကာကွယ်ခြင်း၊ ထိန်းချုပ်ခြင်း၊ စောင့်ကြပ်ကြည့်ရှုခြင်း နှင့် ထိခိုက်မှုကြိုတင်ခန့်မှန်းခြင်း** **(၂) ဇလဗေဒ၊ မြေပေါ်ရေနှင့် မြေအောက်ရေ ထိန်းသိမ်းခြင်း**
U Aung Zayer Wint	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	B.Sc. (Forestry), University of Forestry, Yezin Diploma in Environmental Impact Assessment and Environmental Management System, YTU	5 years	**EIA-AC 008/2023**	**(၁) လေထုညစ်ညမ်းမှု ကြိုတင်ကာကွယ်ခြင်း၊ ထိန်းချုပ်ခြင်း**

Dr. Phyo Thu Aung	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Doctor of Philosophy in Chemical Engineering, Mandalay Technological University	10 years	**EIA-AC 092/2024**	**(၁) မိုးလေဝသနှင့် လေအရည်အသွေး ဆန်းစစ်ခြင်း နှင့် ကြိုတင်ခန့်မှန်းခြင်း (၂) ရေထုညစ်ညမ်းမှု ကြိုတင်ကာကွယ်ခြင်း၊ ထိန်းချုပ်ခြင်း၊ စောင့်ကြပ်ကြည့်ရှုခြင်း နှင့် ထိခိုက်မှုကြိုတင်ခန့်မှန်းခြင်း**
Daw Ei Ei Win Myat	Legal Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Bachelor of Laws (LLB), Dagon University Diploma of Business Law, University of Yangon Diploma in International Law, University of Yangon	7 years	**EIA-AC 065/2023**	**(၁) ဥပဒေရေးရာလေ့လာမှု နှင့်သရုပ်ခွဲဆန်းစစ်ခြင်း**

			Certificate of Occupational First Aid Course, WIN OSHE SAFETY ACADEMY			
U Ye Myat Phone Hlaing	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Bachelor of Engineering (Chemical) Technological University (Thanlyin)	5 years	**EIA-AC 114/2024**	**(၁) လေထုညစ်ညမ်းမှု စောင့်ကြပ်ကြည့်ရှုခြင်း**
Technical Supporting Members						
U Aung Kaung Myat	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	M.S(Environmental Planning and Management), YTU B.E (Port and Harbor Engineering), MMU Dip. (Environmental Planning and Management), YTU	8 years	**Supporting Member**	**(၁) လေထုညစ်ညမ်းမှု ကြိုတင်ကာကွယ်ခြင်း၊ ထိန်းချုပ်ခြင်း**

Daw Shwe Yee Win Soe	Environmental Expert (Member)	Environmental Compliance Consultancy Co., Ltd	Master of Research M.Res (Physics), University of Yangon M.Sc. (Physics), University of Yangon B.Sc. (Physics), Dagon University Post Graduate Diploma in Apply Physics, University of Yangon	12 years	**Supporting Member**	**(၁) မိုးလေဝသနှင့် လေအရည်အသွေး ဆန်းစစ်ခြင်း နှင့် ကြိုတင်ခန့်မှန်းခြင်း**

2.4 Proponents Commitments

GOLDEN APEX INTERNATIONAL TRADING CO., LTD.
No.100, Shwe Yin Aye School Road, Hlaing Thar Yar Livestock Zone , Yangon,Myanmar.
Tel : 09-5187996,09-5187994,09-5098028 Email: info@goldenapextrading.com

Proponents Commitments

Golden Apex International Trading Co., Ltd. in respect of the " Animal Feed Mill Factory, Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region" will at all times comply fully with any and all plans and the various components thereof, including without limitation, impact avoidance, mitigation, and remediation measures, and with respect to such commitments, obligations, plans and measures related to the development, operation and closure of the project, and any circumstance in which work done or to be done, or services performed or to be performed, in connection with the project's development.

We do state that the EIA report, which has been prepared and finalized by Environmental Compliance Consultancy Co., Ltd. comply fully with EIA procedure (December 2015) and other relevant laws/rules.

Golden Apex International Trading Co., Ltd. and Environmental Compliance Consultancy Co., Ltd. state that;

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

When the proposed project will be operated, Golden Apex International Trading Co., Ltd. will fully implement the Environmental Management and Monitoring Plan that prepared by Environmental Compliance Consultancy Co., Ltd.

GOLDEN APEX

Daw Kay Thwe Aung
(Director)
GOLDEN APEX INTERNATIONAL TRADING CO.,LTD.

2.5 Third-party Consultant Confirmation

Environmental Compliance Consultancy Co., Ltd; a local environmental consultant firm, conducted Environmental Impact Assessment Report for Golden Apex International Trading Co., Ltd. in compliance with EIA Procedure (December 2015) and other relevant laws/rules and formally submitted to the Environmental Conservation Department (ECD) for final approval.

We do state, to the best of our knowledge at the time of report preparation, that

- ✓ the accuracy and completeness of the EIA Report,
- ✓ that the EIA Report has been prepared in strict compliance with applicable laws including this Procedure, and

We also consulted to Golden Apex International Trading Co., Ltd. to undertake that;

Golden Apex International Trading Co., Ltd. in respect of "Animal Feed Mill Factory, Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region" will at all times comply fully with any and all plans and the various components thereof, including without limitation, impact avoidance, mitigation, and remediation measures, and with respect to such commitments, obligations, plans and measures related to the development, operation and closure of the project, and any circumstance in which work done or to be done, or services performed or to be performed, in connection with the project's development.



Chit Myo Lwin

Project Director

Environmental Compliance Consultancy Co., Ltd.

3. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.1 Corporate Environmental and Social Policies

The Company hereby formally undertakes to comply with all environmental protection requirements in relation to its animal feed mill factory. This commitment is made in accordance with the Environmental Conservation Law (2012), the Environmental Conservation Rules (2014), the Environmental Impact Assessment (EIA) Procedure (2015), and all applicable rules, regulations and guidelines of the Republic of the Union of Myanmar.

The company shall-

- Consult with qualified environmental conservation specialists in order to prevent any potential environmental impacts arising from construction activities and subsequent operations.
- Implement effective environmental management practices to minimize potential environmental impacts, including air emissions, noise, solid waste, and wastewater generation for pollution prevention.
- Allocate Corporate Social Responsibility (CSR) fund for environmental conservation activities to support local environmental protection and rehabilitation programs.
- Conduct training programs and awareness sessions for its employees to ensure that all staff are knowledgeable about best practices in environmental management and workplace safety and to reduce potential occupational health risks.

3.2 Policy and Legal Framework

Government of Myanmar has adopted various Laws, regulations and guidelines to ensure the integration of development and conservation of environment. This section provides a brief summary of relevant national environmental legislations established by the Ministry of Natural Resources and Environmental Conservation and overview of current local and international environmental and social policies including related international or regional convention for the proposed project.

3.2.1 National Environmental Policy of Myanmar

The National Environmental Policy provides long-term, strategic guidance for achieving a sustainable future for Myanmar. It requires the mainstreaming of environmental protection into planning and decision-making at all levels of government and in all sectors. Its detailed principles respect livelihood needs and development objectives while at the same time recognizing the full value of Myanmar's ecosystems and the implications of climate change. This Policy ensures that environmental protection continues to be a central objective in Myanmar's sustainable development pathway.

3.3 Proponent's Contractual and other Commitments

The Project Proponent hereby makes the following commitments to ensure that the project is designed, constructed, and operated in full compliance with Myanmar's environmental laws, rules, regulations and guidelines.

The company commits

- Adhere to all relevant national environmental laws, including the Environmental Conservation Law (2012), EIA Procedure (2015), and Environmental Quality (Emission) Guidelines (2015).
- Obtain and maintain an Environmental Compliance Certificate (ECC) from MONREC and fulfill all its conditions.
- Comply with international environmental conventions to which Myanmar is a signatory.
- Implement a comprehensive Environmental Management Plan (EMP) to address potential environmental impacts during construction and operation.
- Conduct regular environmental monitoring and submit reports.
- Allocate a CSR Fund to support environmental protection, biodiversity conservation, and community development activities in the project area.
- Provide regular training and awareness programs to employees on Environmentally responsible operational practices and occupational health and safety.

3.4 Institutional Framework

In Myanmar, matters pertaining to Health, Safety and Environment (HSE) requirements are generally under the jurisdiction of the ministries and state-owned enterprises. Key ministries and agencies that have jurisdiction over HSE matters in industrial operations including animal feed mill factory works.

Ministry/Agency	Responsibility
Ministry of Natural Resources and Environmental Conservation (MONREC)	The Environmental Conservation Department (ECD) of MONREC has ultimate responsibility in the review and approval, or otherwise, of submissions under the IEE/EIA process.
Myanmar Investment Commission (MIC)	MIC is a government agency responsible for coordinating with ministries (such as the MOEE) and other state entities to facilitate foreign investment in Myanmar. The MIC is also responsible for granting MIC permits which enable foreign investors to carry out business activities under the Myanmar Investment Law (2016).
Ministry of Industry (MOI)	Responsible for managing manufacturing industries according to engineering norms and relevant national code of industrial practice for professional ethic and industrial development in Myanmar.
Department of Livestock and Veterinary Medicine under the Ministry of Agriculture, Livestock and Irrigation.	Responsible for improving livestock production through technology and services for the development of the country's meat sector and managing animal health, disease prevention and control, and livestock production activities in accordance with the provisions of the Animal Health and Development Law.
Department of Fisheries under the Ministry of Agriculture, Livestock and Irrigation.	Responsible for conserving state-owned aquatic resources, ensuring the country's sustainable consumption of fish, and disseminating fish farming technologies to the public.

3.5 Related Environmental laws, Rules, Regulations and Policies

Related Laws and policies on environmental management and protection in Myanmar that are applicable to this project are presented in the following Table. The project proponent commits to comply the following laws, rules, regulations, and guidelines.

No	Law, Act or Regulation	Section	Requirement by the Law
1	The Environmental Conservation Law (2012)	7(o), 14, 15, 29, 24, 30	Environmental Conservation Law, 2012 builds on the provision of basic guidance to integrate environmental conservation in sustainable development, the ministry's responsibility to develop relevant guidelines and regulations, setting up monitoring systems, waste management, and conservation of natural resources, and cultural heritage. The project proponent commits to comply -To compensate if there is an environmental population by the project, to contribute a portion of the project profit as prescribed by the Ministry for environmental conservation activities according to Environmental Conservation Law 2012, Section 7 (o), -To treat, discharge, dispose and accumulate the materials that cause environmental pollution per the specified environmental standards according to Section 14, -To monitor, control, manage, reduce, or avoid by installing support equipment or control equipment, or dispose of by the measures not to damage the environment the environmental pollutions according to Section 15,

			-To follow the rules, notice of order, order, instruction, and restriction in the procedure mentioned in Section 29 issued by Environmental Conservation Law. According to Section 24, the Ministry may, in issuing the prior permission, stipulate terms and conditions relating to environmental conservation. It may conduct inspection whether or not it is performed in conformity with such terms and conditions or inform the relevant Government departments, Government organizations to carry out inspections. -The project proponent shall not, without permission of the Ministry, import, export, produce, store, carry, or trade any material which causes impact on the environment prohibited by the Ministry according to Section 30.
2	The Environmental Conservation Rules (2014)	56, 69	The project proponent shall arrange and carry out for conducting the environmental impact assessment for the project, business or activity by a qualified third person or third party accepted by the Ministry. (56) According to Environmental Conservation Rules (2014)'s Rule 69 (a) and (b), the project proponent commits to comply - Not to emit, dispose, and pile the hazardous waste or hazardous substances stipulated by the rule. - Not to carry out any activity that can damage the ecosystem and the natural environment, except for the permission of the Ministry.
3	Environmental Impact Assessment Procedures (2015)	102 to 110, 113, 115, 117	The EIA Procedure sets out the procedures for completing an IEE, EIA and/or EMP in Myanmar. This includes information on project category responsibilities of project developers and ministries,

			EIA review, monitoring and auditing, among other issues. • Concerning the responsibility for adverse impacts, project proponent commits to bear full legal and financial responsibility (Section 102) • For their actions and omissions and those of its officers, employees, agents, representatives, and consultants employed, hired, or authority by the project acting for or on behalf of the project, in carrying out work on the project; Section 103) • To support programs for livelihood restoration and resettlement in consultation with the Project Affected Peoples (PAP), related government agencies, and organizations and other concerned persons for all Adverse Impacts until PAPs have achieved socio-economic stability at a level not lower than that in effect prior to the commencement of the Project. (Section 104) • To take full responsibility to implement the EMP, the requirements set forth in ECC, Project commitments and conditions when providing services to the Project and inform the Ministry with detailed information as to the proposed project's potential adverse impacts. (Section 105) Concerning for the monitoring, the project proponent has responsible to (Section 106 to 110) • undertake comprehensive self-monitoring. • notify and identify in writing to the Ministry for any breaches of its obligations or other performance failures or violations of the ECC and EMP. • submit monitoring reports in every six months to the Ministry. • Submit the monitoring report within ten (10) days of completing a monitoring report and the

			information to be included. For the purposes of monitoring and inspection, the event of emergency, Pan Theingi Energy Co., Ltd has the responsibilities to (Section 113, 115,117) • grant the ministry and/or its representatives. • grant the Ministry access by the Ministry to the Project's contractors and subcontractors to any places relating to project activities.
4	National Environmental Quality (Emissions) Guidelines (2015)		MOECAF formulated the National Environmental Quality (Emission) Guidelines (NEQG) in coordination with ADB in December 2015. The NEQG determines the guideline values for general emissions such as air emissions, wastewater, noise levels, and odor, and those for sector-specific emissions such as emissions from forestry, agribusiness/food production, chemicals, oil and gas, infrastructure, general manufacturing, mining, and power. The project proponent commits to comply with these guidelines.
5	Myanmar Investment Law (2016)	50(d), 51, 65 (a), (c), (e), (f), (g), 67	The project proponent commits to comply: • The stipulation that the investor has to register the land lease contract at the office of Registry of Deeds in accordance with the Registration Act. (Section 50 (d)) • The mentioning for appointment, replacement, providing for the employment of staff and workers, ensuring to comply the entitlements and rights in the labor laws and rules, settling dispute regarding HR issues. (Section 51)

			According to Section 65(a), (c), (e), (f), (g), the project proponent commits to comply the stipulations: • shall respect and comply with the customs, traditions and traditional culture of the ethnic groups in the Union; • shall abide by the terms and conditions, stipulations of a special license, permit, and business operation certificates issued to them, including the rules, notifications, orders and directives and procedures issued by this Law and the existing laws, terms and conditions of contract and tax obligations; • shall immediately inform to the Commission if it is found that natural mineral resources or antique objects and treasure trove are not related to the investment permitted above and under the land on which the investor is entitled to lease or use and not included in the original contracts. If the Commission allows, the investor shall continue to carry out the investment in such land, and if not allowed, the investor shall transfer and carry out, by obtaining the permission, at the substituted place which is selected and submitted by him; • shall not make any significant alteration of topography or elevation of the land on which he is entitled to lease or to use, without the approval of the Commission; • shall abide by the existing laws, rules, procedures and best standards practiced internationally for his investment so as not to

			cause damage, pollution, and loss to the natural and social environment and not to cause damage to cultural heritage. The investors shall comply with all responsibilities stipulated under section 65 from the date of this Law comes into effect. (Section 67)
6	Myanmar Investment Rules (2017)	202, 206, 212	The project proponent commits to comply the stipulations; • To involve in Subsection (q) of Section 65 of the law shall submit the confirmation of implementation of initial environmental impact assessment, reporting of the environmental impact assessment, taking the applicable certification of environmental conservation, and carrying out environmental management program in accordance with Environmental Conservation Law, rules and procedures of environmental impact assessment. The Commission shall make the decision whether or not to continue the investment based on its compliance. • To comply with all terms and conditions in the permit and other applicable laws when the investment is carried out. (Section 202) • To appoint expert foreigner as senior manager, technical and operational expert or advisor according to subsection (a) of the section 51 of the Law, he shall submit the application attached with passport, expertise evidence or degree certificate and summary of biography of such foreigner to the Commission and obtain the approval. (Section 206) • To obtain the permit or tax exemption or relief to insured 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. (Section 212)
7	Export Import Law (2012)	7	The project proponent shall not export or import prohibited goods specified to be subject to approval without obtaining approval, will not violate the terms of the permit.
8	Yangon City Development Law 2018	Chapter 23, 322	It has stated that the committee has the right to: To corporate for the inspection with the concerning authority and To stipulate orders for the carriage, storage of chemical and related substances for not harming to public health and life To manage the waste regarding for the hazardous. There it has been prohibited for disposing chemical and its related substances in areas, which are not being allowed in the City Development area and mentioned offenses and penalties. The project proponent commits to comply the stipulations and undertake the necessary proceeding as per this law and notification issued by the committee. According to Section 322, the project proponent shall not engage in any activity within the city limits that may cause environmental damage such as land pollution, air pollution, water pollution, and noise pollution.
9	Factory Act (1951) (Amended in 2016)		The project proponent commits to comply the provisions for the requirement: • For permits for some chemicals.

			• For all project building to have proper pollution control measures such as air pollution, sewage and wastewater treatment system.
10	The Standardization Law (2014)	25, 26	This is for the reducing the technological barriers for the trade and supportive for the development international free trade zone and for the development of Myanmar economy and social, the standardization will utilize for the smoothness of technology transfer and invention. There it empowers to organize the council for setting up the policy, guideline and to implement to practice the national standard in respective production and service. According to Section 25, the project proponent not commits any of the following acts shall; • counterfeiting any standardization mark; • using standardization mark that is not allowed to use or not approved by the Council; • advertising, selling or possessing in order to sell any product or advertising or carrying out any service which does not meet the compulsory standard stipulated by the Council knowingly or likely to know. The Project Proponent commits to comply the stipulations under the Section 26.
11	Prevention of Hazard from Chemicals and Related Substances Law (2013)	15 (a, b), 16 (b) to (j), 17, 22, 27(a) to (d)	According to The Prevention of Hazard from Chemical and Related Substances Law, 2013, the company commits to comply with the provisions mentioned in the section 15 (a, b), 16 (b) to (j), 17, 22, 27(a) to (d). According to Section 15(a)(b), the project proponent, before starting the respective chemical and related substances business will be inspected for the safety and the power of resistance of the machinery and

			equipment by the respective Supervisory Board and Board of Inspection and will be attended the person who serve in the work to the respective foreign trainings or the trainings and the expert trainings on prevention of hazard from the chemical and related substances opened by the government department and the government organizations. According to Section 16(b) to (j), the project proponent, - will perform to abide strictly the instructions for being safety in using the chemical and related substances by himself and also the persons who serve the work; - will keep the required safety equipment enough in the chemical and related substances businesses, furthermore shall grant the personal protection equipment and dresses free of charge to the working persons; - will make the course of training and study and instruction if necessary to the working persons for using the occupational safety equipment, the personal protection equipment and the dresses systematically in the chemical and related substances business; - will be inspected by the respective Supervisory Board and Boards of Inspection in respect of whether or not the hazard may impact on the Human Being and Animals' health and the environment; - will make medical checkup the working persons who will work in the chemical and related substances business and shall permit to serve in that work after obtaining the recommendation that his health is suitable for

			that work. This medical checkup records will be kept systematically; - will acquire in advance the guidance and agreement of the respective Department of Fire Brigade, if the business that is worried to fire hazard is operated by using the fire hazard substances or the explosive substances; - will transport only the permitted amount of the chemical and related substances in accordance with the prescriptive stipulations, if they are transported in local; - will take the permission from the Central Supervisory Board if the chemical and related substance is altered and transferred from one place to any other place which contained in the license. According to Section 17, the project proponent will put the insurance in accordance with the prescriptive stipulations to be able to pay the compensation, if the impact and damage is occurred on the Human Being and Animals or the environment in respect of the chemical and related substances businesses. According to Section 22, the project proponent will abide the regulations consisted in the registration certificate furthermore will also abide the order and instructions issued occasionally by the Central Supervisory Board. According to Section 27(a) to (d), the project proponent commits to comply with the following matters to control and decrease the hazard of the chemical and related substances: - classifying the hazard level to protect in advance the hazard according to the properties of the chemical and related substances;

			- expressing the Material Safety Data Sheet and Pictogram; - providing the safety equipment, the personal protection equipment to protect and decrease the accident and attending to the training to be used systematically; in accordance with the stipulations in respect of transporting, possessing, storing, using, discharging the chemical and related substances.
12	The Petroleum and The Petroleum Product law (2017)	8. 9, 10, 11	According to The Petroleum and The Petroleum Product law 2017's section 8(a, c), 9(a, e), 10 (a, b, d, e) and 11 the project proponent shall follow the instructions of Ministry of Natural Resources and Environmental Conservation relating to the usage of fuel for the proposed project. According to Section 8(a)(c), the Ministry shall carry out the following activities in relation to petroleum and petroleum products: - brewing; transport through pipeline transportation; distribution and sales; inspection Issuance of licenses related to testing; a dual license for doing more than one type of business, or Issuance of combined license; - brewing; Transport through Pipeline transportation; distribution and sales; inspection prescribing procedures and rules relating to testing. According to Section 9(a)(e), the Ministry of Transport and Communications shall carry out the following activities in relation to petroleum and petroleum products:

			- a vehicle carrying oil and petroleum products; Licensing of vessels and trailers; - prescribing the procedures and rules to be followed in carrying out transportation activities other than pipeline transportation. According to Section 10(a)(b)(d)(e), he Ministry of Natural Resources and Environmental Protection shall carry out the following activities in relation to petroleum and petroleum products: - issuance of storage license for storage tanks and warehouses; - a vehicle carrying oil and petroleum products; Vessels and trailers - the period to apply for the license in sub-section (a) and the permit in sub-section (b); Form and Terms; Application methods; determining the authorizing authority and the fees to be levied; - storage tanks and warehouses; A vehicle carrying oil and petroleum products; Procedures relating to the standard quality of storage tanks in fleets; Coordinating terms with relevant ministries. According to Section 11, labeling of all packaging materials containing hazardous petroleum and petroleum products; embossing, writing with paint; either by printing or the hazard warning will be displayed in some other way. If it is not possible to describe it, gasoline, a similar warning of the dangerous nature of volatile alcohol or petroleum,

			either in conspicuous letters or in conspicuous letters, it will be expressed either in symbols or in writing.
13	Myanmar Fire Brigade Law (2015)	25	According to The Myanmar Fire Brigade Law 2015, Section 25, the project proponent commits to follow the directive of the Department of Fire Services. The project proponent shall provide materials and apparatuses for fire precaution and prevention.
14	Myanmar Insurance Law (1993)	15, 16	Requires that any business, that may pollute the environment is required to have compulsory general liability insurance. The project proponent commits to comply with Sections 15 and 16. According to Section 15, the project proponent commits to effect compulsory Third-Party Liability Insurance with the Myanma Insurance. According to Section 16, the project proponent, if it may cause pollution to the environment, commits to effect compulsory general liability insurance with the Myanma Insurance.
15	Traffic Safety and Motor Vehicle Management Law (2020)	9(a), 12(c), 14(d), 18(a), 81(g	The project proponent commits to comply with the provision under Traffic Safety and Motor Vehicle Management Law, 2020 as follows. According to Section 9 (a), the project proponent shall follow the regulations and restrictions on the vehicles allowed to travel in the country. According to Section 12 (c), the project proponent shall follow rules, standards, and norms on safety and environmental protection in relation to the initial registration of motor vehicles issued by the Ministry.

			According to Section 14 (d), the project proponent shall follow the speed limit for the safe movement of vehicles traveling on public roads. According to Section 18 (a), the project proponent shall perform maintenance and repair in accordance with the standards set by the Department to drive the vehicle safely. According to Section 81 (g), the project proponent shall not transport dangerous goods in public places without complying with the regulations.
16	Public Health Law (1972)	3, 5	The project proponent commits to cooperate with the authorized person or organization in line with the stipulations: To abide by any instruction or stipulation for public health. (Section 3) To accept any inspection, anytime, anywhere if it is needed. (Section 5)
17	The Prevention and Control of Communicable Diseases Law (1995) Amendment in (2011)	3 (a),4, 9, 11	To ensure a healthy work environment and prevention the communicable diseases by the project owner with the relevant health department. The project proponent commits to comply with Sections 3 (a),4, 9 and 11 mentioned in the Prevention and Control of Communicable Diseases Law, 1995 as follows. According to Section 3(a)(9), in order to prevent the outbreak of communicable diseases, the Department of Health shall implement the following activities systematically under the guidance of the Ministry of Health, giving advice to and coordinating with relevant Government departments, organizations and non-governmental organizations for construction of healthy housing, obtaining safe drinking water and fresh water for use, proper waste disposal in order to

			prevent occurrence of communicable disease for workers who are carrying out activities of social and economic development. -To comply with the measures undertaken by the Ministry of Health and the Department of Health with respect to the prevention of the occurrence and spread of communicable disease and control according to Section 4. -To report immediately to the nearest health department or hospital in accordance with Section 9. -To follow the instructions of the health officer according to Section 11.
18	The Control of Smoking and Consumption of Tobacco Product Law (2006)	9	To protect from the danger which affects public health adversely by creating tobacco smoke-free environment. The project proponent commits to comply with Section 9 of the Control of Smoking and Consumption of Tobacco Product Law, 2006. -Supervise and carry out measures so that no one will smoke at the non-smoking area. -Accept the inspection when the supervisory body comes to the project.
19	Occupational Health and Safety Law (2019)	12, 14, 16, 17, 18, 26, 27, 34 and 36,	Occupational Safety and Health Law, 2019, Section 12, 14, 16, 17, 18, 26, 27, 34 and 36, the project proponent commits to comply with this Law. According to Section 12, the project proponent will appoint a person in-charge for occupational safety and health according to the type of industries to closely supervise the safety and health of the workers in accordance with the specifications of the Ministry and establish each Occupational Safety and Health Committee comprising equal number of employers and workers' representatives according to the types

			of industry without lessening the number of workers prescribed by the Ministry to be safe and healthy workplace, in accordance with the specifications of the Ministry. In establishing the Committee, occupational safety and health matters for female workers will be considered according to the nature of work. According to Section 14, the project proponent responsible for occupational safety and health shall ensure that the workplace is safe and healthy according to the rules and orders of the Law. According to Section 16, the inspectors shall inspect the workplace under this Law for occupational safety and health, instruct the respective employer on the facts to be observed, and report to the chief inspector. According to Section 17, for the purposes of occupational safety and health in line with the code of conduct, inspectors are entitled to: (a) enter, inspect and examine any workplace applicable to this Law without a warrant by showing their identity cards at any time; (b) inspect and copy all records, books, and documents relating to the workplace and process, and seize any of them as exhibits, if necessary; (c) take photographs and video records of the workplace situations and processes which may be harmful to the occupational safety and health; (d) assess and record the amount of impact and time on the workplace environment, due to noise, illumination, temperature, dust, fume and hazardous materials, with the assistance of

			an expert on the respective subjects, if necessary; (e) inquire any person working at the workplace during working hours about contracting occupational diseases or potential situations with the assistance of a certified doctor; (f) ask the responsible person from hospitals and medical clinics to confidentially send the medical report of a worker who is receiving medical treatment for injuring in a workplace accident or suffering from an occupational disease or information about death or the autopsy report requested with the form prescribed by the Department. According to Section 18, the inspectors shall issue a temporary order to the employer for work stoppage partially or wholly with the approval of the chief inspector and inform the relevant departments, if necessary, if any occupational accident, disease, dangerous occurrence or major accident happens or is likely to happen due to any of the following facts: (a) impropriety to work continuously due to the unsafe workplace conditions, unsafe acts of workers, the existence of hazardous material and machinery at the workplace, or parts of machinery or laying out of machinery at the workplace, and working practices; (b) impropriety to work continuously due to violation of or failure to comply with any provision of this Law; (c) assumption to be harmful to workers at the workplace due to any act of negligence and carelessness or omission by any person;

			(d) necessity to evacuate workers for safety due to the imminent danger situation of the occupational injury. According to Section 26, the project proponent will; - arrange to assess the risk severity of material and machinery used in the workplace and process, if necessary; - arrange to assess the risk of occupational factors, if necessary; - arrange to conduct medical examination for workers by the certified doctor in accordance with the specifications whether occupational diseases are contracted; - arrange to be safe and healthy workplace based on the findings of subsections (a), (b) and (c); - provide the suitable personal protective equipment, things and facilities adequately prescribed and allowed by the Department to the workers with free of charge, and make sure them to wear at the workplace; - take the preventive measures and emergency response preparedness; - establish dispensary, appoint registered doctors and nurses, and provide necessary medicines and facilities at the workplace where the workers are not less than the number of workers prescribed by the Ministry; - cause to attend the training on occupational safety and health prescribed by the Ministry to the managers and workers from the respective type of work or branch including himself and members of the Occupational Safety and Health Committee;

			- arrange to give information immediately to the person in-charge for occupational safety and health or managers if any worker faces the situation which is likely to happen occupational injury or harm his life and health; - arrange to be safe and healthy for persons at the work place due to material and machinery used in the workplace or process, or wastes; - arrange to stop the process immediately, remove the workers from the workplace, and perform necessary evacuation and rescue procedures in case of imminent danger. If possible, workers are transferred to and worked at other suitable safety workplaces; - have instructions, warning signs, notices, posters and signage regarding occupational safety and health in accordance with the specifications; - arrange to follow the precautions in accessing to the restricted workplaces where may be harmful; - arrange to distribute or disseminate the manual and guidance regarding the occupational safety and health issued by respective Ministries to workers and persons related to the workplace for acquiring knowledge, technology and skills; - design the fire security plan and organize the fire-drills, and train to use systematically fire extinguishers and devices; - allow the chief inspector and inspectors to inspect the workplace, inquire, ask for documents or seize exhibits;

			- employ workers within the prescribed working hours at hazardous work and workplaces; - bear any expenditure regarding occupational safety and health measures. According to Section 27, the project proponent will not dismiss or suspend any worker due to one of the following reasons: - before obtaining the medical report of a registered doctor for being injury in the workplace or the medical report of a certified doctor for contracting occupational disease; - complaint about a matter of unsafe or health risk; - undertaking the functions and duties of the Occupational Safety and Health Committee; - no longer working at the imminent danger situation or situation to be contracted the occupational disease. According to Section 34, the project proponent will inform the Department in case of an occupational accident, dangerous occurrence and major accident and submit a report with the medical report of the certified doctor to the Department, in case of any worker contracted any of the prescribed occupational diseases or being or likely to be occupational poisoning due to any material or process. According to Section 36, inspectors shall investigate the occupational accident, dangerous occurrence, occupational disease, and occupational poisoning if they become aware of. The project proponent will not, without the permission of the chief inspector, remove, destroy, add or alter the whole or part of material, machinery,

			equipment, layouts, and documents related to the occupational accidents, dangerous occurrences, occupational diseases and occupational poisoning.
20	The Protection and Preservation of Ancient Monuments Law (2015)	12	The project proponent commits to comply the stipulations: • For a person who finds an ancient monument over one hundred years old under the water or above ground shall promptly inform the relevant Ward or Village-Tract Administrative Office.
21	The Protection and Preservation of Antique Objects Law (2015)	12	The project proponent commits to comply the stipulation: • For person who finds any object which has no owner or custodian, needs to inform the relevant Ward or village-tract administrator if he knows or it seems reasonable to assume that the said object is an antique object.
22	The Ethnic Rights Protection Law (2015)	5	According to the Ethnic Rights Protection Law (2015), Section 5, if the proposed project is to be implemented in the area of ethnic nationalities, the project proponent commits that the project information has to be presented in advance and consultation with the relevant indigenous peoples has to be conducted.
23	Conservation of Water Resources and Rivers Law (2006)	8, 11(a), 24	The empowerment of this Law is provided to the Ministry of Transport for controlling navigation of vessels in the rivers and creeks as well as communicating with local and foreign government and organizations for conservation of water resources, rivers and creeks. Also, to carry out conservation works for water resources, rivers and creeks, in accordance with the relevant international conventions, regional agreements and bilateral agreements for environmental conservation.

			The project proponent commits to comply prohibitions for the following activities: • Not to carry out any act or channel shifting with the aim to ruin the water resources and rivers and creeks. • Not to dispose of engine oil, chemical, poisonous material and other materials which may cause environmental damage, or dispose of explosives from the bank or from a vessel which is plying, vessel which has berthed, anchored, stranded or sunk. Not to violate the conditions prescribed by the Directorate so as not to cause water pollution and change of watercourse in rivers and creeks.
24	Conservation of Water Resources and Rivers Rule (2013)	8, 9	According to Section 8, the project proponent, which excrement and dirt to prevent water pollution, motor oil chemicals toxic material hazardous materials discharge of radioactive materials, and other materials into rivers will be carried out in accordance with the specified rules. According to Section 9, the project proponent will pay the department the cost of the necessary repairs for the prevention of water pollution and environmental protection.
25	Underground Water Act, 1930	3, 5	The underground water act enacted on the date of 21st June in 1930 whereas it is expedient to conserve and protect underground sources of water supply in the Union of Myanmar. This act prohibits exploring of a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Township Officer or sub- divisional officer had power to close a license tube after exercising jurisdiction over the

			local area concerned and the expense of such closure shall be recoverable from the owner of the tube as if it were an arrear of land-revenue. The project proponent commits to comply for the stipulations and undertake the necessary proceeding as per following section: • Not to sink a tube for the purpose of obtaining underground water except under and in accordance with the terms of a license granted by the water officer. Every person owning a tube which was in existence before the extension of this Act to the local area concerned shall apply to the water officer for a license for the said tube, and such license shall be granted free of charge. Power to close unlicensed tubes. (Section 3) • To prescribe the licenses and the fees payment and the information to be supplied to the water office. (Section 5)
26	The Land Acquisition Act (1894)	4	Section. 4 (1) states that whenever it appears to the President of the Union that land in any locality is needed or is likely to be needed for any public purpose, a notification to that effect, shall be published in the Gazette, and the Collector shall cause public notice of the substance of such notification to be given at convenient places in the said locality.
27	The Farmland Law (2012)	30 (a)(b)	The project proponent commits to comply the stipulations for empowering: In respect of the application to utilize the farmland for other purposes in the interest of the public: a) The Central Farmland Management Body to give permission to utilize the paddy land for other

			purposes, with the recommendation of the Region or State Farmland Management Body. b) The respective Region or State Government shall give permission to utilize the farmland for other purposes except paddy land, with the recommendation of the Region or State Farmland Management Body. (Section 30)
28	Vacant, Fallow, Virgin Land Management Law	2012	According to Section 16, the project proponent shall carry out only the type of business permitted and affiliated economic enterprises, not extract other natural resources above or below the ground except the permitted business.
29	Employment and Skill Development Law (2013)	5, 14, 30	According to Section 5, the project proponent will sign an employment agreement within 30 days after appointing an employee to work. The terms of employment included in the employment agreement will be consistent with existing laws. The project proponent will send a copy of the employment agreement signed by the employer and the employee to the relevant employment and labor search office for approval. According to Section 14, the project proponent will carry out training programs to raise the level of employment skills of the workers he intends to employ in his business and the workers who are currently working in the business according to the needs of the business, in accordance with the policy of the Myanmar Workers' Skill Standardization Organization. According to Section 30, the total wages paid by the project proponent of industry and services to workers at the supervisor level and below that level; A sum of

			not less than zero fifteen percent of the salary will be paid to the fund without fail every month.
30	The Settlement of Labour Dispute Law (2012)	38, 39, 40 51	This law was enacted to safeguard the rights of workers or have a good relationship between employer and workers and make a peaceful workplace or obtain the rights fairly, rightfully, and quickly by settling the dispute between employer and worker justly. The project proponent commits to comply with the provisions acted in the Sections 38, 39, 40, and 51 of the Settlement of Labor Dispute Law, 2012. According to Section 38, the project proponent will not fail to negotiate and coordinate in respect of the complaint within the prescribed period without sufficient cause. According to Section 38(a), the project proponent will not fail to form a negotiation committee in accordance with the provisions of Section 3. Failure to do so will not result in another failure to form within 60 days from the date of conviction by the relevant court. According to Section 39, the project proponent will not alter the conditions of service relating to workers concerned in such dispute at the consecutive period before commencing the dispute within the period under investigation of the dispute before the Arbitration Body or Council, to affect the interest of such workers immediately. According to Section 40, the project proponent will not lock-out or strike without accepting negotiation, conciliation and arbitration by Arbitration Body in accord with this law in respect of a dispute.

			According to Section 51, the project proponent, in the course of settlement of dispute, commits any act or omission, without sufficient cause, which by causing a reduction in production resulting so as to reduce the workers' benefits will be liable to pay full compensation in the amount determined by the Arbitration Council or the Arbitration Body.
31	Workmen's Compensation Act (1923) Amendment in (2005)	3, 4, 13	The project proponent commits to comply with the provisions mentioned in Section 3,4 and 13 of the Workmen's Compensation Act, 1923. The project proponent is required to make payments to employees who become injured or who die in any accidents arising during and in consequence of their employment. The minimum and the maximum payment shall be the amount of compensation prescribed by notification made by the Ministry of Labor with the approval of the Government respectively. Where a workman has recovered compensation in respect of any injury caused under circumstances creating a legal liability of some person other than the person by whom the compensation was paid to pay damages in respect thereof, the person by whom the compensation was paid and any person who has been called on to pay an indemnity shall be entitled to be indemnified by the project proponent so liable to pay damages as aforesaid.
32	Labour Organization Law (2011)	17 to 22	This Law was enacted, to protect the rights of the workers, to have good relations among the workers or between the employer and the worker, and to enable to form and carry out the labor organizations systematically and independently.

			The project proponent commits to comply the stipulations: • That Labor Organizations are free to organize and negotiate worker rights if not meeting labor laws. (Section 17) • That Labor Organizations may demand re-appointment of worker if cause of dismissal is related to labor organization membership or activities or not conform with labor laws. (Section 18) • That Labor Organizations have the right to send representatives to conciliation tribunals. (Section 19) • That Labor Organizations have the right to participate and discuss worker rights and interests with government and employers. (Section 20) • That Labor Organization have the right to participate in collective bargaining in accordance with labor laws. (Section 21) • That Labor Organization may take collective actions in accordance with the relevant procedures, regulations and law. (Section 22)
33	Minimum Wages Law, 2013	12, 13	The project proponent commits to comply with the provisions of Sections 12 and 13 mentioned in the Minimum Wage Law, 2013. According to Section 12, the project proponent will not pay wage to the worker less than the minimum wage stipulated under this Law; and not to deduct any other wage except the wage for which it has the right to deduct as stipulated in the notification issued under this Law. According to Section 13, the project proponent will inform the workers the rates of minimum wage relating to the business among the rates of minimum wage stipulated under this Law and advertise it at the

			workplace to enable to be seen by the relevant workers; The project proponent will record the lists, schedules, documents and wages of the workers correctly in accord with the stipulation and report the lists, schedules and documents recorded under sub-section (b) to the relevant department in accord with the stipulations. And then will accept the inspection when summoned by the inspection. Moreover, he shall produce the said lists and documents when so required. The project proponent will give them holiday for medical treatment in accord with the stipulations if the workers cannot work due to sickness, give holiday without deducting from the minimum wage, in accord with the stipulations if the funeral matter of the family of worker or his parent occurs.
34	The Payment of wages Law (2016)	3, 4, 5, 14 and Chapter 3	The project proponent commits to comply with the provisions of Sections 3, 4, 5, 14 and Chapter 3 mentioned in The Payment of Wages Law, 2016. According to Section 3, the project proponent will pay wages to the workers employing in his business in local currency or foreign currencies stipulated by the Central Bank of Myanmar. Such payment may be paid in cash or cheque or deposit into the bank account of the worker with the agreement between the employer and the worker. According to Section 4, the project proponent will pay wages at the end of the work or at the time agreed to pay to the worker for hourly, daily, weekly or other part time work, or temporary or piece work, not exceed one month than the period agreed with the worker.

			According to Section 5, if an employer encounters difficulties to make payment under sub-section (c) of the Section 4 due to any unexpected condition, including natural disaster, the employer will submit that which date has been altered for the payment of wages with the consent of the workers to the Department on reasonable ground. According to Section 14, the project proponent will pay if the worker has to work overtime at the rate set by law. The project proponent may deduct from wages, except leaves which are entitled wages under the relevant law and public holidays, for the absent period from work. According to Chapter 3, the project proponent will not deduct from the wages of the worker except deduction from wages in accordance with provisions of the law.
35	Social Security Law, 2012	11(a), 15(a, b), 18(b), 48(b), 53 75	The Social Security Law stipulates the formation and implementation of the social security system. The project proponent commits to comply with Sections 11 (a), 15 (a, b), 18 (b), 48 (b), and 75. According to Section 11(a), the project proponent will be applied with the provisions for compulsory registration for ports and out-ports contained in any existing law; According to Section 15(a), the following funds are included in the Social Security Fund: (i) health and social care fund; (ii) family assistance fund; (iii) invalidity benefit, superannuation benefit, and survivors' benefit fund;

			(iv) unemployment benefit fund; (v) other social security fund for social security system of compulsory registration and contribution stipulated by the Ministry of Labor, in co-ordination with the Social Security Board, under clause (ii) of sub-section (e) of section 13; (vi) other social security fund stipulated that contribution may be paid after voluntary registration under clause (ii) of sub-section (e) of section 13; (vii) Social Security Housing Plan fund. According to Section 15(b), the project proponent and workers of establishments will pay contributions after effecting compulsory registration to the fund contained in clauses (i), (iii), (iv) and (v) of sub-section (a). According to Section 18(b), the project proponent will deduct contributions to be paid by worker from his wages together with contribution to be paid by him and pay to the social security fund. The project proponent will also incur the expense for such contribution. According to Section 48(b), the project proponent will insurance by registering voluntarily for the workers who are not applied to provisions of compulsory registration for employment injury benefit insurance system and by paying stipulated contribution to employment injury benefit insurance fund. According to Section 53, the employers and workers shall co-ordinate with Social Security Board or insurance agency in respect of keeping plans for

			safety and health in order to prevent employment injury, contracting disease and decease owing to occupation and in addition to safety and educational work of the workers and accident at the establishment. The project proponent shall incur the costs of medical treatment for employment injury occurring from criminal action or omission of the employer, or occurring from employer's failure to keep occupational safety plans and protections, and other benefits entitled to enjoy under this Law in accord with the stipulations without fail. According to Section 75, the project proponent will prepare and keep the following records and lists correctly and submit to the relevant township social security office in accord with the stipulations: - records and lists of workers' daily attendance; - records on appointment of new workers, employing worker by changing of work, termination, dismissal and resignation; - records on promotion and paying remuneration; - records and lists of employer, manager, and administrator and records on change of them. The project proponent will inform the relevant township social security office if the following matters arise: - changes in number of workers and address of establishment; - change of employer, change of business, suspension of work, and close-down of work; - employment injury, decease and contracting diseases;

			The project proponent will submit records of work and lists if requested by inspectorate or official assigned by the Social Security Head Office and various levels of Regional Social Security Office under this Law.
36	Leaves and Holidays Act, 1951	3, 4, 5, 6, 7(a)	The project proponent commits to comply with the provisions mentioned in Sections 3, 4, 5, 6 and 7(a) of the Leave and Holiday Act, 1951; Amendment in 2014. This defines the public holidays that every employee shall be granted with full payment. It also defines the rules of leave for workers including casual leave, medical leave, earned leave, and maternity leave.
37	The Private Industrial Enterprise Law (1990)	13, 27	The project proponent must receive the inspection, if an inspection team assigned by the Department or the supervisory board comes to inspect, comply with the orders and instructions issued by the Ministry and the Department from time to time and must comply with any order or decision made by the Minister and the Director General. (Section 13) The project proponent, in the distribution and sale of the products, shall not sell them without a trademark and comply with any order or decision made by the Minister and the Director General according to Section 27.
38	Myanmar Engineering Council Law (2013)	34, 37	The project proponent commits to follow; If, whoever has received a registration certificate, is found to have breached any rules contained in the registration certificate or violated any prohibition contained in a rule, order or directive enacted under this law or in any stipulation of this law, the executive committee may take the following administrative actions-

			(a) giving a warning; (b) assessing a suitable fine; (c) suspending the registration certificate; (d) cancelling the registration certificate. (Section 34) The project proponent commits to comply; No one will perform any engineering work and technological work that is specified as being dangerous to the public by a rule enacted under this law without having received a registration certificate issued by the council, except for engineers appointed in a government department or an organization in the performance of their duties according to Section 37.
39	The Electricity Law (2014)	20, 21, 24, 27, 29, 33, 40, 68	According to Section 20, the project proponent will abide by the rules, regulations, bye-laws, notifications, orders, directives and procedures issued by the Ministry in carrying out the electrical business contained in the permit. According to Section 21(a), the project proponent will, if causes damages and losses to any person and entity for failing to abide by this law, rules, procedures, regulations, bye-laws, order and directives and failing to abide by the prescribed qualities and standardization, be liable according to law. According to Section 24, the project proponent, if damages or losses arise to any other electric power user or any electrical business due to the negligence of any electric power user, the calculated compensation in accordance with the method prescribed by the Ministry for the value of damage or loss will be paid. According to Section 27, in the event of an electricity hazard occurring in respect of generation,

			transmission, distribution, and utilization of electric power, the project proponent will report to the Chief Inspector and in-charge of the relevant department as soon as possible. According to Section 29, the Ministry shall inspect the specification of quality and standardizations in respect of the factories, equipment installed to them, business buildings, and electrical equipment which are manufactured, imported and sold from the local and foreign country. According to Section 33, the Chief Inspector, Inspectors and persons conferred duty by them have the right to enter and inspect any place or building to perform their duties in accord with stipulations. According to Section 29 and 33, the project proponent will be allowed inspection of the Ministry, Chief Inspector or an inspector. According to Section 40, the project proponent will carry out the project the project in accordance with the rules, standardizations, and procedures issued by the Ministry and shall be subjected to the necessary inspection of relevant government departments and organizations. According to Section 68, if a person is injured, disabled, or killed by the electric shock or outbreak of fire due to negligence or default of the project proponent or the person designated by him, the aggrieved person shall have the right to claim compensation from the project proponent.
40	The Highways Law (2000)	8	The proponent shall comply an interactive general guides and regulations that citizens shall follow when using the highway for various purposes.

			According to section 8, the project proponent will not commit of the following acts; - road construction; expansion repair Interferes with or hinders conservation work; - Vehicles designated not to be driven on highways; wheel type driving a heavy vehicle or using a wheel rim; - obstructing or obstructing the clearing of dangerous trees by the Roads Department; - Damage the road, bridge and terrain without the permission of the Road Department within the boundary of the main road.
41	Animal Health and Livestock Development Law (2020)	23, 25	According to Section 23, the project proponent shall apply to the Township Department Head of the Department in accordance with the requirements for obtaining a permit for the operation. The project proponent commits to comply with this law and rules, orders, directives and procedures issued under this law, (Section 25)
42	Natural Disaster Management Law (2013)	14 to 18	Natural Disaster Management Law's Objectives are to implement natural disaster management programs systematically and expeditiously in order to reduce disaster risks , to form the National Committee and Local Bodies in order to implement natural disaster management programs systematically and expeditiously, to coordinate with domestic and foreign government departments and organizations, social organizations, other non-government organizations or international organizations and foreign regional organizations in carrying out natural disaster management activities, to conserve and restore the environment affected by natural disasters and to provide health, education, social and

			livelihood programs in order to bring about better living conditions for victims. The project proponent commits to comply incorporating measures of natural disaster risk reduction in development plans of the State according to Section 14 (d) and the project proponent shall pre-planning measures for disaster mitigation before a natural disaster strikes and reconstruction activities. (Section. 14 to 18)
43	The Ethnic Rights Protection Rules (2019)	20, 21	For any businesses within the area of ethnic groups, the project proponent shall follow rules 20, and 21 of the Ethnic Rights of Protection Rules (2019). According to the Ethnic Rights Protection Rules (2019), Rule 20, the project proponent, the advantages and disadvantages of the project must be fully and accurately explained in advance, using languages and methods that they can understand, so that the local ethnic groups living in the area where the project will be implemented can understand. In order to find out whether there is any impact on the environment and socio-economic life in the area, environmental impact analysis and socio-economic development impact analysis shall be carried out in accordance with the guidelines of the relevant department. Rule (21), The project proponent upon completion of project implementation, pre-arranged activities and progress conditions shall be submitted to the Ministry.

3.6 International Conventions, Treaties and Agreements

Myanmar is a signatory to various international conventions, treaties, and agreements related to environmental protection and sustainable development. For this project, all relevant international instruments will be identified, and their key provisions applicable to the project's planning, construction, and operational phases will be summarized.

The Project Proponent commits to full compliance with all international conventions, treaties, and agreements that are applicable to the proposed project, ensuring that the project activities align with Myanmar's international environmental obligations.

No	International Environmental Conventions/ Protocols/ Agreements	Date of Ratification	Relevance to the project
1	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	6-01-2015	Management of hazardous wastes generated by the project
2	United Nations Framework Convention on Climate Change, New York, 1992 (UNFCCC)	25-11-1994	Climate change mitigation related to emissions from construction and operations
3	Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985	24-11-1993	Control of ozone-depleting substances that may be used in the project
4	Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987	24-11-1993	Regulation of refrigerants and other ozone-depleting chemicals
5	Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, D.C., 1973; and this convention as amended in Bonn, Germany,1979 (CITES)	13-6-1997	Prevent any involvement in the illegal trade, use, or transportation of protected species
6	Kyoto Protocol to the Convention on Climate Change, Kyoto, 1997	13-8-2003	Reduce greenhouse gas emissions

7	Convention on Biological Diversity (CBD)	1995	Protection of biodiversity potentially affected by project activities

3.7 Environmental Quality Standards

Ministry of Natural Resources and Environmental Conservation, in exercise of the power conferred by sub-section (b) of section 42 of the 2012 Environmental Conservation Law (ECL), the National Environmental Quality (Emission) Guidelines were issued on December, 2015.

These Guidelines have been excerpted from the International Finance Corporation (IFC) Environmental Health and Safety (EHS) Guidelines, which provide technical guidance on good international industry pollution prevention practice for application in developing countries. The Guidelines are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of these Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them.

Emissions Guidelines shall apply to any project subject to EIA Procedure, as adopted by the Ministry, in order to protect the environment and to control pollution in the Republic of the Union of Myanmar. These Guidelines specifically apply to all project types listed in the EIA Procedure under 'Categorization of Economic Activities for Assessment Purposes' which sets out projects that are subject to EIA, IEE, or EMP. The Project proponent will follow and comply National Environmental Quality (Emission) Guidelines (2015).

3.7.1 Air Emission

Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: (i) emissions do not result in pollutant concentrations that reach or exceed ambient quality guidelines and standards, or in their absence the current World Health Organization (WHO) Air Quality Guidelines; and (ii) emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards (i.e. not exceeding 25 percent of the applicable air quality standards) to allow additional, future sustainable development in the same airshed (Source:National Environmental Quality (Emission) Guidelines, 2015.

Table 3.1 Ambient quality guidelines

Parameter	Averaging Period	Guideline Value µg/m^3
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
Sulfur dioxide	24-hour 10-minute	20 500

[a]Particulate matter 10 micrometers or less in diameter

[b] Particulate matter 2.5 micrometers or less in diameter

Source:National Environmental Quality (Emission) Guidelines, 2015

3.7.2 Wastewater

The guideline applies to intensive poultry production and covers the production of laying hens, broiler chickens, turkeys, ducks and game birds. Poultry production operations include feed manufacture, storage and handling, poultry raising, feeding and watering, egg and/or live bird collection, management of animal waste, and disease and pest control.

Table 3.2 Effluent Level (Poultry Production)

Parameter	Unit	Guideline Value
Biochemical oxygen demand	mg/l	50
Chemical Oxygen Demand	mg/l	250
Oil and grease	mg/l	10

pH	S.U[a]	6-9
Temperature increase	°C	<3[b]
Total Coliform Bacteria	100 ml	400
Total Nitrogen	mg/l	10
Total Phosphorus	mg/l	2
Total Suspended Solids	mg/l	50

[a] Standard Unit

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

3.7.3 Noise Level

Noise prevention and mitigation measures should be applied where predicted or measured noise impacts from a project facility or operations exceed the applicable noise level guideline at the most sensitive point of reception. Noise impacts should not exceed the levels presented below, or result in a maximum increase in background levels of three decibles at the nearest receptor location off-site.

Table 3.3 Target Noise Level

Receptor	**One Hour LAeq (dBA)**	
	Daytime **07:00 – 22:00**	**Nighttime** **22:00 – 07:00**
Residential, institutional, educational	55	45
Industrial, commercial	70	70

Source:National Environmental Quality (Emission) Guidelines, 2015

3.7.4 Ambient Water Quality Standard for the Protection of Aquatic Life (Environmental Compliance Certificate Template)

The following standards apply to ensure that effluents, drainage or runoff from the Project or its related activities do not result in ambient water quality downstream of a discharge point(s) exceeding these Ambient Water Quality Standards.

Table 3.4 Ambient Water Quality

Parameter	Units	Concentration	Reference
Aluminum	mg/l	0.005 (if pH<6.5) 0.1 (if pH>6.5)	Australian and New Zealand guidelines for fresh and marine water quality (2000). Australian and New Zealand Environmental Conservation Council. Water Quality Guidelines for the Protection of Aquatic Life (2016). Canadian Council of Ministers of the Environment. Metal mining technical guidance for environmental effects monitoring (2012). Environmental Canada.
Ammonia	mg/l	0.02	As above
Arsenic	mg/l	0.05	As above
Boron	mg/l	0.5	As above
Cadmium	mg/l	0.0002	As above
Chloride	mg/l	0.86	As above
Chromium (hexavalent)	mg/l	0.01	As above

Parameter	Units	Concentration	Reference
Chromium (trivalent)	mg/l	0.0089	As above
Coliforms (Total)	MPN/100ml	5000	As above
Coliforms (Faecal)	MPN/100ml	1000	As above
Color	mg/l	Not significantly Higher that seasonally adjusted background value	As above
Copper	mg/l	0.002	As above
Cyanide (Free)	mg/l	0.005	As above
Dissolved Oxygen	mg/l	6	As above
Ethanol	mg/l	1.4	As above
Fluoride	mg/l	0.2	As above
Iron	mg/l	0.3	As above
Lead	mg/l	0.001	As above
Manganese	mg/l	0.05	As above
Mercury	mg/l	0.0001	As above
Molybdenum	mg/l	0.073	As above
Naphthalene	mg/l	0.016	As above
Nickel	mg/l	0.015	As above
Nitrate	mg/l	5	As above
Nitrite	mg/l	0.06	As above
Oil & Grease	-	Substantially absent, no iridescent sheen	As above
pH	-	6.5-9	As above
Phenols	mg/l	0.004	As above
Phosphorus	mg/l	0.15	As above
Selenium (total)	mg/l	0.005	As above
Sliver	mg/l	0.0001	As above
Sulphide	mg/l	0.002	As above
Temperature	^{o}C	<2 increase	As above
Thallium	mg/l	0.004	As above

Parameter	Units	Concentration	Reference
Total Suspended Solids	mg/l	10	As above
Tributyltin	mg/l	0.000008	As above
Turbidity	-	<10%change	As above
Uranium	mg/l	0.015	As above
Zinc	mg/l	0.005	As above

3.7.5 Drinking Water Quality Standard (Environmental Compliance Certificate Template)

The following standards apply to ensure that effluents, drainage or runoff from the Project or its related activities do not result in ambient water quality downstream of a discharge point(s) exceeding these Drinking Water Quality Standards.

Table 3.5 Drinking Water Quality Standards

Parameter	Units	Concentration	Reference
Aluminum	mg/l	0.2	National drinking water quality standard 2019. Ministry of Health, Myanmar.
Ammonia-Nitrogen	mg/l	1.5	As above
Antimony	mg/l	0.02	As above
Arsenic	mg/l	0.05	As above
Barium	mg/l	0.7	As above
Boron	mg/l	2.4	As above
Cadmium	mg/l	0.003	As above
Calcium	mg/l	200	As above
Chloride	mg/l	250	As above
Chromium	mg/l	0.05	As above
Coliforms (Total)	MPL/100ml	3	As above
Coliforms (Faecal)	MPL/100ml	0	As above

Color	TCU	15	As above
Copper	mg/l	2	As above
Cyanide	mg/l	0.07	As above
Fluoride	mg/l	1.5	As above
Hardness	mg/L as CaCO3	500	As above
Iron	mg/l	1	As above
Lead	mg/l	0.01	As above
Magnesium	mg/l	150	As above
Manganese	mg/l	0.4	As above
Mercury (total)	mg/l	0.001	As above
Nickel	mg/l	0.07	As above
Nitrate (as NO3)	mg/l	50	As above
Nitrate (as NO2)	mg/l	3	As above
Odor	-	Acceptable/ No objectionable odor	As above
pH	-	6.5-8.5	As above
Selenium	mg/l	0.04	As above
Sodium	mg/l	200	As above
Sulphate	mg/l	250	As above
Sulphide	mg/l	0.05	As above
Taste	-	Acceptable/ No objectionable taste	As above
Total dissolved Solids	mg/l	1000	As above
Turbidity	NTU	5	As above
Uranium	mg/l	0.03	As above
Zinc	mg/l	3	As above

3.8 International Finance Corporation Environmental, Health and Safety Guidelines

The IFC EHS Guidelines are technical reference documents with general and industry-specific examples of good international industry practice.

The General EHS Guidelines are designed to be used together with the relevant industry sector EHS guidelines that provide guidance to users on EHS issues in specific industry sectors. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent.

General EHS Guidelines

The General EHS Guidelines are organized as reported in the following Table.

Table 3.6 Organization of the IFC EHS General Guidelines

Main Area	Topic
Environmental	▪ Air Emissions and Ambient Air Quality ▪ Energy Conservation ▪ Wastewater and Ambient Water Quality ▪ Water Conservation ▪ Hazardous Materials Management ▪ Waste Management ▪ Noise ▪ Contaminated Land
Occupational Health and Safety	▪ General Facility Design and Operation ▪ Communication and Training ▪ Physical Hazards

	▪ Chemical Hazards ▪ Biological Hazards ▪ Radiological Hazards ▪ Personal Protective Equipment (PPE) ▪ Special Hazard Environments ▪ Monitoring
Community Health and Safety	▪ Water Quality and Availability ▪ Structural Safety of Project Infrastructure ▪ Life and Fire Safety ▪ Traffic Safety ▪ Transport of Hazardous Materials ▪ Disease Prevention ▪ Emergency Preparedness and Response
Construction and Decommissioning	▪ Environment ▪ Occupational Health & Safety ▪ Community Health & Safety

With respect to the environmental issues, IFC Guidelines refer to World Health Organization (WHO) standards that include the following:

- WHO Ambient Air Quality Standards;
- WHO Guidelines for Community Noise;
- WHO Drinking Water Quality; and
- WHO Guidelines for the Safe Use of Wastewater, Excreta and Greywater.

In addition, the following guidelines and standards may be applicable:

- Dutch Intervention Values for Soil Quality;
- International Union for Conservation of Nature (IUCN) Red Data Book for protected species (fauna and flora);
- Occupational Health and Safety Administration (OHSA) standards – United States Department of Labor; and
- United Nations Framework Convention on Climate Change (UNFCCC) Baseline and Monitoring Methodologies for Large Scale Clean Development Mechanism (CDM) Project Activities.

According to IFC requirements, air emissions should not result in pollutant concentrations higher than the relevant national ambient quality guidelines and standards. In their absence, the current WHO Air Quality Guidelines or other internationally recognized sources, such as the United State Environmental Protection Agency (USEPA), National Ambient Air Quality Standards (NAAQS) and the relevant European Council Directives can be also referred to.

In the following Table, Ambient Air Quality values outlined in the IFC EHS General Guidelines are reported.

Table 3.7 Ambient Air Quality Values - IFC EHS General Guidelines

Pollutant	Averaging Period	Maximum Limit Value ($\mu g/m^3$)
Sulphur Dioxide (SO_2)	10 min	500
	1 hour	--
	24 hours	20
	Year	--
Nitrogen Dioxide (NO_2)	1 hour	200
	24 hours	--

	Year	40
Ozone (O_3)	1 hour	--
	8 hours	100
Carbon Monoxide (CO)	1 hour	-
	8 hours	-
Black Smoke (BS)	24 hours	--
	Year	--
Total Suspended Particles (TSP)	24 hours	--
	Year	--
Particular Matter <10 µm (PM_{10})	24 hours	50
	Year	20
Particular Matter <2.5 µm ($PM_{2.5}$)	24 hours	25
	Year	10
Lead (Pb)	Year	--

In addition, IFC EHS General Guidelines require as a general rule that Project specific ground concentration does not contribute more than 25% of the above-mentioned applicable air quality standard to allow additional, future sustainable development in the same airshed.

As outlined in the IFC EHS General Guidelines, noise impacts should be estimated by the use of baseline noise assessments for developments close to local human populations to verify that the levels presented in the following Table are not exceeded, or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site.

Table 3.8 Noise Level Guidelines – IFC EHS General Guidelines

Noise Level Guidelines		
Receptor	**IFC - One Hour L_{Aeq} (dBA)**	
	Day-time 07:00 - 22:00	**Night-time 22:00 – 07:00**
Residential; institutional; educational	55	45
Industrial; commercial	70	70

Noise monitoring programs should be designed and conducted by trained specialists. Typical monitoring periods should be sufficient for statistical analysis and may last 48 hours with the use of noise monitors that should be capable of logging data continuously over this time period, or hourly, or more frequently, as appropriate (or else cover differing time periods within several days, including weekday and weekend workdays). The type of acoustic indices recorded depends on the type of noise being monitored, as established by a noise expert. Monitors should be located approximately 1.5 m above the ground and no closer than 3 m to any reflecting surface (e.g., wall). In general, the noise level limit is represented by the background or ambient noise levels that would be present in the absence of the facility or noise source(s) under investigation.

In terms of Occupational Health and Safety (OHS) aspects, IFC noise limits for different working environments are provided in the following Table.

Table 3.9 Noise Limits for Different Working Environments - IFC EHS General Guidelines

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

Discharges of process wastewater, sanitary wastewater, wastewater from utility operations or storm water to surface water should not result in contaminant concentrations in excess of local ambient water quality criteria or, in the absence of local criteria, other sources of ambient water quality. Receiving water use and assimilative capacity, taking other sources of discharges to the receiving water into consideration, should also influence the acceptable pollution loadings and effluent discharge quality.

Waste management should be addressed through a waste management system that addresses issues linked to waste minimization, generation, transport, disposal, and monitoring.

Land is considered contaminated when it contains hazardous materials or oil concentrations above background or naturally occurring levels. Contaminated lands may involve surficial soils or subsurface soils that, through leaching and transport, may affect groundwater, surface water, and adjacent sites. Where subsurface contaminant sources include volatile substances, soil vapor may also become a transport and exposure medium, and create potential for contaminant infiltration of indoor air spaces of buildings. Contamination of land should be

avoided by preventing or controlling the release of hazardous materials, hazardous waste, or oil to the environment. When contamination of land is suspected or confirmed during any project phase, the cause of the uncontrolled release should be identified and corrected to avoid further releases and associated adverse impacts. Contaminated lands should be managed to avoid the risk to human health and ecological receptors. The preferred strategy for land decontamination is to reduce the level of contamination at the site while preventing the human exposure to contamination.

With respect to the OHS field, the General EHS Guidelines state that employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers. The guidelines provide guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. Although, the focus is placed on the operational phase of projects, much of the guidance also applies to construction and decommissioning activities.

The General EHS Guidelines on Community Health and Safety complement the guidance provided for the environmental and occupational health and safety topics, specifically addressing some aspects of project activities taking place outside of the traditional project boundaries, but nonetheless related to the project operations, as may be applicable on a project basis. These issues may arise at any stage of a project life cycle and can have an impact beyond the life of the Project.

Finally, the General EHS Guidelines provide additional, specific guidance on prevention and control of community health and safety impacts that may occur during new project development, at the end of the project life-cycle, or due to expansion or modification of existing project facilities.

4. PROJECT DESCRIPTION AND ALTERNATIVES

4.1 Project Justification and need

Golden Apex International Trading Co., Ltd, a 100% Myanmar citizen-owned company, proposes to establish and operate an animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026. During the operational phase, the facility is expected to employ a total of 104 workers to support production and related activities.

Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Golden Apex International Trading Co., Ltd sources the raw materials required for the production of animal nutrition feed and feed additive both locally and internationally. These materials are systematically stored in designated warehouses and are processed according to predetermined formulations using grinding and mixing machines.

4.1.1 Project Proponent

	GOLDEN APEX INTERNATIONAL TRADING CO., LTD	
	Project Proponent	Daw Kay Thwe Aung
	Contact Person	Director
	Address	No. (90 A/B), Near Yoe Gyi Yoe Lay Roundabout, West University Road, Htantapin Township, Yangon Region.
	Telephone Number	+95 9 5098028
	E mail	goldenapexmyanmar@gmail.com

4.2 Project Location

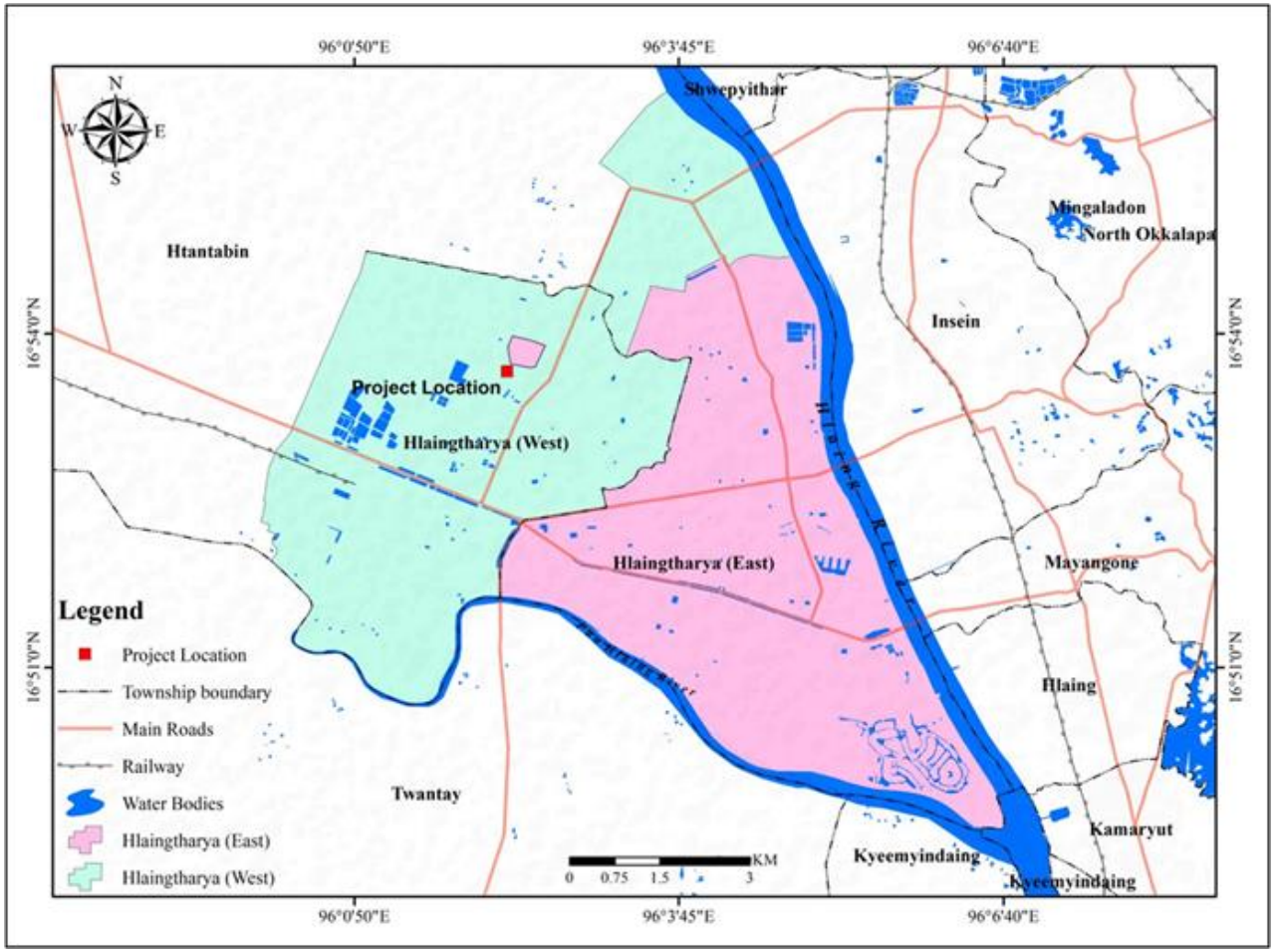


Figure 4.1 Location of the Project Area

The project area is located is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region and is shown in below Figure. The proposed project of animal feed mill factory will produce three main group feed product types such as poultry, pig/swine and fish feed.

4.3 Basic Components, Facilities, and Activities

The machinery and equipment used for the animal feed mill factory are listed in Table 4.1. The main equipment of the Animal Feed Mixer with the Raw Material-Grinding-Premix-Dosing-Mixing-Finishing Product System, the mixing machine, and the grinding machine are used for production. The conveyor, butterfly conveyor, and forklift are used for the raw material carrying and weighing process. The proposed project has one office building, one warehouse for Laboratory and Feed additive, one warehouse for raw material and finished goods, and one feed mill factory, which are located about project boundary and location map show in Figure 4.1.

Table 4.1 List of Machinery and Equipment

No	Type of Machinery and Equipment	Number
1	Mixing Machine (4 tons)	7
2	Mixing Machine (3 tons)	5
3	Grinding Machine (with hammer) (4 tons)	1
4	Forklift (5 tons)	2
5	Forklift (3 tons)	1
6	Generator (500 KVA)	1
7	Generator (300 KVA)	1
8	Butterfly Conveyor	1
9	Animal Feed Mixer with (Raw Material – Grinding – Premix – Dosing – Mixing – Finishing Product System)	1

Table 4.2 List of Building in Animal Feed Mill Factory

No	Type	Dimension	Number
1	Office	80 ft x 18 ft	1
2	Warehouse I (Laboratory and Feed additive)	37 ft x 45 ft	1
3	Warehouse II (Raw Material and Finished Goods)	62 ft x 97 ft	1
4	Feed Mill Factory	80 ft x 91 ft	1



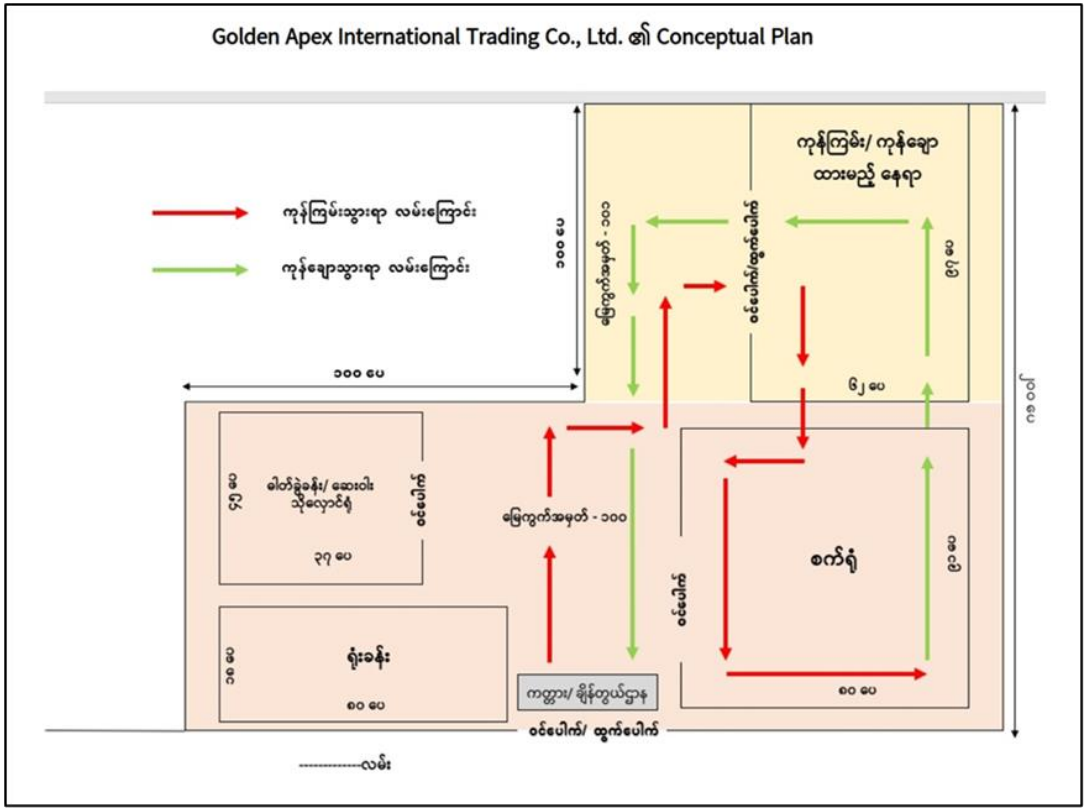




Figure 4.2 Type of Building in Animal Feed Mill Factory

4.3.1 Layout Map and Building

The location of the office building, warehouse for Laboratory and Feed additive, warehouse for raw material and finished goods, and feed mill factory are show in Figure 4.3.



(a)



(b)

Figure 4.3 Layout Map of Animal Feed Mill Factory

4.4 Project Activity

4.4.1 Type of Animal Feed Products

The proposed project of animal feed mill factory will produce three main group feed product types such as poultry, pig/swine and fish feed. The estimated production tonnage for poultry, pig/swine and fish feed are 726.14 tons per day and 217,842 tons per year.

Table 4.3 Product list of Animal Feed Mill Factory

No	Group of Product	Product List
1	Poultry	Laying Feed Starter (16 weeks to 19 weeks)
		Laying Feed Grower (19 weeks to 45 weeks)
		Laying Feed Finisher (>45 weeks)
		Broiler Feed Starter (0 day to 20 days)
		Broiler Feed Grower (21 days to 40 days)
		Broiler Feed Finisher (40 days to MKT)
2	Pig/swine	Pig/Swine Feed Starter (5 kilograms to 30 kilograms)
		Pig/Swine Feed Grower (30 kilograms to 70 kilograms)
		Pig/Swine Feed Finisher (> 70 kilograms)
3	Fish Feed	Aqua Feed (Fish) (25% Protein)

Table 4.4 Daily Production Tonnage of Animal Feed Mill Factory

No	Group of Product		Production Ton per day
1	Poultry	Laying Feed	151.77
		Broiler Feed	237.6
2	Pig/swine		269.65
3	Fish Feed		67.12
Total			**726.14**

4.4.2 Production Process of Animal Feed Mill

Requirements for the raw materials for the production of animal nutrition feed and feed additives are met by imports from both local and international sources. Upon receipt, these materials are systematically stored in designated warehouses. During the feed production process, precise quantities of raw ingredients are measured and mixed according to predetermined formulations, then processed using grinding and mixing machines. The resulting semi-finished feed is subsequently cooled, weighed, and packed into standardized bags before being stored in warehouses. These finished products are then distributed and sold to livestock farmers across the country at reasonable prices.

Procedure for Animal Feed Mill Products

Raw materials stored in warehouses I and II are sent to the production building. The following steps outline the production stages of the animal feed mill process:

1. Import Raw Material
2. Conveying Raw Material
3. Weighting
4. Mixing
5. Grinding
6. Conveying with Butterfly conveyor
7. Shaking

8. Hammer
9. Pelleting
10. Cooling
11. Packing Product

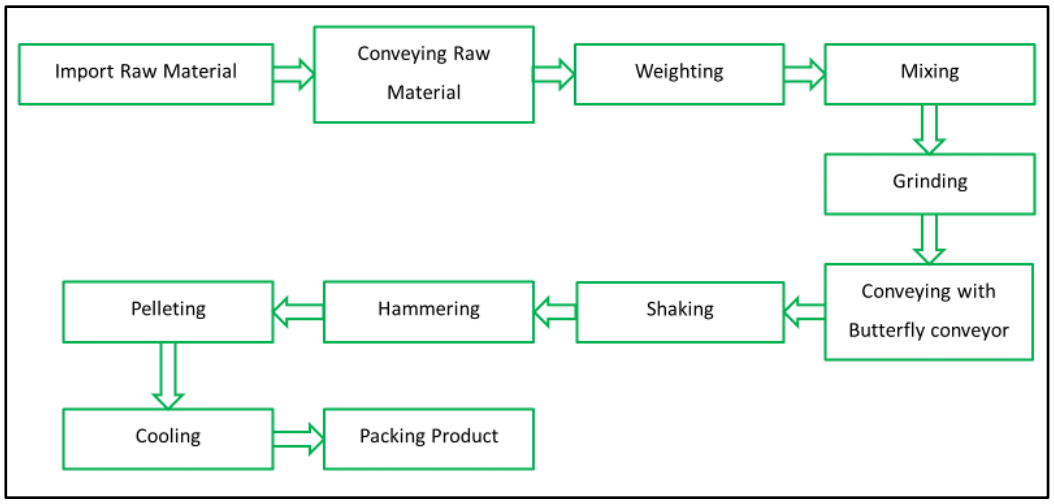


Figure 4.4 Production Process Flow Chat of Animal Feed Mill

4.4.3 Use of Raw Materials

The basic raw material for the production of animal nutrition feed include (1) Corn, (2) Soybean Meal, (3) Meat and Bone Meal, (4) Rapeseed Meal and feed additive for the production of animal nutrition feed include (1) Dicalcium Phosphate DCP 17%, (2) Dicalcium Phosphate DCP 18%, (3) BA 112 Broiler Premix, (4) BA 133 Layer Premix, (5) L – Lysine HCL, (6) L – Threonine, (7) L – Tryptophan, (8) DL – Methionine CUC, (9) Biotronic Top 3, (10) Hiphos – Enzyme, (11) Mycofix Secure, (12) ProAct Enzyme, (13) Multigrain Enzyme, (14) Lime Stone, (15) Chlorine Chloride 50%, (16) DSM pig/swine Prestarter premix, (17) DSM pig/swine Grower premix, (18) DSM pig/swine Finisher premix, (19) DSM Poultry Star ME, (20) DSM Rohu Carp Premix, (21) Biotronic SE, (22) Shrimp VMP, and (23) Mycofix Plus 3.0.

Table 4.5 Raw material and Feed additive for animal feed mill factory

No	Ingredient	Source
Raw Material		
1	Corn	Local
2	Soybean Meal	Import
3	Meat and Bone Meal	Import
4	Rapeseed Meal	Import
Feed additive		
5	Dicalcium Phosphate DCP 17%	Import
6	Dicalcium Phosphate DCP 18%	Import
7	BA 112 Broiler Premix	Import
8	BA 133 Layer Premix	Import
9	L – Lysine HCL	Import
10	L – Threonine	Import
11	L - Tryptophan	Import
12	DL – Methionine CUC	Import
13	Biotronic Top 3	Import
14	Hiphos - Enzyme	Import
15	Mycofix Secure	Import
16	ProAct Enzyme	Import
17	Multigrain Enzyme	Import
18	Lime Stone	Local

19	Chlorine Chloride 50%	Import
20	DSM pig/swine Prestarter premix	Import
21	DSM pig/swine Grower premix	Import
22	DSM pig/swine Finisher premix	Import
23	DSM Poultry Star ME	Import
24	DSM Rohu Carp Premix	Import
25	Biotronic SE	Import
26	Shrimp VMP	Import
27	Mycofix Plus 3.0	Import

4.5 Electricity and Fuel Equipment

The proposed project is intended to get required electricity supply form Yangon City Electricity Supply Board (YESB) and distributed by 315 KVA transformer. Another source of energy 500 KVA generator and 300 KVA generator will also be kept as the emergency generator if normal electricity supply could not provide for the proposed project. Estimate electricity usage is 40 Mega Watt (40000 kwh) per month. Annual fuel consumption for the animal feed mill factory is 6,000 gallons of diesel per year, 900 gallons of gasoline per year, and 12 gallons of lubricant per year.

Table 4.6 Electricity, Fuel and Lubricant Consumption Per Years

No	Type	kWh and Gallon per year
1	Electricity	480,000 kWh
2	Diesel	6,000 gal
3	Gasoline	900 gal
4	Lubricant	12 gal





Figure 4.5 315 KVA Transformer

4.6 Water Requirement

Two tube well water supplies will be used for this project which is located in the project areas. Its depth is 120 ft with 1.5 inches submersible pump and the water is stored at the overhead fiber 3 tank and one concrete tank. According to the MIC proposal, approximately water used for operation process is 96,000 cubic feet per year which is the total water consumption production of animal nutrition feed. Drinking water will be provided by outsource suppliers.

4.7 Environmental Protection Measures

4.7.1 Emission and Odor

The sources of air pollution from the animal feed mill factory activities are particulate matter and gas emissions. These activities, such as raw material storage, handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material. To minimize dust generation and maintain air quality within and around the factory premises, appropriate dust control measures will be implemented throughout the production process. During grinding and mixing operations, the facility will utilize lower-capacity butterfly conveyors and install exhaust fans within the factory to minimize dust emissions. All raw materials and feed additives will be stored exclusively within the designated warehouses, Warehouse I (Laboratory and Feed Additive) and Warehouse II (Raw Material and Finished Goods), to prevent wind-blown dust. Additionally, regular housekeeping practices, including water spraying on internal

roadways and factory premises, will be carried out to suppress fugitive dust and ensure a clean working environment.

4.7.2 Wastewater

The animal feed production process is a dry process. Therefore, significant industrial wastewater generation is not anticipated from the production line itself. Domestic wastewater generated from sanitary facilities for the total of 104 employees will be treated using a properly designed and constructed Septic Tank and which will be regularly maintained. To manage runoff water, a proper drainage system will be constructed around all buildings to channel rainwater away from work sites, and these drains will be regularly inspected and cleaned to prevent overflow and soil erosion.

4.7.3 Solid Waste

Solid waste generated from various animal feed mill factory activities. The primary sources include organic waste such as crushed cereal grain dust, and rejected raw materials and packaging waste such as packing bags, packing materials, and paper pallets. Most organic by-products from feed milling are recyclable or can be sold. Packaging waste, including packing bags, packing materials, and paper pallets, will be collected in leak-proof containers and stored in a designated, secure area with a concrete floor and roofing. These materials will be disposed in designated area and coordinate with Livestock and Livestock Products Manufacturing Industrial Zone and Hlaingtharya (West) Township Development Committee.

4.7.4 Noise and Vibration

The primary sources of noise and vibration include the handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material and the operation of exhaust fan. All machinery including mixing machines, grinding machine, crushing, and generators, will undergo regular maintenance, including lubrication and tightening of components, to prevent excessive noise and vibration from wear and tear. Additionally, noisy operation activities will be restricted to daytime hours to minimize disturbance to the surrounding area.

4.8 Project Development and Implementation Schedule

Main Project Activities and Schedule

Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. The expected total investment for this project is 4,939.919 million kyat and expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026. During the operational phase, the facility is expected to employ a total of 104 workers to support production and related activities. The estimated production tonnage for poultry, pig/swine and fish feed are 726.14 tons per day and 217,842 tons per year.

Table 4.7 Animal Feed Production Plan and Tentative Schedule

No	Type of Produce	Production Ton per year				
		Year 1	Year 2	Year 3	Year 4	Year 5 to 10
1	Poultry (Laying Feed, Broiler Feed), Pig/swine, and Fish Feed	217,842	219,242	220,642	220,042	225,000
Due to the nature of the operation process, production losses of up to 2-5% may occur.						

Table 4.8 Estimated Daily Production Tonnage of Animal Feed

No	Group of Product		Production Ton per day
1	Poultry	Laying Feed	151.77
		Broiler Feed	237.6
2	Pig/swine		269.65
3	Fish Feed		67.12
Total			**726.14**

4.9 Organization Structure and Workplace for Animal Feed Mill Factory

The proposed project of animal feed mill factory which composed under the Golden Apex International Trading Co., Ltd, to produced animal nutrition feed. Animal feed mill factory has a total of 104 employees, most are local people.

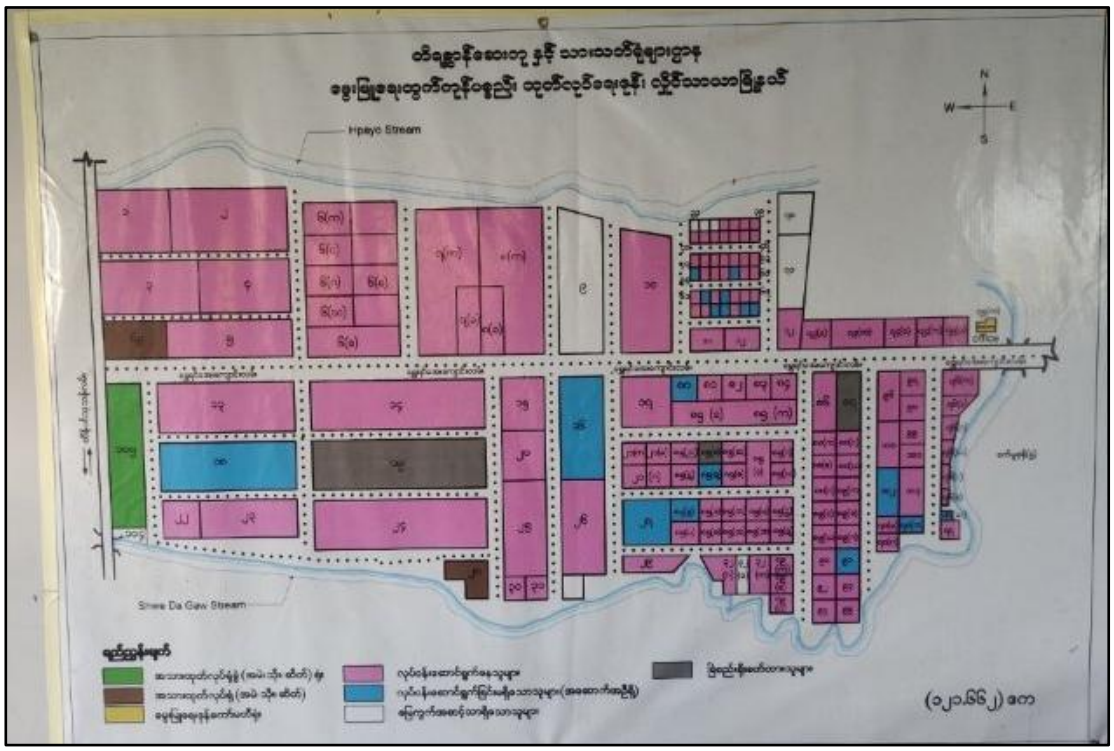
Table 4.9 Staffing of Animal Feed Mill Factory

No	Position	Staff (Number)
1	General Manager	1
2	Production Manager	1
3	Factory Manager	1
4	QC & Distribution Manager	1
5	HR Manager	1
6	Assistant HR Manager	1
7	HR Executive	2
8	Admin Manager	1
9	Assistant Admin Manager	1
10	Senior Accountant	2
11	Junior Accountant	5
12	Casher	3
13	Office Staff	2
14	Marketing Staff	10
15	Procurement Staff	2
16	Admin Supervisor	1

17	Store Keeper	5
18	Store QC	6
19	Production Affairs	45
20	Driver	5
21	Security	5
22	General Worker	3
Total		**104**

4.10 Other Existing Project and Development Project

The animal feed mill factory is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region and operate on a total land area of 0.688 acres. The expected investment period is 22 years. The animal feed mill factory is located Livestock and Livestock Products Manufacturing Industrial Zone. The Livestock and Livestock Products Manufacturing Industrial Zone is located in Hlaingtharya (West) Township, Yangon Region, with a total area of 121.662 acres.



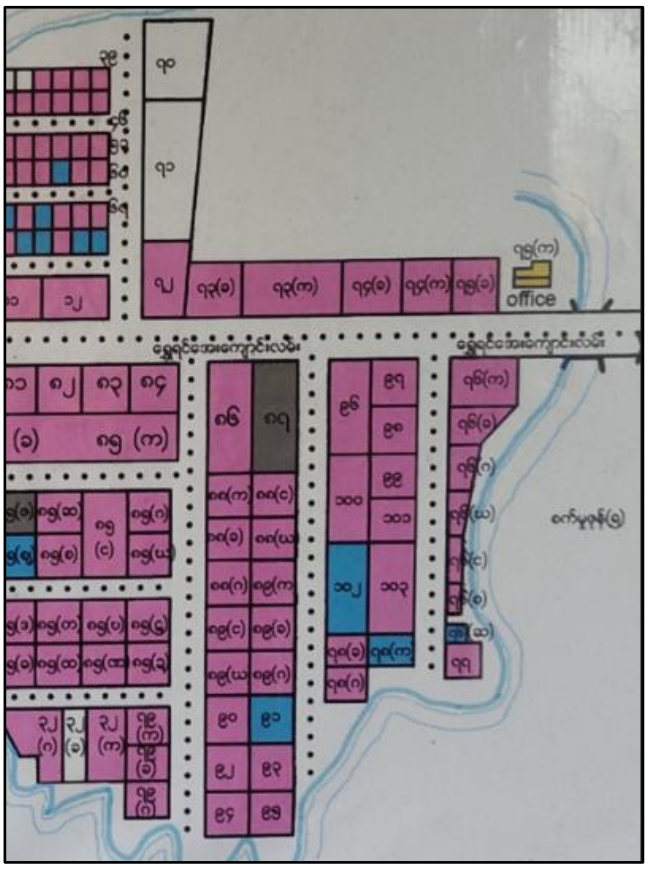


Figure 4.6 Location map of Animal Feed Mill Factory and Livestock and Livestock Products Manufacturing Industrial Zone

4.11 Consideration of Alternatives

The analysis of alternative is the process of comparing potential impacts and mitigation options of a series of alternative location, technologies, operation to identify optimal alternatives that meets national legislation. These alternatives can include variations in layout, alternative engineering process, grinding process, and raw material handling, those with appropriate environmental and risk management system.

The animal feed mill factory is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Golden Apex International Trading Co., Ltd, is committed to offering its products at affordable prices to serve not only commercial livestock producers but also small-scale livestock farmers throughout the country.

Analysis of alternatives based on site and technology are given below:

a) Alternative Location
b) Alternative Technologies
c) No project alternatives

4.11.1 Location Alternative

No location alternative site has been proposed aside from this area since the proposed project area is situated within Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region, which has been designated as the Livestock and Livestock Products Manufacturing Industrial Zone for the development of livestock and livestock products manufacturing by the government.

4.11.2 Technology Alternative

An animal feed mill factory will produce three main group feed product types such as poultry, pig/swine and fish feed. The production of animal nutrition feed such as raw material storage and handling, grinding, crushing, weighting, and mixing of premix feed additive and raw material.

Butterfly Conveyor: A butterfly conveyor is a type of conveyor that can be folded at one or more points like butterfly wings for easy movement, storage, or quick setup in temporary operations. The butterfly conveyor is best suited for operations where the transport location changes frequently and feed mills that require portability and compact storage.

Hammer Mill: Hammer mill is the most equipment used for the purpose of particle size reduction. The particle size of the material to be reduced can be easily controlled by changing the size of screen. Particle of small diameter that has been grinded by the hammer mill passes through the screen and leaves the hammer mill.

Raw Material Handling

Raw Material Handling	Advantages	Disadvantages
Butterfly Conveyor	▪ Easy to move - Can be wheeled to different work areas. ▪ Space Optimization: Helps in space-saving layouts by efficiently managing material flow without requiring extensive conveyor setups. ▪ Quick installation - Minimal setup time compared to fixed conveyors. ▪ Cost-effective - Good for small-scale or temporary operations.	▪ Lower load capacity - Not suitable for heavy materials compared to fixed conveyors. ▪ Limited length - Usually available only in shorter sections. ▪ More maintenance points - Hinges and joints need regular checks. ▪ Less robust - Not ideal for harsh or continuous industrial use.

Belts Conveyor	▪ Versatility: Conveyor belts can transport a wide variety of materials, including those with irregular shapes or sizes. ▪ Speed and Efficiency: Belt conveyors can move materials quickly and continuously, improving efficiency in production lines and material handling tasks.	▪ Limitations with Vertical Transport: While inclined belts can handle some elevation changes, steep or vertical transport is generally not feasible. ▪ Maintenance: The belt itself may require regular maintenance, cleaning, or replacement due to wear and tear or material spillage.
Selective Alternative	***Reason***	
Butterfly Conveyor	A butterfly conveyor is a type of conveyor that can be folded at one or more points like butterfly wings for easy movement, storage, or quick setup in temporary operations. The butterfly conveyor is best suited for operations where the transport location changes frequently and feed mills that require portability and compact storage.	

Grinding Process

Grinding Process	Advantages	Disadvantages
Hammer Mill	▪ Handles many materials; simple design; can produce fine grind sizes ▪ Versatile grinding; Can process a wide variety of raw materials (grains, fiber materials, by-products). ▪ Uniform particle size; Adjustable screen size allows better control of grind fineness.	▪ Higher energy consumption; Uses more power compared to roller mills for the same output. ▪ More heat generation ; May affect heat-sensitive ingredients. ▪ More fines and dust; Produces more powdery particles, requiring dust control.

		▪ Wear and tear; Hammers and screens need regular replacement.
Roller Mill	▪ For large volumes of feed. ▪ To effectively control particles of all sizes. ▪ Less heat generation; Good for heat-sensitive feed ingredients. ▪ Consistent particle shape; Produces uniform flake or granule sizes. ▪ Lower dust production; Cleaner milling process with fewer fines.	▪ Limited material types; Works best with grains and low-fiber materials; not suitable for fibrous or tough ingredients. ▪ Lower throughput flexibility; Less effective for extremely coarse or very fine grinding.
Selective Alternative	***Reason***	
Hammer Mill	Hammer mill is the most equipment used for the purpose of particle size reduction. The particle size of the material to be reduced can be easily controlled by changing the size of screen. Particle of small diameter that has been grinded by the hammer mill passes through the screen and leaves the hammer mill.	

4.11.3 No Project Alternative

If the proposed project does not implement, the project's benefits would be lost. So, no project alternative is not applicable for current conditions of the local and national economy in Myanmar. Other reasons included:

- Local businesses will lose opportunities for growth.
- Loss of job opportunities for local workers.
- Loss of direct effect on the commercial livestock producers and small-scale livestock farmers throughout the country.
- Loss of revenue by the regional government and central governments.

5. DESCRIPTION OF NATURAL AND SOCIAL ENVIRONMENT

This Environmental and Social Impact Assessment Study report will give an assessment of the various environmental impacts likely to be caused on the surrounding nature in and around the proposed project. It will also incorporate the appropriate control measures required to be adopted or implemented to minimize the adverse effects thereof.

In order to carry out such assessment study, it is first necessary to delineate and define the existing environmental factors in and around the proposed project on the existing environmental scenario which will include various environs like ecology, Flora-fauna, socio economic profiles, environmental quality in respect of water, air, odor and noise. This section incorporates the description of the existing environmental settings within the area of proposed project site. The base line study was conducted during 12th - 15th September and 24th - 26th September 2025.

5.1 Setting the Study Limits

The proposed project is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. Golden Apex International Trading Co., Ltd, is engaged in the distribution, and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Its operations focus on producing nutritionally balanced, hygienic, and fresh feed pellets that contribute to increased productivity in livestock farming.

The potential Area of Influence (AOI) for the proposed project will be identified based on the existing environmental and social condition. The AOI for this project will be designated for the animal feed mill factory.

5.1.1 Scope of Study

Temporal Boundary for Environmental (biophysical) Impact Assessment

The biophysical impact during the construction phase, the environmental impacts are expected to occur on the atmospheric environment, water environment, noise and vibration, and flora and fauna due to construction activity of animal feed mill factory and construction equipment activities.

In the operation phase, the environmental impacts are expected to occur on the atmospheric environment, water environment, noise and vibration, waste generated during the production of animal nutrition feed such as raw material storage, handling, grinding, crushing, weighting, and mixing of premix feed additive and raw material. In the de-commissioning, closure and post-closure phases are expected to be minimal or insignificant.

Spatial boundary for environmental (biophysical) impact assessment

The spatial boundaries of the assessment of the environmental (biophysical) impacts can be divided into direct and indirect impact zones. Direct impacts generated by proposed project activities will incur dust generation, noise and vibration generation, and solid waste generate in the area. Indirect impacts such as dust generation from vehicle movements are expected to affect nearby areas. The project area of influence (AOI) for baseline surveys were focused and centered at the proposed project area with a radius of approximately 500 m for environmental (biophysical) impact assessment.

Temporal boundary for social impact assessment

The purpose of the scope is to assess and predict potential adverse social impacts and develop suitable mitigation measures. Any development activity has positive and negative impacts on human society. During the construction phase, project activities may pose temporary hazards, such as physical contact, dust, emissions, and noise. On the other side is the project that can have a positive impact on socio-economic development. It can create temporary employment for the local people in each phase. The basic infrastructures (healthcare, education, and transportation) can be developed. In the operation phase, the possibility of predicting that per capita and job opportunities will increase.

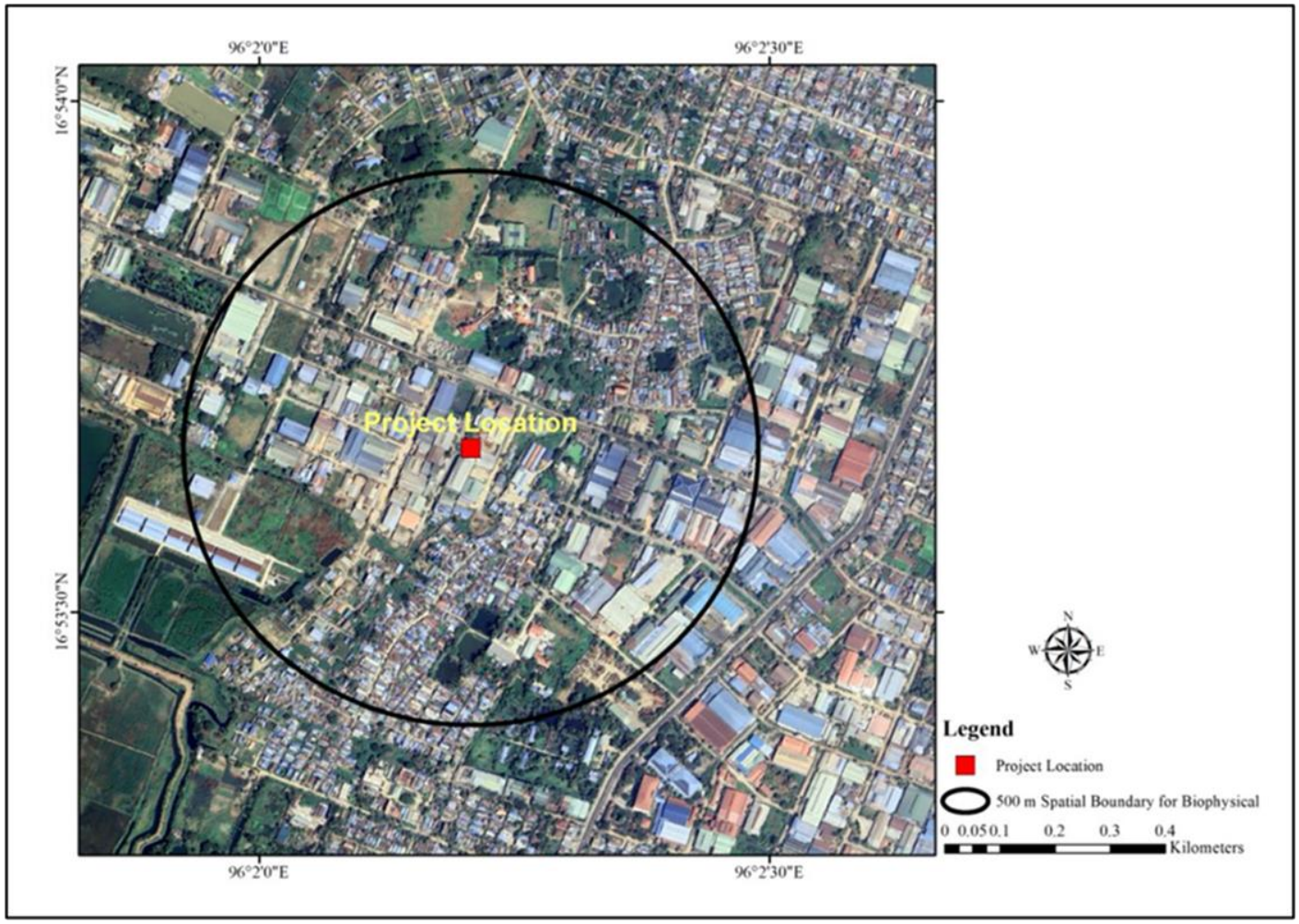


Figure 5.1 Map of AOI for Biophysical Environment

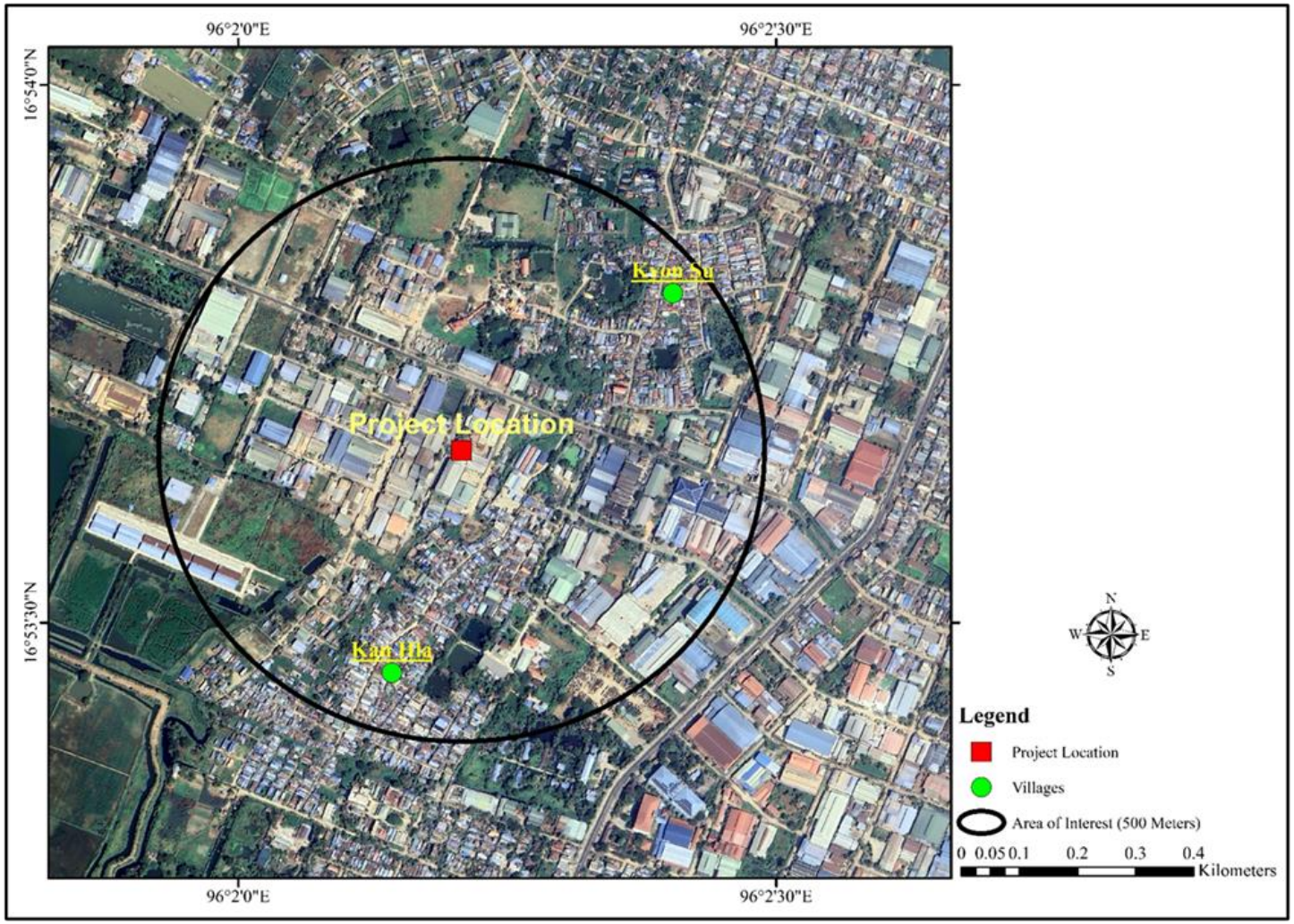


Figure 5.2 Map of AOI for Social Environment

Spatial boundary for indirect social impact assessment

The project area is located within the Livestock and Livestock Products Manufacturing Industrial Zone of Hlaingtharya (west) Township. Indirect impact areas include areas within the radius of 500 meters. The people who lives adject the project site will be included in Social AOI because it is potential to be affected by the activities of work site. Other villages which have economic activities affected by the project will be considered for AOI of social environment. The following Table shows the villages of AOI for social survey.

Table 5.1 Area of interest for social survey

No	Township	Village Tract	Village
1	Hlaingtharya (West)	Ku Lar Gyi Su	Kan Hla
2	Hlaingtharya (East)	Shwe Lin Ban	Kyon Su

5.2 Methodology and Approach

Desktop studies as well as site specific baseline surveys were carried out to provide a full picture of the status of the existing natural and human environment and to understand potential impacts and any sensitive risk receptors for the Project.

The collection and generation of relevant baseline environmental data (primary and secondary) in the Project-related area were mainly carried out by Environmental Compliance Consultancy Co., Ltd. These data are relevant to decisions about project location, design, operation, and mitigation measures.

The overarching purpose for the collection of a proper environmental and socio-economic baseline data focuses to give an overall evaluation of the existing environmental and socio-economic conditions, values, and functions of the project areas (identified as: project area and vicinity) and include the followings:

- Physical Environment;
- Biological Environment; and
- Social-economic and cultural Environment.

5.3 Physical Components

5.3.1 Climate and Meteorology

Hlaingtharya (west) Township is located in a tropical monsoon climate zone, characterized by a distinct wet season from May to October and a dry season from November to April. The area experiences high humidity and warm temperatures throughout the year. The annual average temperature ranges from 23°C to 33°C, with the hottest months being March to May, during which temperatures can exceed 34°C. Yangon receives an average annual rainfall of approximately 2,681 mm, with over 70% of the rainfall occurring during the monsoon season (June to October). The peak rainfall months are July and August, each averaging 500-600 mm. Relative humidity remains high year-round, averaging 70-85%, peaking during the monsoon season. Prevailing winds during the dry season blow from the northeast, while during the monsoon, they shift to the southwest, consistent with regional monsoon circulation patterns.

The analysis of monthly rainfall (2015–2025) indicates strong seasonality, with low rainfall from November to April (dry season) and peak rainfall from June to September due to the southwest monsoon.

Table 5.2 Monthly Total Rainfall (mm) in 2015 to 2025

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	1.28	0	0.98	1.14	4.91	8.01	18.88	8.01	6.18	4.16	0.66	0.4
2016	1.19	0.15	0.03	0.41	2.1	11.25	11.36	8.17	7.52	6.76	0.79	0.01
2017	0.4	0	0.04	1.51	7.03	9.37	16.65	9.43	6.89	7.98	1.08	0.34
2018	0.04	0.07	0.08	0.9	8.54	15.63	20.36	12.41	7.44	6.1	0.71	0.33
2019	1.22	0	0.6	0.02	4.03	9.76	11.57	18.54	6.31	2.97	0.13	0.02
2020	0	0	0	2.13	2.7	8.87	5.26	11.5	6.12	3.81	0.91	0
2021	0.05	0.14	0.03	7.88	5.15	10.61	19.88	13.23	11.54	6.35	2.32	0.01
2022	0.74	1.07	1.06	2.5	16.61	6.05	10.89	12.62	15.78	3.51	1.86	0.58
2023	0	0.62	0.2	0.84	5.66	6.56	12.97	15.33	15.53	8.31	0.33	0.08
2024	0.37	0	0.05	1.76	8.83	13.63	16.76	9.99	17.93	4.76	2.36	0.05
2025	0	1.1	0.02	3.91	-	-	-	-	-	-	-	-

Source: NASA/POWER Source Native Resolution Monthly and Annual

Table 5.3 Mean Temperature (°C) in 2015 to 2025

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	24.5	26.61	30.41	32.04	31.37	28.41	27.22	26.66	27	26.92	27.39	25.81
2016	23.62	26.18	30.91	33.66	32.85	27.74	27.2	26.96	26.65	26.78	25.9	25.17
2017	25.95	27.44	30.4	31.88	30.18	27.65	26.68	26.78	27.28	26.82	25.66	23.78
2018	24.94	27.05	30.49	32.41	29.37	27.24	26.66	26.32	26.86	27.06	26.03	25.98
2019	25.49	28.05	30.27	33.97	31.43	28.47	27.14	26.63	26.99	27.78	26.64	24.29
2020	26.42	27.5	30.34	31.96	31.57	28.32	27.74	26.99	27.16	26.65	26.38	25.65
2021	25.97	27.41	31.37	29.37	29.56	27.8	27.11	26.93	26.61	27.1	26.34	23.26
2022	25	25.67	30.94	31.91	28.27	27.3	27.22	26.89	26.62	26.61	26.48	25.4
2023	24.22	27.31	30.8	32.94	31.1	28.49	27.59	27.15	27.09	27.09	26.65	25.86
2024	25.56	28.04	31.36	33.63	31.89	27.8	27.37	27.34	27.39	27.93	26.34	25.91
2025	24.87	28.19	31.25	31.08	-	-	-	-	-	-	-	-

Source: NASA/POWER Source Native Resolution Monthly and Annual

The analysis of mean monthly temperatures from 2015 to 2025 shows a consistent seasonal pattern, with the highest temperatures occurring between April and May, and the lowest between December and February. The peak mean temperature was recorded in April 2016 at 33.66°C, while the lowest occurred in January 2016 at 23.62°C.

5.3.2 Topography

Hlaingtharya (West) Township is characterized by flat and low-lying terrain. Yangon Region, including Hlaingtharya, is situated on an extensive deltaic plain, with average elevations ranging from 3 to 10 meters above mean sea level. The landscape is largely flat, with very gentle slopes toward tidal rivers and creeks. The project area in Hlaingtharya is almost level, with elevation generally between 5 and 8 meters.

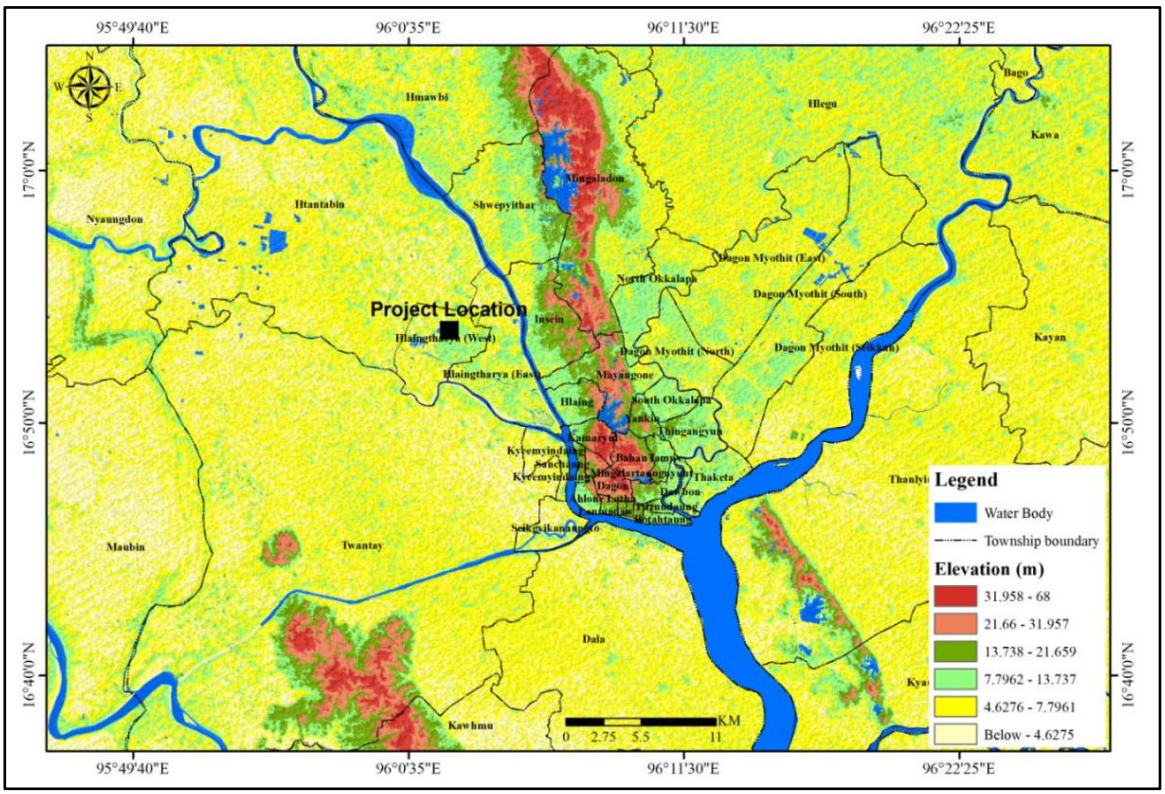


Figure 5.3 Topography Map of Yangon Region

5.3.3 Regional Geology Setting

Hlaingtharya (west) Township is characterized by extensive alluvial and deltaic deposits derived from sedimentation processes of the Ayeyarwady River system and its distributaries, including the Hlaing and Pan Hlaing Rivers. The geological framework of this area consists primarily of Quaternary deposits (Holocene to Recent age) overlying older Neogene sediments. These deposits include unconsolidated to semi-consolidated clay, silt, fine sand, and occasional organic-rich layers formed by riverine and tidal.

Regionally, the geology of Yangon is controlled by the tectonic setting of the Central Myanmar Forearc Basin, which developed as a result of oblique subduction along the Indo-Burma Ranges and dextral strike-slip movement along the Sagaing Fault to the east. While Hlaingtharya is not located directly on active fault traces.

5.3.4 Hydrology

Hlaingtharya (west) Township is located on the western side of Yangon and is hydrologically influenced by the Hlaing (Yangon) River, which is part of the tidal estuary system of the Yangon River. The water level of the Hlaing River is subject to tidal fluctuations. The region experiences a tropical monsoon climate with distinct wet and dry seasons. The annual average rainfall in Yangon is approximately 2,681 mm, with more than 80% of precipitation occurring between June and October during the southwest monsoon. The heaviest rainfall typically occurs in July and August, when monthly averages can exceed 600 mm.

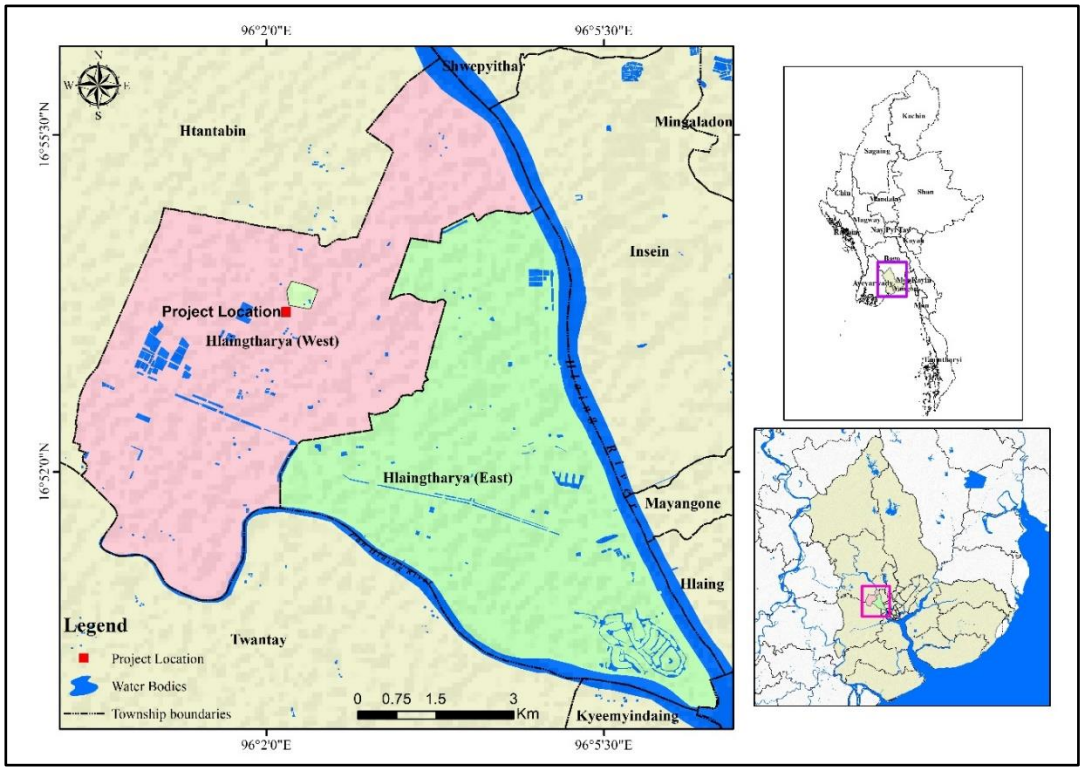


Figure 5.4 Drainage Pattern of the Project Area

5.3.5 Natural Hazards

According to the data of the Government Administration Department (2023), the disasters of fires have occurred as below Table 5.4 in Hlaingtharya Township.

Table 5.4 List of Natural Disasters in Hlaingtharya (West) Township

No.	Types of Disaster	Frequency	Loss of Building
1.	Fires	7	25

5.3.6 Air Quality

a) Applicable Standards and Guidelines

The ambient air quality assessment parameters were identified based on the relevant environmental quality standards set out in the national emission guidelines. Reference values for ambient air pollutants were taken from the Myanmar National Environmental Quality (Emission) Guidelines, promulgated by MONREC on 29 December 2015. These guideline values are used for evaluating baseline ambient air quality conditions for this project. Accordingly, the baseline ambient air quality conditions presented in this chapter are assessed and interpreted in accordance with the relevant requirements of the Myanmar National Environmental Quality (Emission) Guidelines, as summarized in the following Table.

Table 5.5 Myanmar National Environmental Quality Guideline Values for Survey Parameters of Air Quality

No	Parameter	Averaging Period	Guideline Value	Units
1.	Nitrogen dioxide	1-hour	200	µg/m^3
2.	Ozone	8-hour daily maximum	100	µg/m^3
3.	Particulate matter PM_{10} [a]	24-hours	50	µg/m^3
4.	Particulate matter $PM_{2.5}$ [b]	24-hours	25	µg/m^3
5.	Sulphur dioxide	24-hours	20	µg/m^3
6.	Temperature	-	-	°C
7.	Relative Humidity	-	-	%

[a] *Particulate matter 10 micrometers or less in diameter*

[b] *Particulate matter 2.5 micrometers or less in diameter*

b) Survey Locations and Site Selection

Ambient air quality monitoring locations were selected to represent areas potentially affected by emissions from the proposed Project, as well as nearby sensitive receptors such as residential areas, schools, or public facilities. The selection of monitoring locations considered prevailing

wind direction, accessibility, safety, and proximity to project activities. Ambient air quality monitoring was undertaken at three representative locations within and around the proposed project area, selected to reflect areas near potential air emission sources.

Table 5.6 Air Quality Survey Location

Survey Location	Coordinates		Description
	Latitude	Longitude	
AQ 1	16°53'40.14"N	96° 2'12.86"E	Within project area
AQ 2	16°53'48.37"N	96° 2'15.64"E	Approximately 250 m north of the project area, at Kyon Su village
AQ 3	16°53'27.85"N	96° 2'15.15"E	Approximately 350 m south of the project area, at Kan Hla village

AQ 1

The air monitoring point, AQ 1, was conducted within the project site, identified as a potential emission source due to operational activities. This monitoring location was established in proximity to the main gate, specifically between the loading and unloading area for raw materials and finished feed products and the administrative office building which may generate noise, dust, and vehicle emissions.

AQ 2

The air monitoring point, AQ 2, was conducted at Kyon Su village, Hlaingtharya (East) Township, approximately 250 m north from the project area of 500 m AOI. The surrounding land use is predominantly mixed-use area with residential area and industrial zone. This site was selected to represent ambient air quality conditions potentially influenced by emissions from project-related activities and was selected to represent background air quality conditions and potential impacts on nearby sensitive receptors.



Figure 5.5 Location Map of Air, Noise and Vibration Quality Survey Points

AQ 3

The air monitoring point, AQ 3, was conducted at Kan Hla village, Hlaingtharya (West) Township, approximately 350 m south from the project area of 500 m AOI. The site is also mixed-use area of residential and industrial zone and was selected by considering considered prevailing wind direction to ensure representativeness of baseline ambient air quality conditions potential impacts on nearby sensitive receptors.



Figure 5.6 Air Quality, Noise and Vibration Survey Activities

c) Survey Item

The parameters were selected based on the Myanmar National Environmental Quality (Emission) Guidelines (2015) and the nature of the proposed Project.

Parameters for air quality: Particulate Matter (PM_{10} / $PM_{2.5}$), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Ozone, Meteorological parameters, including wind speed, wind direction, temperature, and relative humidity.

d) Survey Period

The ambient air quality monitoring survey was conducted continuously over a 24-hour period from 12th - 15th September. The continuous monitoring period enabled the assessment of variations in air pollutant concentrations throughout both daytime and nighttime hours during the operational phase.

Table 5.7 Survey Period for Air Quality

Sampling Point	Period
AQ 1	12th -13th September 2025
AQ 2	13th -14th September 2025
AQ 3	14th – 15th September 2025

e) Survey Equipment and Analytical Methods

The environmental parameters such as ambient air quality, which were measured by using air quality monitoring system (AQM-09). The AQM-09 can measure outdoor air pollutants in real-time, measure data quickly and accurately. To determine the air quality status within 500 m radius of the project site, 24-hours of continuously air pollutants level, which include particle modules (TSP, PM10 and PM2.5), gases (VOC, O3, CO, CO2, SO2, NO2) and meteorological parameters (including of Temperature, Humidity, Wind speed, Wind direction, Barometric pressure) were measured at the selected site using the AQM-09.

Table 5.8 Survey Equipment for Air Quality

Item	Description	Specification
Particle modules	Monitor method	Continuously, automatically, and real-time
	Working principle	Light scattering technique
	Measuring range	0~10mg/m3
	Response time	≤ 60s
	Measuring time	0.1min (Shortest measurement time) 1min (Standard measurement time)
	Minimum detection limit	≤0.001 mg/m3
	Monitor method	Continuously, automatically, and real-time
Gas modules	Working principle	High precision Electrochemical sensor
	Measuring range:	0~200ppm 0~20000ppb/
	Resolution:	1ppb/5ppb 1ppm
	Response time:	< 45s

f) Survey Results

Ambient air quality

The average concentrations of ambient gaseous pollutants recorded over a 24-hour monitoring period are presented in Table 5.9. Based on the survey results, the 24-hour average concentrations of $PM_{2.5}$, PM_{10}, and SO_2 were found to be within the limits specified by the National Environmental Quality (Emission) Guidelines (NEQG). The maximum 8-hour average ozone concentration also complied with the 100 µg/m³ standard. The NO_2 concentration was assessed against the one-hour standard specified in the NEQG, and the measured levels were below the prescribed limit.

Table 5.9 Ambient Air Quality Survey Results

Sampling No	Time	Ozone (8-hours)	NO_2 (1-hour)	SO_2	PM_{10}	$PM_{2.5}$	RH	Temp (^oC)
	hours	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	%	Deg. C
AQ 1	24 Hours	52.45	25.63	16.54	11.17	6.74	77.62	30.26
AQ 2	24 Hours	55.92	18.83	12.86	7.67	14.94	80.91	29.53
AQ 3	24 Hours	54.71	9.06	14.68	9.27	5.63	67.72	33.15
National Environmental Quality (Emission) Guideline		**100**	**200**	**20**	**50**	**25**	**-**	**-**

Wind Speed and Direction

According to the wind rose diagram, the average wind speed at the air quality station is AQ 1 is 0.1 m/s, AQ 2 is 0.49 m/s and AQ 3 is 0.9 m/s. The predominant wind direction of AQ 1 and AQ 2 is from west, northwest and south direction, AQ 3 is dominant in southwest direction. The wind rose diagrams of the air quality station are shown below.

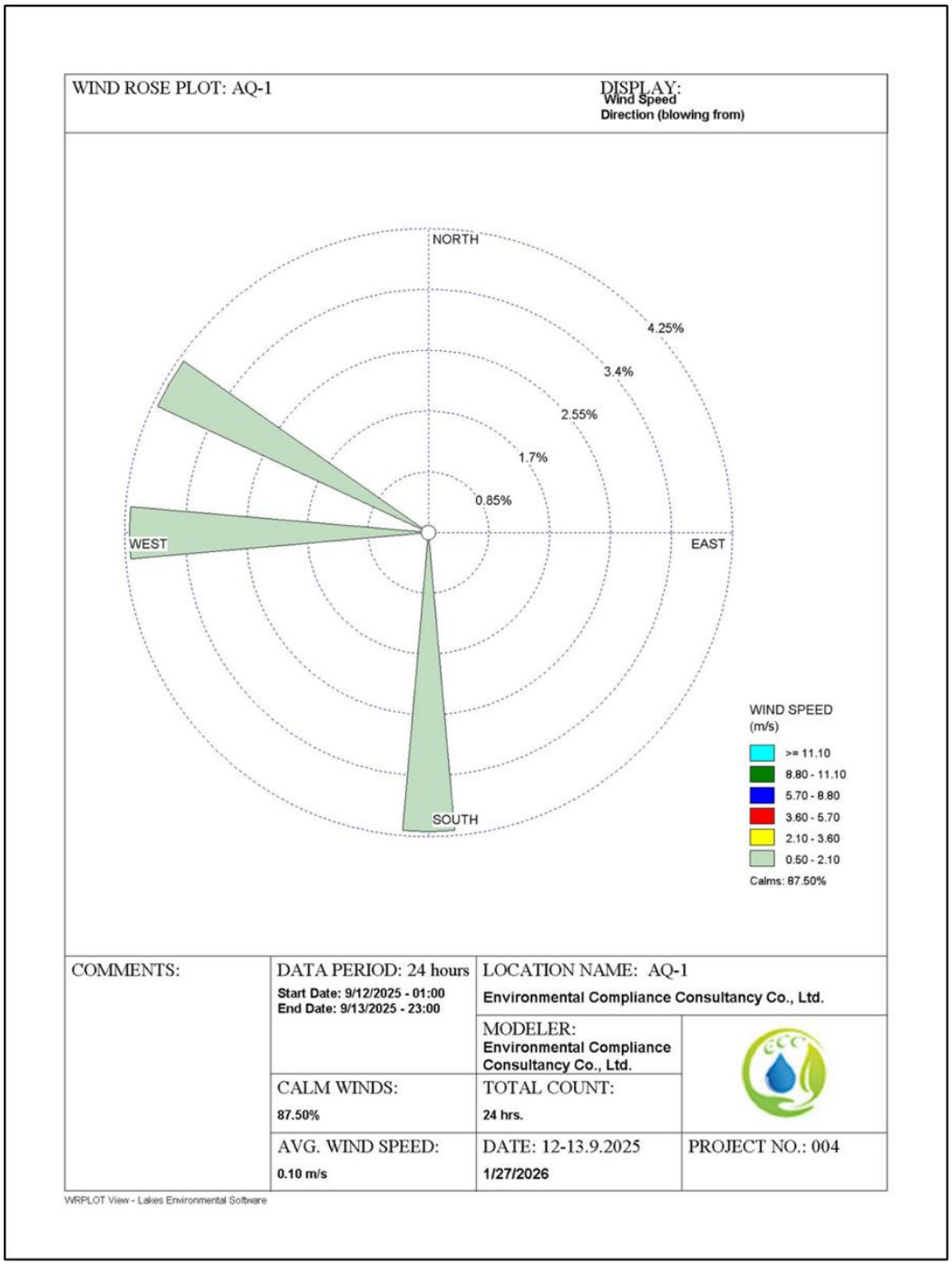


Figure 5.7 Wind Speed and Direction diagram at AQ 1

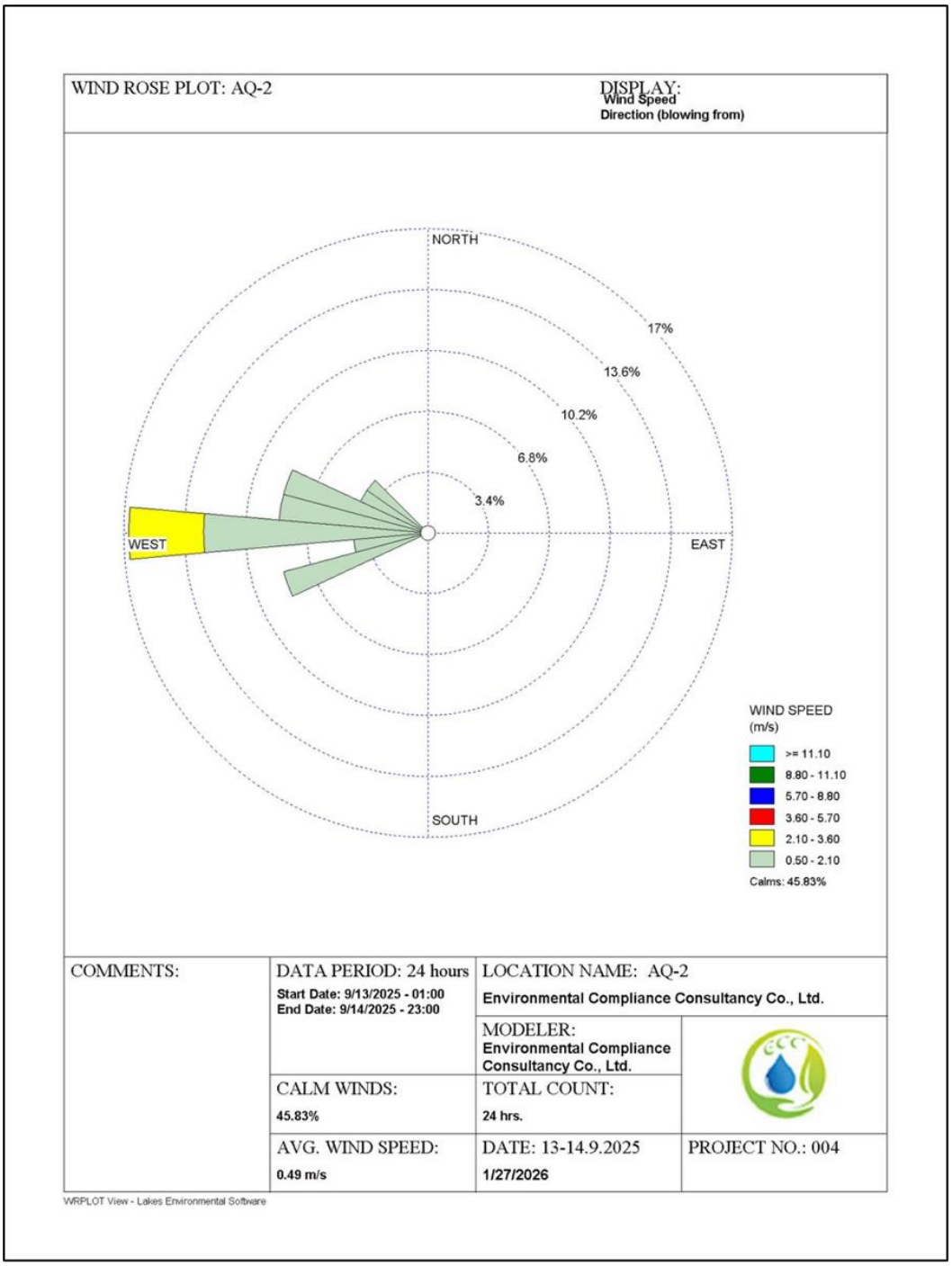


Figure 5.8 Wind Speed and Direction diagram at AQ 2

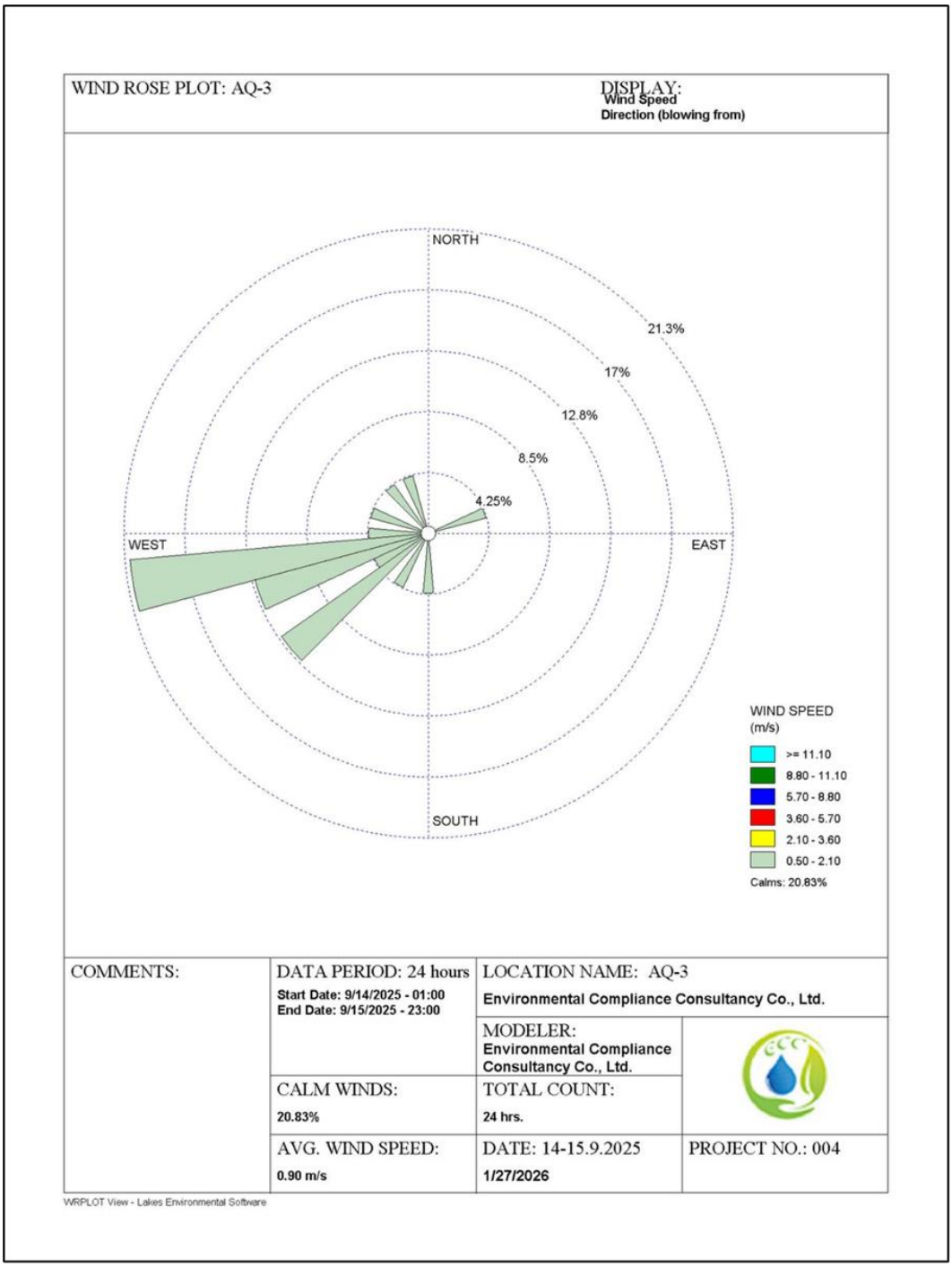


Figure 5.9 Wind Speed and Direction diagram at AQ 3

5.3.7 Noise

a) Applicable Standards and Guidelines

Noise prevention and mitigation measures shall be implemented for any project where the predicted or measured noise levels from facilities or operations exceed the applicable noise level guidelines at the most sensitive receptor. Noise impacts should not surpass the guideline values specified below or cause an increase of more than three decibels above existing background levels at the nearest off-site receptor. The measured noise levels were evaluated against the daytime and nighttime limits prescribed in the Myanmar National Environmental Quality (Emission) Guidelines for residential, institutional, and educational areas, which are 55 dB(A) for daytime and 45 dB(A) for nighttime, respectively and for industrial, commercial areas, which are 70 dB(A) for daytime and nighttime respectively.

Table 5.10 Applicable Noise Level Guideline

Receptor	LAeq (dBA)a	
	Daytime 07:00AM - 22:00PM	Nighttime 22:00PM - 07:00AM
Residential, institutional, educational	55	45
Industrial, commercial	70	70

a; Equivalent continuous sound level in decibels

b) Survey Locations and Site Selection

Ambient noise quality monitoring was undertaken at three representative locations to establish baseline noise conditions, assess compliance with applicable environmental standards. Noise monitoring points were established within the project compound near major noise sources and at the nearest sensitive receptors, such as residential areas or community facilities, to determine potential off-site noise impacts. The noise monitoring locations are the same as air quality monitoring locations and locations map of noise monitoring is shown in Figure 5.5.

Table 5.11 Noise Quality Survey Location

Survey Location	Coordinates		Description
	Latitude	Longitude	
N 1	16°53'40.14"N	96° 2'12.86"E	Within project area
N 2	16°53'48.37"N	96° 2'15.64"E	Approximately 250 m north of the project area, at Kyon Su village
N 3	16°53'27.85"N	96° 2'15.15"E	Approximately 350 m south of the project area, at Kan Hla village

N 1

The noise monitoring point, N 1, was conducted within the project site, identified as a potential emission source due to operational activities. The site was selected to represent noise levels generated from routine operational activities, including truck movements and material handling operations.

N 2

The noise monitoring point, N 2, was established at Kyon Su Village, Hlaingtharya (East) Township, approximately 250 m north of the Project Area and within the 500 m Area of Influence (AOI). The surrounding land use is predominantly mixed-use, comprising residential areas and adjacent industrial zones. This location was selected to represent existing ambient noise conditions in an area potentially influenced by project-related activities, while also reflecting background noise levels from surrounding industrial operations and residential activities.

N 3

The noise monitoring point, N 3, was established at Kan Hla Village, Hlaingtharya (West) Township, approximately 350 m south of the Project Area and within the 500 m Area of Influence (AOI). The surrounding area is characterized by mixed land use, comprising residential settlements and adjacent industrial zones. This location was selected to represent existing ambient noise conditions in an area potentially influenced by project-related activities.

c) Survey Item

The measured noise levels were evaluated against the daytime and nighttime limits prescribed in the Myanmar National Environmental Quality (Emission) Guidelines for residential, institutional, and educational areas, which are 55 dB(A) for daytime and 45 dB(A) for nighttime, respectively and for industrial, commercial areas, which are 70 dB(A) for daytime and nighttime respectively.

d) Survey Period

Noise level monitoring was carried out once during the operational phase of the project to obtain representative data at a defined stage of facility operation. A 24-hour continuous measurement was conducted within the project compound and its surroundings, covering both daytime and nighttime periods. This approach enables a reliable evaluation of operational noise patterns and potential impacts over a full daily cycle.

Table 5.12 Survey Period for Noise Quality

Sampling Point	Period
N 1	12th -13th September 2025
N 2	13th -14th September 2025
N 3	14th – 15th September 2025

e) Survey Equipment and Analytical Methods

Sampling and monitoring of surrounding sound were conducted by using following instrument for 24 hours/1-day measurement. Measurement of environmental sound level was conducted by referring to the recommendation of International Organization for Standardization (ISO), i.e., ISO 1996-1:2003 and ISO 1996-2:2007. The instrumentation used for noise quality survey is shown in the following Table. Noise meter was set up to record the log as ten minutes intervals during an hour for one consecutive day. Day time and night time was calculated by using the following array formula in the excel sheet. This formula is firstly used for hourly LAeq and then for the 24 hours LAeq.

10*LOG10(AVERGAE (10^((RANGE)/10)))

Table 5.13 Instrumentation for noise survey

Instrumentation	Description
Sound level meter	Sound level meter with SD Card (Brand - Lutron; Model - SL-4023SD)



Figure 5.10 Lutron Sound Level Meter

f) Survey Results

Daily average noise levels (LAeq) of the monitoring point were presented in the following Table. Day time and night time was calculated by using the following array formula in the excel sheet. This formula is firstly used for hourly LAeq and then for the 24 hours LAeq.

10*LOG10(AVERGAE (10^((RANGE)/10)))

Possible noise emission sources have around the noise level monitoring station. So, noise levels found the lower than the Myanmar National Environmental Quality (Emission) Guideline values for residential, institutional, educational environment. The noise level results are shown below with the Figure 5.11 and 5.12. The monitoring results provide a representative assessment of baseline noise exposure conditions at nearby sensitive receptors and allow comparison with applicable guideline values for respective time periods.

Table 5.14 Noise Quality Survey Results

Results	N 1		N 2		N 3	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
	58.07	53.5	47.58	43.99	46.45	43.37
NEQG Guideline Industrial, commercial	**70**	**70**	**70**	**70**	**70**	**70**

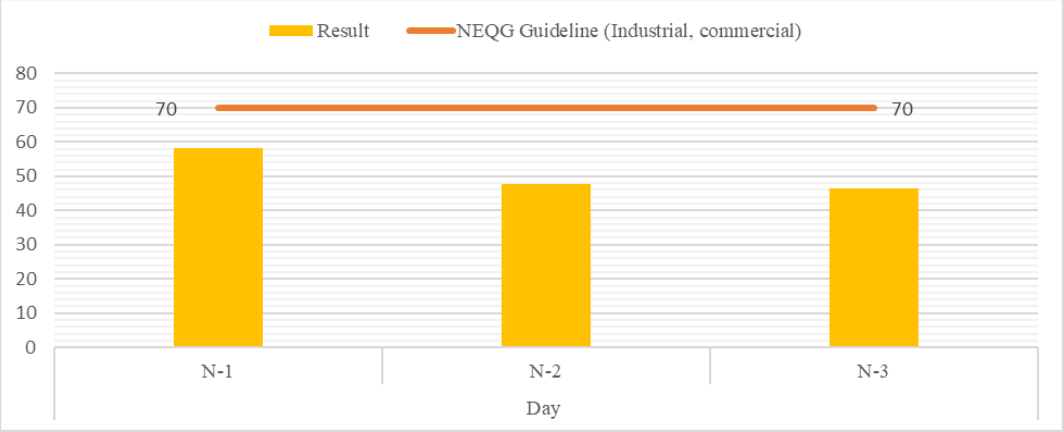


Figure 5.11 Comparison between Noise Level Results (Day time) and Guideline

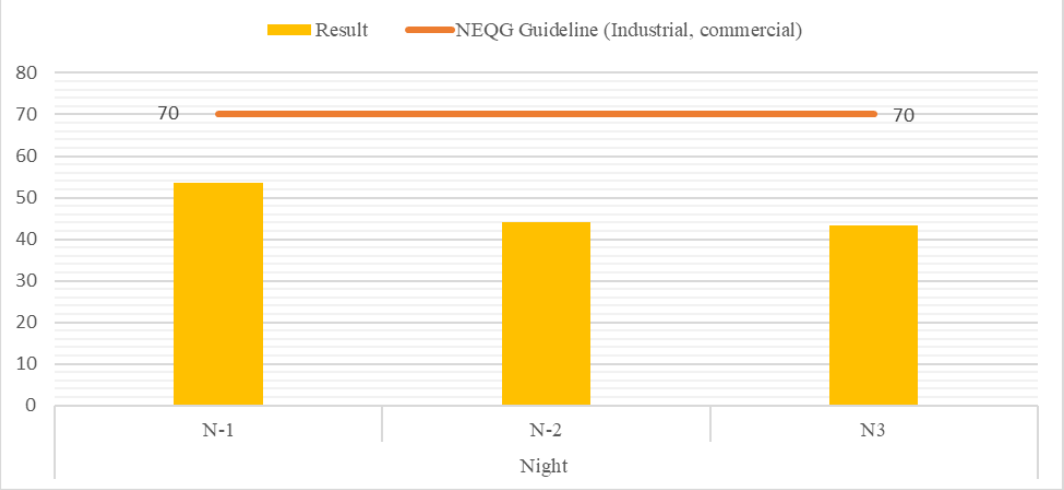


Figure 5.12 Comparison between Noise Level Results (Night time) and Guideline

5.3.8 Vibration

a) Applicable Standards and Guidelines

As there is no vibration standard for receptors in Myanmar, the target vibration level at the construction phase shall be set based on the standards in some foreign countries. Accordingly, the target level of vibration is set based on the following policies.

- Monastery and residential houses where is necessary to keep quiet and sleep shall comply with the Japanese standard for residential areas,
- Office, commercial facilities, and factory areas shall comply with the Japanese standard for mixed areas including residential, commercial, and industrial areas, and
- The category of times is divided into three types in a manner consistent with the target noise level for construction.

1. Regulatory Standards for Vibration Emitted from Specified Factories (Summary)			
Time Area	**Daytime**	**Nighttime**	**Applicable Areas**
I	60 – 65 dB	55 – 60 dB	Areas where maintenance of quiet is particularly needed to preserve a good living environment and where quiet is needed as they are used for residential purposes.
II	65 – 70 dB	60 – 65 dB	Areas used for commercial and industrial as well as residential purposes where there is a need to preserve the living environment of local residents and areas mainly serving industrial purposes require measures to prevent the living environment of local residents from deteriorating.

Note: Vibration level shall be measured at the boundary line of the specified factory.

2. Standards for Vibration Emitted from Specified Construction Works (Summary)		
Type of Restriction	Area Classified	
Standard value	I & II	85dB

Work prohibited time	I	7 p.m. - 7 a.m.
	II	10 p.m. - 6 p.m.
Maximum Working duration	I	10 hours per day
	II	14 hours per day
Maximum consecutive working days	I & II	6 days
Work prohibited days	I & II	Sundays and holidays

Notes: 1.'Area I' stands for areas to which one of the following descriptions applies:

(a) Areas where maintenance of quiet is particularly needed to preserve the residential environment.

(b) Areas that require maintenance of quiet since they are used for residential purposes.

(c) Areas used for commercial and industrial as well as residential purposes need measures to prevent vibration pollution since a considerable number of houses are located.

(d) The neighborhood of schools, hospitals, and the like. 'Area II' stands for areas where there is a need to preserve the living environment of inhabitants and other than Area I.

Note: 2. Vibration level shall be measured at the boundary line of the specified construction work site.

3. Request Limits for Motor Vehicle Vibration (Summary)			
Time Area	**Daytime**	**Nighttime**	**Applicable Areas**
I	65 dB	60 dB	Areas where maintenance of quiet is particularly needed to preserve a good living environment and where quiet is called for as they are used for residential purposes.
II	70 dB	65 dB	Areas used for commercial and industrial as well as residential purposes where there is a need to preserve the living environment of local inhabitants and areas mainly serving industrial purposes require measures to prevent the living environment of local residents from deteriorating.

b) Survey Locations and Site Selection

Vibration monitoring points will be selected within the Project Area and AOI to represent locations potentially influenced by vibration-generating activities and nearby sensitive receptors. The vibration monitoring locations are the same as air quality monitoring locations and locations map of vibration monitoring is shown in Figure 5.5.

Table 5.15 Vibration Survey Location

Survey Location	Coordinates		Description
	Latitude	Longitude	
V 1	16°53'40.14"N	96° 2'12.86"E	Within project area
V 2	16°53'48.37"N	96° 2'15.64"E	Approximately 250 m north from the project area, at Kyon Su village
V 3	16°53'27.85"N	96° 2'15.15"E	Approximately 350 m south from the project area, at Kan Hla village

V 1

The vibration monitoring point, V 1, was established at the same location as air quality monitoring point AQ 1within the project site, near the main gate between the loading and unloading area and the administrative office building. The site was selected to represent baseline vibration levels in an area potentially affected by operational activities, including vehicle movements and machinery operations.

V 2

The vibration monitoring point, V 2, was established at the same location as air quality monitoring point AQ 2. The site was selected to represent baseline vibration conditions in a mixed-use area comprising residential and industrial zones and to assess potential exposure at nearby receptors.

V 3

The vibration monitoring point, V 3, was established at the same location as the air quality monitoring location AQ 3. This location was selected to represent baseline vibration conditions in an area potentially influenced by project-related activities and surrounding industrial operations. The monitoring was conducted to assess vibration levels that may arise from vehicular movements and to evaluate potential exposure at nearby sensitive receptors.

c) Survey Item

As there is no vibration standard for receptors in Myanmar, the target vibration level at the construction phase shall be set based on the standards in some foreign countries. Areas used for commercial and industrial as well as residential purposes where there is a need to preserve the living environment of local residents and areas mainly serving industrial purposes require measures to prevent the living environment of local residents from deteriorating. Regulatory Standards for Vibration Emitted from Specified Factories for Day Time is (65 – 70 dB) and Night Time is (60 – 65 dB).

d) Survey Period

Vibration monitoring stations were conducted as same time as of air quality monitoring stations during 12th -15th September 2025.

e) Survey Equipment and Analytical Methods

The instrumentation for vibration level was used by the RION VM-55 vibration meter. This instrument is a 3-axis (X, Y, Z) vibration meter that can be used in a wide range of applications for measurement and analysis of different parameters. The unit is equipped to measure the instantaneous value for vibration level and vibration acceleration level, as well as the time percentile level, time-averaged level, and maximum and minimum values in three axes simultaneously.

Table 5.16 Instrumentation for Vibration Survey

Instrumentation	Description
Vibration meter	Rion VM55 with SD Card

f) Survey Results

Average vibration level (Lveq) results of three points for 24 hours are presented in the following Table. According to the calculated results, all vibration level is compared with the Japanese standard of road traffic vibration, where daytime and nighttime vibration levels comply with target values.

Table 5.17 Daily Average Vibration Level Results (dB)

Result	V-1		V-2		V-3	
	Day	Night	Day	Night	Day	Night
	35	18	21	13	24	15
Environmental Standard	65	60	65	60	65	60

5.3.9 Surface and Groundwater Quality

a) Applicable Standards and Guidelines

Water quality standards for this project are referenced from the Myanmar National Environmental Quality (Emission) Guidelines (NEQG). The results of the water quality measurements will be compared against the relevant standards stipulated in the Myanmar National Environmental Quality (Emission) Guidelines to evaluate compliance. Laboratory analysis of the collected samples was carried out by ALARM Ecological Laboratory. The locations of the water quality monitoring points are illustrated in the corresponding Figure. The following Table is described the effluent Levels for Poultry Production of Myanmar National Environmental Quality Emission Guideline for Water.

Table 5.18 Myanmar National Environmental Quality Emission Guideline for Water (Effluent Levels for Poultry Production)

Parameter	Unit	Maximum Concentration
BOD	mg/l	50
COD	mg/l	250

Oil & Grease	mg/l	10
pH	S.U. a	6-9
Temperature increase	°C	<3b
Total Coliform Bacteria	100 ml	400
Total Nitrogen	mg/l	10
Total Phosphorus	mg/l	2
Total suspended solids	mg/l	50

b) Survey Locations and Site Selection

Water sampling was conducted for groundwater from a tube well, surface water bodies, and tube well within the proposed project area to assess existing water quality conditions.

Table 5.19 Water Quality Survey Location

Sampling Point	Coordinates		Description of Sampling Point
	Latitude	Longitude	
SW 1	16°53'45.92"N	96° 2'14.73"E	Surface water bodies, approximately 200 m north from the project area, at Kyon Su village
SW 2	16°53'29.48"N	96° 2'13.40"E	Surface water bodies, approximately 300 m south from the project area, at Kan Hla village
GW 1	16°53'40.66"N	96° 2'12.96"E	Tube well within the project site
GW 2	16°53'48.26"N	96° 2'14.66"E	Tube well approximately 270 m north of the project area, at Kyon Su village
GW 3	16°53'28.51"N	96° 2'15.64"E	Approximately 380 m south of the project area, at Kan Hla village

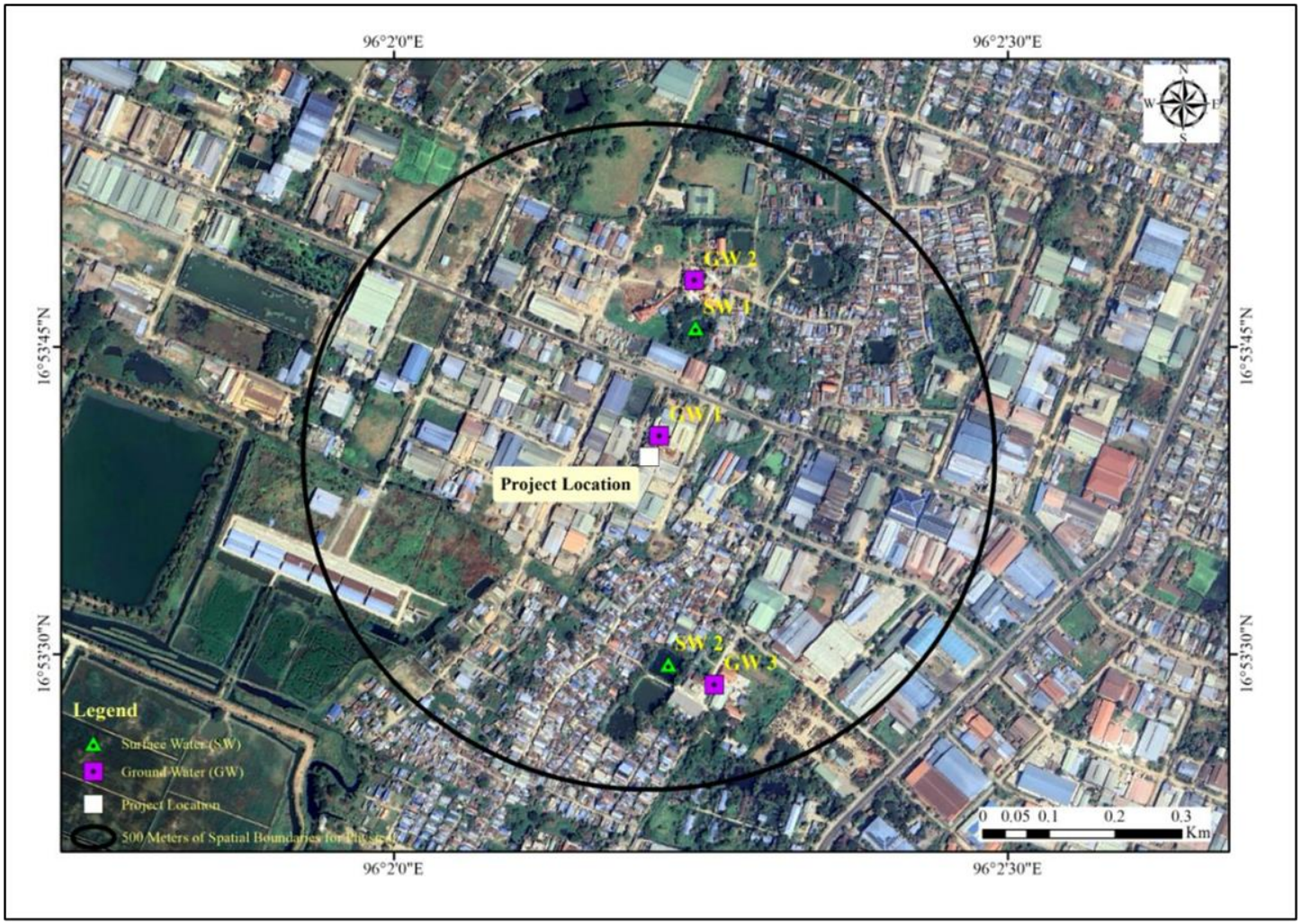


Figure 5.13 Location Map of Water Quality Survey Points

SW 1

The surface water quality sampling point, SW 1, was collected from the pond within Kyon Su village. The water body is located approximately 200 m north of the project Area and is used intermittently for domestic purposes. The sampling point was selected to characterize baseline surface water quality conditions. No direct industrial discharges were observed near the sampling location, although nearby activities include residential settlements.

SW 2

The surface water quality sampling point, SW 2, was collected from the pond within Kan Hla village. The water body is located approximately 200 m north of the Project Area and is used intermittently for domestic purposes. The sampling point was selected to represent baseline surface water quality conditions. No direct industrial discharges were observed nearby, although the water body may be influenced by runoff from nearby residential settlements.

GW 1

The groundwater quality sampling point, GW 1, was established at groundwater abstracted from a drilled tube well. located within the project Area, which serves as a primary water source for operational activities and domestic use by workers. This location was selected to characterize baseline groundwater quality conditions directly associated with project water supply and consumption.

GW 2

The groundwater quality sampling point, GW 2, was established at tube well, approximately 270 m north of the project area, at Kyon Su village. This location was selected to evaluate the quality of groundwater used by local communities for domestic purposes and to determine whether project operations may have any potential impact on off-site groundwater resources.

GW 3

The groundwater quality sampling point, GW 3, was established at tube well, approximately 380 m south of the project area, at Kan Hla village. This location was selected to evaluate the quality of groundwater used by local communities for domestic purposes and to determine whether project operations may have any potential impact on off-site groundwater resources.













Figure 5.14 Surface Water and Ground Water Quality Survey Activities

c) Survey Item

The monitored parameters were selected based on the Myanmar National Environmental Quality (Emission) Guidelines (2015), Drinking Water Quality Guideline and the nature of the proposed Project. The following Table is described the ESIA study for water quality.

Table 5.20 Survey Parameters for Water Quality

Surface Water Quality Measurement	Number of samples	Two Point
	Parameters	pH, DO, EC, TDS, Turbidity, TSS, BOD, COD, Oil & Grease, Total Nitrogen, Total Phosphorus
	Period	One time
Ground Water Quality Measurement	Number of samples	Three points
	Parameters	pH, Color, Turbidity, TDS, TSS, Total Solids, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Sodium Chloride, Iron, Manganese, Total Alkalinity, Carbonate, Bi-Carbonate, Sulfate, Salinity, Arsenic, Dissolved Oxygen
	Period	One time

d) Survey Period

The water quality survey was undertaken as a one-time baseline monitoring activity during the operational phase of the project in order to characterize existing water quality conditions at the time of assessment. Sampling was conducted in 14th September 2025 in accordance with established field procedures and relevant guideline requirements.

e) Survey Equipment and Analytical Methods

Water samples were taken by Alpha horizontal water sampler and collected in plastic and sterilized glass sample containers. All sampling was in strict accordance with recognized standard procedures.

Table 5.21 Field Equipment for Water Quality Survey

No.	Equipment	Manufacturer	Originate Country	Model/Serial No.
1	Multi Parameters for water quality (water checker)	HORIBA	Japan	Model – U52G SN – G2YBAJWD

f) Survey Results

The water samples sent to ALARM Ecological Lab in Myanmar. Laboratories analysis results presented in Table 5.22 and Table 5.23. Water quality results were compared by Drinking Water Quality Guideline and effluent level of general guideline in NEQG. Most of the water results are lower than the applicable NEQG guideline.

Table 5.22 Surface Water Quality Survey Results

Parameter	Unit	SW 1	SW 2	NEQG Guideline
pH	S.U	7.34	6.68	**6-9**
Turbidity	FAU	14	10	-
EC	ms/cm	0.495	0.063	-
TDS	mg/l	257	63	-

BOD	mg/l	8.2	6.4	**50**
COD	mg/l	24	< 20	**250**
DO	mg/l	4.61	3.83	-
TSS	mg/l	29	21	**50**
Oil & Grease	mg/l	5	4	**10**
Total Phosphorus	mg/l	1.18	0.85	**2**
Total Nitrogen	mg/l	4.31	3.62	-

Table 5.23 Ground Water Quality Survey Results

Parameter	Unit	GW 1	GW 2	GW 3	NEQG Guideline	Drinking Water Quality Guideline
pH	S.U	7.6	7.2	7.35	**6-9**	**6.5-8.5**
Colour	HU	< 10	< 10	< 10	-	**15 (TCU)**
TSS	mg/l	< 10	12	< 10	**50**	-
Turbidity	FAU	< 5	< 5	< 5	-	**5 (NTU)**
TDS	mg/l	1662	1982	1197	-	**1000**
DO	mg/l	4.5	4.34	4.53		
Total Solid	mg/l	1668	1984	1202	-	-
Conductivity	mS/cm	3.176	3.812	2.308	-	-
Total Hardness	mg/l	138	128	86	-	-
Calcium Hardness	mg/l	92	86	58	-	**200**
Magnesium Hardness	mg/l	46	42	28	-	-
Total Alkalinity	mg/l	84.2	82.1	385.4	-	-
Phenolphthalein Alkalinity	mg/l	13	6	8	-	-

Carbonate	mg/l	21	21	94	-	-
Bi-Carbonate	mg/l	68	62	292	-	-
Iron	mg/l	0.251	0.163	0.15	-	**1**
Chloride	mg/l	665	778	520	-	**250**
Sodium Chloride	mg/l	1098	1284	858	-	-
Sulfate	mg/l	142	128	96	-	**250**
Salinity	mg/l	970	910	740	-	-
Manganese	mg/l	0.46	0.51	0.38	-	**0.4**

5.3.10 Soil

a) Applicable Standards and Guidelines

Parameters for soil quality survey are determined to cover the parameters of existing available environmental standards. Parameter for soil contamination survey is determined by referring to the parameter of soil content observation of Japan. The following Table shows the applicable guideline for soil quality.

Table 5.24 Applicable Guideline for Soil Quality

No	Parameter	Unit	Standard (Japan)
1	pH	-	-
2	Mercury	ppm	15
3	Lead	ppm	150
4	Cadmium	ppm	150
5	Copper	ppm	125
6	Zinc	ppm	150
7	Chromium	ppm	250

8	Manganese	-	-
9	Nickel	-	-

Source: Japan: Ministry of Environment, Government of Japan (2002), "Regulation for Implementing the Law on Soil Contamination Countermeasures"

b) Survey Locations and Site Selection

Soil sampling points was strategically selected within the Project Area and the Area of Influence (AOI) to represent locations potentially affected by project-related activities, including areas influenced by potential sources of soil disturbance or contamination.

Table 5.25 Soil Quality Survey Location

Stations	Coordinates		Description
	Latitude	Longitude	
S 1	16°53'48.62"N	96° 2'15.30"E	Approximately 300 m north of the project area, at Kyon Su village
S 2	16°53'28.33"N	96° 2'14.40"E	Approximately 350 m south of the project area, at Kan Hla village

S 1

The soil sampling point, S 1, was established at the residential area within 500 m AOI which is approximately 300 m north of the project area, at Kyon Su village. The site was selected to represent baseline soil conditions at a nearby sensitive receptor and to assess potential off-site impacts from project activities.

S 2

The soil sampling point, S 2, was established at the residential area within 500 m AOI which is approximately 350 m south of the project area, at Kan Hla village. The sampling site was chosen to establish representative baseline soil conditions in a residential area and to assess the potential for soil impacts associated with project operations.

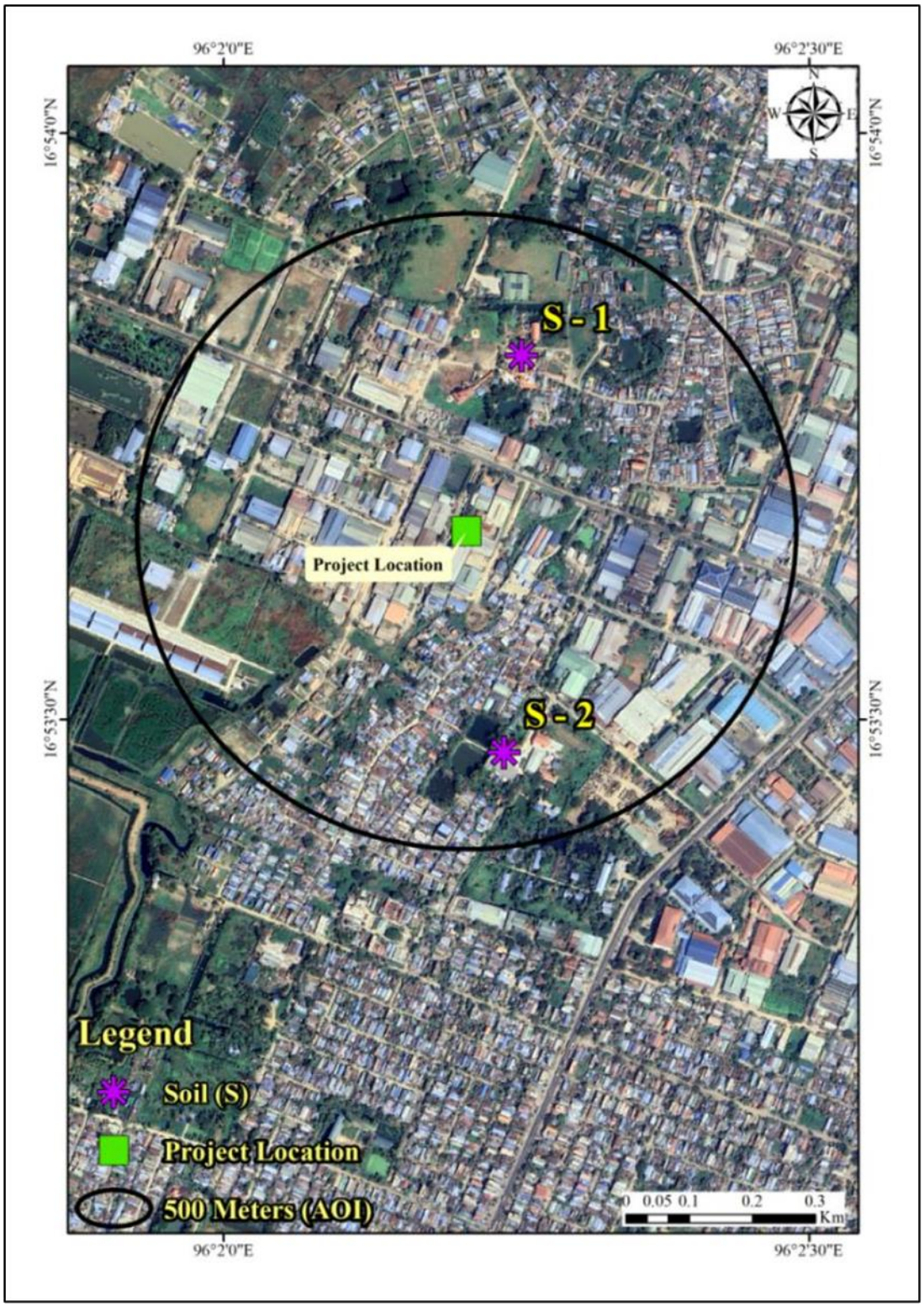


Figure 5.15 Location map of Soil Quality Survey



Figure 5.16 Soil Quality Survey Activities

c) Survey Item

The survey item for the soil quality is shown in the following Table.

Table 5.26 Soil Quality Survey Parameter

Category	Parameter
Soil Quality	pH, Cadmium, Copper, Zinc, Manganese, Lead, Chromium, Nickel, Iron

d) Survey Period

The soil quality survey was conducted as a one-time baseline assessment on 15th September 2025 during the operation phase of the project.

e) Survey Equipment and Analytical Methods

For soil sampling, the standard environmental sampler (soil auger) was applied. The sampler is a stainless-steel tube that is sharpened on one end and fitted with a long, T-shaped handle. This tube is approximately three inches inside diameter. In order to refrain from contamination, about 00-30 cm of top soil was removed by the sampler before sampling. Most of samples were taken and collected from 30-50 cm depth. During sample collection, wear the glove, rinse glove and soil auger with clean water. Then sample was taken and collected in cleaned plastic bag. Chemical preservation of soil not generally recommended. Samples were cooled in an ice box which temperature was under 4ºC. Samples were protected from sunlight to minimize any potential reaction. Field equipment used on site is also shown in the Table.

Table 5.27 Field Equipment for Soil Quality Survey

No.	Equipment	Originate Country	Model
1	Soil Auger (Hand held)	U. S. A	AMS

f) Survey Results

The laboratory analysis of soil samples will encompass key parameters, such as soil texture, pH levels, nutrient content, and the presence of contaminants. These parameters offer insights into soil fertility, potential agricultural use, and any adverse impacts on the soil ecosystem. Chemical analysis for soil quality was tested in the laboratory of Land Use Department of Yangon Region. Soil quality result is presented in Table 5.28. Most of the results are complied with the proposed standard value of contamination whereas soil result is lower than the applicable guideline.

Table 5.28 Soil Quality Results

Parameter	Unit	S 1	S 2	Japan Standard
pH	-	4.73	6.96	-
Lead	ppm	1.34	0.72	150
Cadmium	ppm	Not Detected	Not Detected	150
Copper	ppm	2.528	0.912	125
Zinc	ppm	1.8196	0.6182	150
Chromium	ppm	Not Detected	Not Detected	250
Manganese	ppm	11.96	4.872	-
Nickel	ppm	2.228	0.314	-
Iron	ppm	141.9	28.306	-

5.3.11 Odor

a) Applicable Standards and Guidelines

The survey area of the odor level was determined by referring Myanmar National Environmental Quality (Emission) Guidelines, were announced on 29th December 2015. Generally, odor levels should not exceed five to ten odorant units at the edge of populated areas in the vicinity of a project. Projects with multiple odorous point or diffuse releases, or emitting complex odors should conduct an odor impact assessment to determine ground-level maximum concentrations taking into account site-specific factors including proximity to populated areas.

Table 5.29 Guideline Value for Odor Level

No	Parameter	Unit	Guideline Value
1.	Odor	PPM	5-10

b) Survey Locations and Site Selection

Odor monitoring locations were established within the project compound and at selected receptor sites. The selection focused on areas near potential point sources of odor emissions, including processing and waste handling facilities, and areas where fugitive or diffused odors may be relevant to worker exposure. Odor survey locations are described in the following Table.

Table 5.30 Odor Survey Location

Stations	Coordinates		Description
	Latitude	Longitude	
OR 1	16°53'40.78"N	96° 2'12.68"E	Within the project site
OR 2	16°53'47.97"N	96° 2'15.00"E	Approximately 300 m north of the project area, at Kyon Su village
OR 3	16°53'28.00"N	96° 2'14.64"E	Approximately 350 m south of the project area, at Kan Hla village

OR 1

The odor monitoring point, OR 1, was established within the Project site of the animal feed mill factory. The location was selected to represent baseline odor conditions in an area potentially influenced by feed handling, raw material storage, waste management, and other operational activities.

OR 2

The odor monitoring point, OR 2, was located at a residential area within the 500 m Area of Influence (AOI) of the project. The site was selected to represent baseline odor conditions at a nearby sensitive receptor and to assess potential off-site impacts arising from project-related activities.

OR 3

The monitoring location, OR 3, is situated in a residential area within the 500 m AOI of the project. This site was chosen to provide representative baseline odor data at a nearby community receptor and to determine whether Project-related activities may contribute to off-site odor exposure.



Figure 5.17 Odor Quality Survey Activities

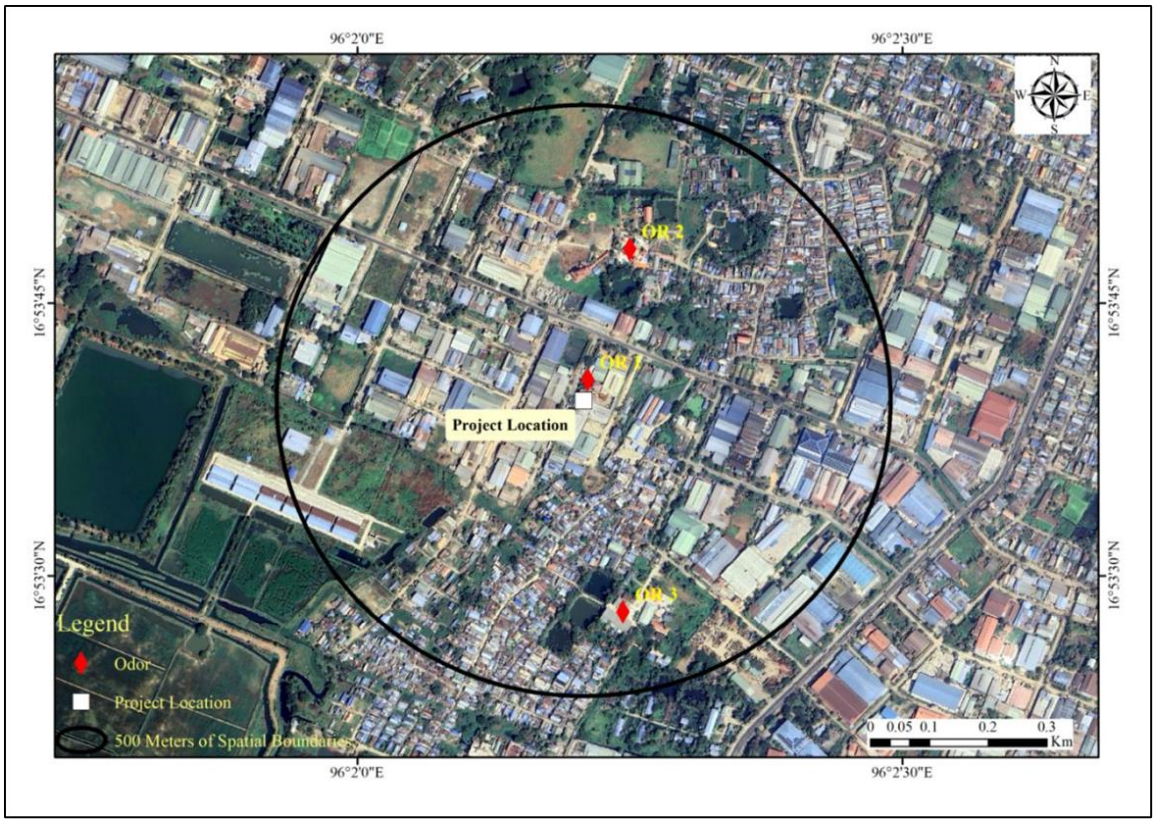


Figure 5.18 Location map of Odor Survey

c) Survey Item

The survey area of the odor level was determined by referring Myanmar National Environmental Quality (Emission) Guidelines, were announced on 29th December 2015. Generally, odor levels should not exceed five to ten odorant units at the edge of populated areas in the vicinity of a project.

d) Survey Period

The odor quality survey was conducted as a one-time baseline assessment on 15th September 2025 during the operation phase of the project.

e) Survey Equipment and Analytical Methods

The Oceanus OC-903 (Odor Gas Detector) was the instruments used for the odor level survey. The Oceanus OC-903 (Odor Gas Detector) is a portable, high-accuracy, fast-reaction gas measurement tool that can be used for direct measurement and measuring range is between 0-100 ppm. The instrument used for the odor level survey was described in the following Table.

Table 5.31 Survey Instrument of Odor

Instrumentation	Photo
Oceanus OC-903 (Portable Odor Gas Detector)	

f) Survey Results

According to the measurement of odor level meter, odor level does not exceed the standard in all four locations measured. The odor level was conducted by referring to the recommendation of Myanmar National Environmental Quality (Emission) Guidelines. The results of the odor monitoring survey are described in the following Table.

Table 5.32 Odor Survey Results

No	Parameter	Unit	Result	Guideline Value
1.	OR 1	ppm	0.04	5-10
2.	OR 2	ppm	0.01	
3.	OR 3	ppm	0.02	

5.3.12 Vehicle Traffic

a) Survey Locations and Site Selection

One traffic survey station (TR 1) was established for feed mill factory.

Table 5.33 Traffic Survey Location

Stations	Coordinates		Description
	Latitude	Longitude	
TR 1	16°53'43.07"N	96° 2'13.19"E	Approximately 120 m of the project area, located on Shwe Yin Aye Kyaung Road.

TR1

The traffic survey point, TR 1, was conducted on Shwe Yin Aye Kyaung Road at Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The survey location was selected at the entrance road to the industrial zone and the feed mill factory in order to assess traffic conditions related to vehicle access to and from the factory, as well as overall traffic flow within the industrial zone.

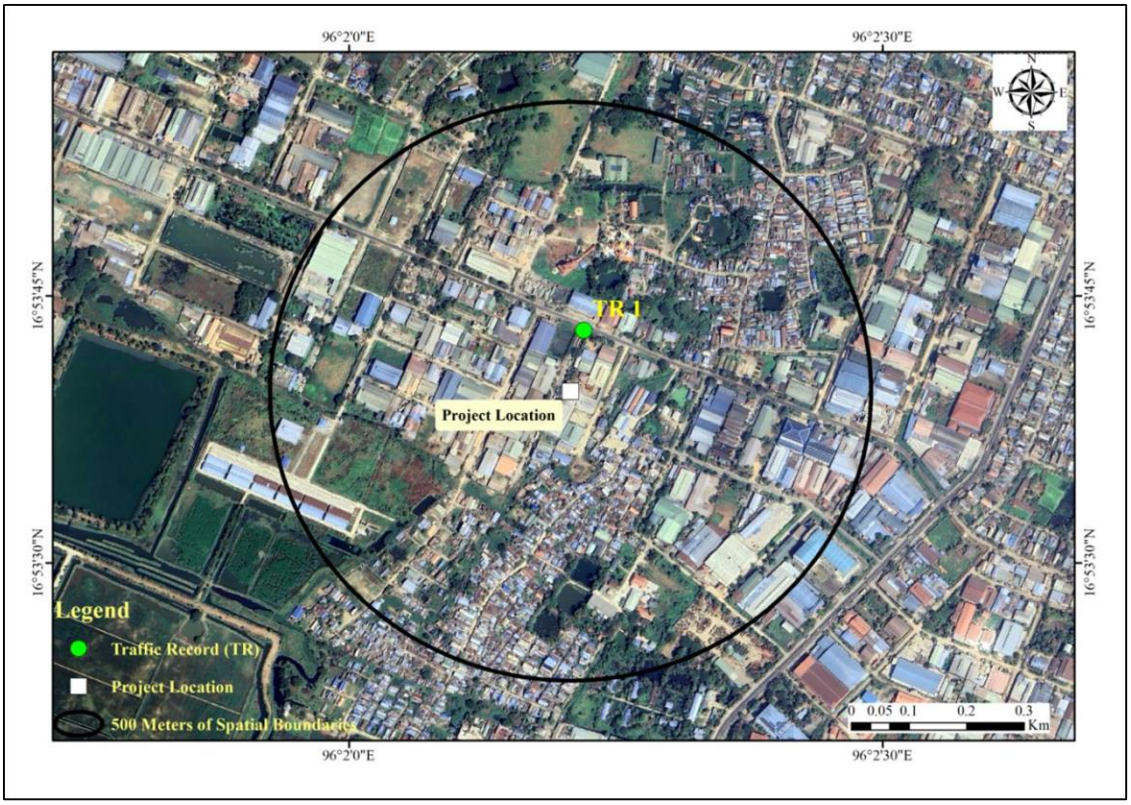


Figure 5.19 Location map of Traffic Survey



Figure 5.20 Vehicle Traffic Survey Activities

b) Survey Method

The traffic survey was undertaken using a direct observation and manual counting approach to obtain reliable baseline traffic data at the selected monitoring locations. Prior to field implementation, a structured Traffic Survey Assessment (TSA) form was prepared to facilitate systematic and consistent data recording. The form was designed to capture traffic information on an hourly basis, allowing for detailed analysis of temporal variations in traffic flow.

The survey parameters included:

- Total number of vehicles
- Classification of vehicle types (e.g., motorcycle, passenger car, light truck, heavy truck, bus, etc.)
- Direction of vehicle movement

Tally counters were used to ensure accuracy and consistency in recording traffic volumes. Surveyors were positioned at designated observation points to capture all passing vehicles without obstructing traffic flow. Data were recorded separately for each travel direction and compiled to determine hourly and daily traffic volumes.

c) Survey Period

The traffic volume surveys were conducted over two consecutive days, from 26th September 2025 to 27th September 2025, covering both a weekday and a weekend to capture representative traffic conditions. Vehicle counts were recorded on an hourly basis to analyze variations in traffic flow throughout the survey period.

d) Survey Results

The traffic survey was conducted at station TR 1, located at the entrance road to the feed mill factory site on Shwe Yin Aye Kyaung Road. Vehicle counts were recorded over two consecutive days, covering a weekday (26th September 2025) and a weekend day (27th September 2025). Only three vehicle types (3-Wheeler, Light Truck, and Truck & Trailer Truck) were observed during the survey period. At the survey location (TR 1), vehicles were counted in two directions:

- *Towards Industrial Zone*: Vehicles passing the survey point and heading into the Industrial Zone.
- *Towards Hlaingtharya Town*: Vehicles passing the survey point and heading out of the industrial zone towards Hlaingtharya Town.

The results are summarized in the following Tables.

Table 5.34 Traffic Volume at TR 1 (Day 1 - Weekday: 26th September 2025)

Vehicle Class	Towards Industrial Zone	Towards Hlaingtharya Town	Total Vehicles	Percentage (%)
3-Wheeler	180	188	368	48.9%
Light Truck	130	126	256	34.0%
Truck and Trailer Truck	65	63	128	17.0%
Total	**375**	**377**	**752**	**100%**

Table 5.35 Traffic Volume at TR 1 (Day 2 - Weekend: 27th September 2025)

Vehicle Class	Towards Industrial Zone	Towards Hlaingtharya Town	Total Vehicles	Percentage (%)
3-Wheeler	120	125	245	50.0%
Light Truck	85	82	167	34.1%
Truck and Trailer Truck	40	38	78	15.9%
Total	**245**	**245**	**490**	**100%**

Traffic Volume

The traffic survey recorded a total of 752 vehicles per day passing the survey point at the factory entrance on the weekday (26th September 2025), while the weekend (27th September 2025) recorded 490 vehicles per day. Among the three vehicle types observed, the 3-Wheeler was the most common on both survey days, accounting for approximately 49% to 50% of the total traffic. Light Trucks comprised around 34% of the traffic, while Truck and Trailer Trucks represented approximately 16% to 17% of the total vehicles.

Directional distribution of traffic was relatively balanced on both survey days, with roughly half of the vehicles heading towards the Industrial Zone and the other half heading out towards Hlaingtharya Town. When comparing weekday and weekend traffic volumes, the weekday traffic was approximately 53% higher than the weekend, indicating significantly reduced commercial and industrial activity during the weekend. Notably, heavy vehicles (Truck and Trailer Truck) accounted for 15.9% to 17.0% of the total traffic, confirming that the road is regularly used by heavy vehicles accessing the industrial zone.

Observation and Implication for the Project

The survey results indicate that Shwe Yin Aye Kyaung Road, at the location of the proposed feed mill factory entrance, carries a moderate volume of traffic consisting exclusively of commercial and industrial vehicles. No private cars, motorcycles, or buses were observed during the survey period, suggesting that the road is primarily used for industrial purposes. The balanced directional flow indicates that vehicles are equally likely to be entering or leaving the industrial zone throughout the day. Heavy vehicles (Truck and Trailer Truck) accounted for approximately 16% to 17% of the total traffic, confirming that the road is regularly used by heavy vehicles accessing the Industrial Zone. With the proposed feed mill factory expected to generate additional truck movements for raw material delivery and finished product distribution, the existing road infrastructure appears capable of accommodating the additional traffic based on current volume levels.

5.4 Environmental Biological Components

The biotic components of the environment comprise all living organisms, including flora, fauna, and microorganisms such as bacteria. These components interact closely with the abiotic components of the environment, and together they form various ecosystems, including pond, marine, and limestone ecosystems.

As part of the ecological and biodiversity assessment, a desktop study was undertaken to review available scientific literature relevant to the project Area of Influence (AOI). Field surveys were subsequently conducted to identify and map ecological features within the AOI. These activities included the preparation of a fine-scale vegetation map, through which distinct plant communities across the project site were identified and mapped. A walk-through ecological survey was carried out across the project area, during which all plant and animal species observed were systematically recorded. Targeted surveys for listed and protected plant species were conducted, and the geographic coordinates of all such species identified were recorded using Global Positioning System (GPS) equipment.

The biodiversity survey was conducted with the aim of establishing a baseline understanding of the flora and fauna present within the proposed project area and its vicinity, assess the conservation value of existing flora and fauna, habitats, and identify any environmentally sensitive species or ecosystems.

5.4.1 Project Area/biological environment and Survey Scope

The project site is situated at coordinates 16°53′44.7″ N and 96°03′66.6″ E, within the Livestock and Livestock Products Manufacturing Industrial Zone of Hlaingtharya Township, Yangon Region. The project site and nearby areas are heavily developed, with many factories, buildings, and concrete roads. No natural habitats remain. There are some few scattered natural trees, roadside planted trees, planted trees, shrubs, grasses, and small patches of man-made habitats such as manmade ponds and swampy area covering with shrubs, herbs and grass provide limited habitats. Some common fauna such as birds, amphibians and reptiles, small mammals, and flying insects (Butterfly and dragon fly) are present and adapted to human-inhabited environments.

For the study area, 500 m radius from the project site has been defined as Area of influence (AOI) of the project based on its location and the nature of the project. No protected areas, national parks, or wildlife sanctuaries are located near the project site.





Roadside plants and industrial infrastructures (Disturbed/Modified Habitat)



Cultivated Vegetation Habitat



Artificial aquatic habitat (Manmade Pond in religious area)



Concrete Road with roadside grass habitat



Patchy swamp habitat

Figure 5.21 Environment and habitats of the project and surrounding area



Bird watching with binoculars



Collecting butterfly and dragonfly specimens using a portable insect net



Recording roadside plants and other vegetation with a checklist form



Interviewing local resident about amphibians, reptiles, and elusive animals

Figure 5.22 Biodiversity Survey Activities Photo

5.4.2 Locations for sampling and field observations

The sampling sites and observation points were selected to represent the diverse habitats within the project's Area of Influence (AOI). Eleven sites were surveyed to record the fauna, including birds, insects, amphibians, reptiles, and small mammals across these varied environments. The flora survey focused on existing vegetation types, such as planted trees, roadside plants, and natural plant species within the designated survey area.

Table 5.36 Sampling points, survey taxonomic groups, and habitats in survey range of the project area

Sampling point	Coordinate Location		Target taxonomic group	Habitat
	Latitude	Longitude		
1	16°53′44.7″ N	96°03′66.6″ E	Project area	Factory with a concrete yard, no natural vegetation
2	16°53′42.00″ N	96°02′15.00″ E	Roadside plants (planted trees) and birds, lizards, butterfly & Dragon fly	Roadside plants (Planted trees), no natural vegetation
3	16°53′45.00″ N	96°02′15.00″ E	Planted trees, herb vegetation, birds, amphibian & reptiles, small mammals, butterfly & dragon fly	Monastery, Manmade Pond, planted trees, swamp area with natural vegetation (herbs & grass)
4	16°53′43.00″ N	96°02′19.00″ E	Planted trees, birds, reptiles	Swamp area affected by saltwater intrusion
5	16°53′54.00″ N	96°02′14.00″ E	Planted trees, birds, amphibian & reptiles, butterfly & dragon fly	Human habitation area, with planted trees
6	16°53′45.00″ N	96°02′27.00″ E	Planted trees, birds, amphibian & reptiles, butterfly & dragon fly, small mammals	Swamp area, planted trees and herb vegetation
7	16°53′34.00″ N	96°02′21.00″ E	Roadside plants, birds, amphibian & reptiles, butterfly & dragon fly, small mammals	Roadside plants, Wood factory
8	16°53′36.00″ N	96°02′29.00″ E	Planted trees, herb vegetation, birds, amphibian & reptiles, small mammals,	Monastery, Manmade Pond, planted trees, swamp area with natural vegetation (herbs & grass)

			butterfly & dragon fly, and small mammals	
9	16°53′28.00″ N	96°02′11.00″ E	Planted trees, herb vegetation, birds, amphibian & reptiles, small mammals, butterfly & dragon fly, and small mammals	Manmade Pond, planted trees, swamp area with natural vegetation (herbs & grass)
10	16°53′28.00″ N	96°02′ 06.00″ E	Planted trees, birds, amphibian & reptiles, butterfly & dragon fly	Human habitation area, with planted trees
11	16°53′37.00″ N	96°02′ 00.00″ E	Planted trees, natural vegetation (herbs, grass) birds, amphibian & reptiles, butterfly & dragon fly	Pig production factory, rice field, natural vegetation (herbs and grass)

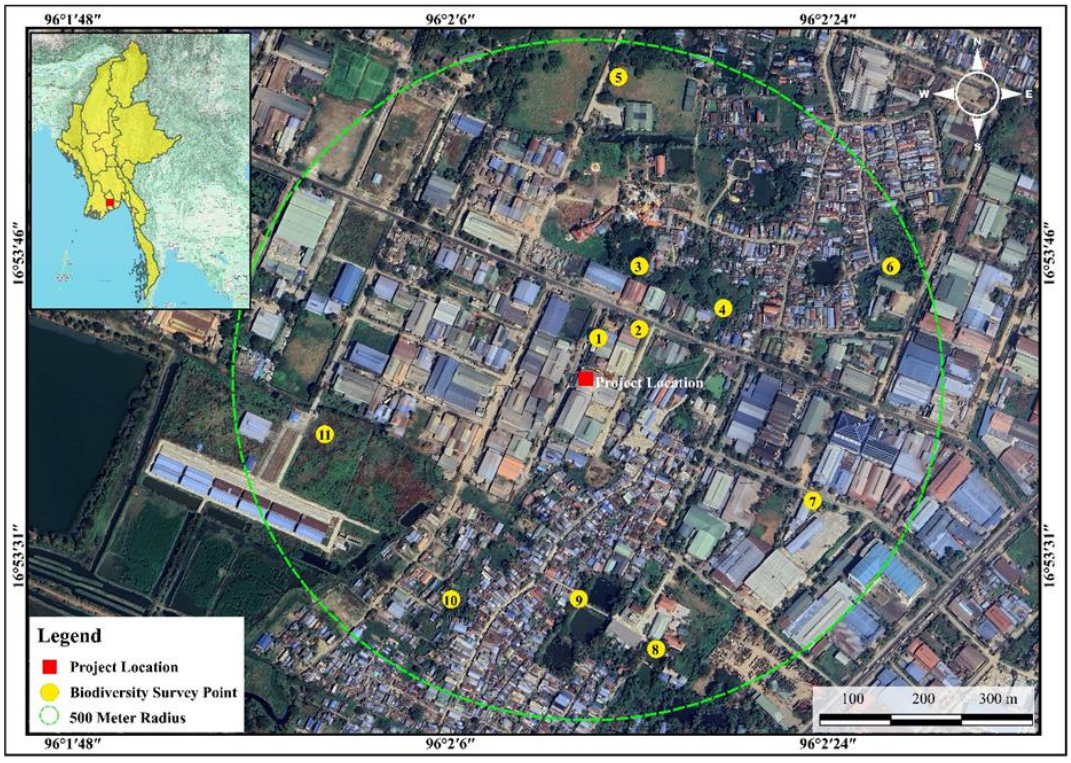


Figure 5.23 Map of sampling locations within the AOI of the project area

5.4.3 Classification of habitats

Habitat classification was conducted through direct field observation and assessment of landscape features, focusing on structural vegetation types and faunal presence within a highly urbanized setting (adapted from Li et al., 2019). As no natural habitats remain at the project site, habitat units were defined based on anthropogenic features supporting ecological functions. Habitat types were identified through systematic field surveys, verified on the ground using GPS, and cross-checked against satellite imagery to maintain accuracy and consistency.

Habitat types

The habitat assessment revealed that no natural habitats remain within the project site, as the area is highly urbanized and dominated by industrial infrastructure. However, a small patch of man-made habitats such as manmade ponds and swampy area covering with shrubs, herbs and grass provide limited habitats. Habitat units were therefore classified based on anthropogenic features that still provide limited ecological functions. A few scattered natural trees, roadside plantations, planted ornamental species, shrubs, and grasses represent modified vegetation structures that support small-scale ecological interactions. Man-made ponds were also identified as artificial aquatic habitats, offering minimal resources for amphibians and insects to sustain themselves. Despite the degraded environment, these fragmented habitats sustain a few adaptable fauna, including common bird species, amphibians, reptiles, small mammals, and flying insects such as butterflies and dragonflies. The presence of these species reflects the ability of generalist taxa to persist in disturbed landscapes. Therefore, the project environment consists of human-modified habitats with limited capacity to support urban biodiversity.

5.4.4 Biodiversity Survey Methodology

a) Flora survey

Listing method

A basic species listing method was employed for the flora survey, which is one of the simplest and most widely used techniques for documenting plant diversity (Kent, 2012). During the field survey, all plant species (both natural and planted trees) in the study area were recorded. Surveyors walked through the area and along the roads to record natural and planted vegetation, stopping at each sampling site for about 10 minutes to observe the plants and fill out a checklist (adapted from Kent, 2012). Field identification was carried out using standard botanical keys and field guides (Kress et al.,2003), and unidentified specimens were collected for later identification with the help of herbarium references.

Data analysis (Qualitative)

The DAFOR scale (Dominant-Abundant-Frequent-Occasional-Rare) was used to assess the density, coverage, or abundance of vegetation within quadrats or along transects. (The DAFOR scale is a qualitative method used in ecological and botanical surveys to assess plant species abundance or coverage within a given area. It's especially common in habitat and vegetation assessments (Rodwell, 2006).

Each category reflects an approximate percentage of ground coverage or abundance of vegetation in a particular area:

D: Species covers a very large proportion of the area (>50% coverage)

A: Very frequent and widely distributed; covers a large area (31–50%)

F: Seen often but not dominant (16–30% coverage)

O: Found intermittently or in patches (5–15% coverage)

R: Found very sparsely, in very small amounts (<5% coverage

The threatened levels of observed plants were checked and examined in accordance with "the IUCN Red List of Threatened Species, 2021" (**web: https://www.iucnredlist.org/**).

b) Fauna survey

Bird Survey	Bird surveys were conducted using point count method to record species presence and abundance. Survey started during early morning and late afternoon when bird activity is highest. Observers recorded all bird species seen or heard within fixed radius points and along survey routes. Identification was aided by field guides, and GPS was used to record survey locations. Opportunistic observations (Sutherland, W.J., 2006) and interviews with local residents supplemented the survey data to understand bird presence and behavior in relation to industrial activities. Photograph of birds was taken by use of zoom-lens Camera. Birds were observed by naked eyes and with binocular (Nikon 10X40) and identification was conducted using field guides, including Robson (2011) and Kyaw Nyint Lwin & Khin Ma Ma Thwin (2003). The IUCN Red List was used to assess the conservation status of the recorded bird species.
Mammal Survey	A combination of methods was used to survey mammals in the study area. These include opportunistic visual observations (Sutherland, W.J., 2006), and interviews with local residents to gather information on the presence of mammals. A field guidebook (Charles M. Francis, 2019) and GPS were used for species identification and to record their locations and distribution within the project area. The IUCN Red List was used to assess the conservation status of the recorded mammal species.
Amphibian and Reptiles Survey	Amphibians and reptiles were surveyed using a combination of Visual Encounter Surveys (VES) and active searching during the survey. Surveys focused on suitable microhabitats such as under logs, leaf litter, water edges, and vegetation near wetlands, flooded fields, and agricultural areas. Opportunistic sightings (Sutherland, W.J., 2006) were recorded along footpaths, irrigation ditches, and ponds. Interviews with local residents were also conducted to gather information on commonly seen species. Frogs and toad species were confirmed by use of call classification method/Auditory surveys for estimating species richness of anurans. GPS was used to record

	observation locations, and field guides (Kalyar et al. (2018) and Das, I. (2010) was used for species identification. The IUCN Red List was used to assess the conservation status of the recorded species.
Insect fauna survey: Butterfly and dragonfly	Butterfly and dragonfly surveys was conducted using opportunistic observation methods (Sutherland, 2006) during favourable weather conditions, such as sunny or partly cloudy skies with minimal wind. Surveys took place in the morning (8:00–11:00 AM) and afternoon (3:00–5:00 PM), when activity levels of these insects are typically highest across different habitat types. Species was identified visually in the field, with photographic documentation using a zoom-lens camera where necessary for later confirmation using standard field guides (Kirton, 2020; Subramanian, 2009). Common species were identified on-site using field guides. For species requiring closer examination, individuals were captured using an aerial insect net. Some specimens were photographed and released immediately after morphological checks, while others were retained and stored in triangular paper envelopes for further identification. The IUCN Red List was used to assess the conservation status of the recorded species.

Data analysis

The data were analyzed using the Shannon-Wiener, Margalef indices and Pielou's evenness to assess the species diversity and abundance of flora and fauna in the project area.

Shannon Diversity Index (Shannon, 1948)

The Shannon Diversity Index (sometimes called the Shannon-Wiener Index) is a way to measure the diversity of species in a community. The higher the value of H, the higher the diversity of species in a particular community. The lower the value of H, the lower the diversity.

The index is calculated as:

$$H = -\Sigma pi * \ln(pi)$$

where:

Σ: A Greek symbol that means "sum"

ln: Natural log

p i: The proportion of the entire community made up of species i

Marjalef Index (Margalef, 1958)

The Margalef index, also known as Margalef's richness index, is a simple measure of species richness used in ecology, especially in biodiversity studies. Margalef's index increases in much the same way as the number of species increases Conversely, higher values of Margalef's index indicate a higher number of species richness.

The index is calculated as:

$$SR= (S-1) /\ln(N)$$

Where:

SR: Index for species richness

S: Total number of different kinds of species

N: Total number of individuals in species

Pielou's evenness

Pielou's Evenness Index (J') builds upon the Shannon Diversity Index (H'). If you're new to diversity indices, you might want to start with our comprehensive guide to the Shannon Diversity Index to understand the underlying concepts.

The index is calculated as:

$$J' = \frac{H'}{\ln(S)}$$

Where:

H' is the Shannon Diversity Index

S is the total number of species

ln(S) is the natural logarithm of S

5.4.5 Flora Survey Results

A total of 36 flora species were recorded within the AOI of the project site. It includes 19 species of planted trees, 9 species of natural plants and 8 species of herb, shrubs and grass. Two species of planted trees (*Pterocarpus macrocarpus* and *Borassus flabellifer*) found as Endangered species, one Near Threatened (*Eucalyptus camaldulensis*), several Least Concern, Data Deficient, and unassessed species. In addition, nine species of natural plant from seven families were documented, with Moraceae most represented. No IUCN Red list species are observed. Based on the DAFOR scale, the abundance of natural plants ranged from rare species such as *Albizia procera* to dominant species like *Microcos paniculata*. These were found in religious compounds and undeveloped patches. Furthermore, eight species of natural herbs, shrubs, and grasses were recorded, belonging to six families. Dominant groups included Asteraceae and Poaceae, while others were represented by single species. Most are classified as Least Concern and are common, hardy plants adapted to disturbed environments, occurring in religious sites, roadsides, and open areas.

Planted trees/road site trees

The project area lies within industrial zone, dominated by extensive industrial infrastructure and factories. A total of 19 planted tree species recorded in the study area, belonging to 11 plant families, with Fabaceae being the most represented. Among these species, two are classified as Endangered (*Pterocarpus macrocarpus* and *Borassus flabellifer*), one as Near Threatened (*Eucalyptus camaldulensis*), seven as Least Concern, and two as Data Deficient (*Mangifera indica* and *Albizia lebbeck*). Additionally, three species are Not Evaluated by the IUCN, while four are Not Listed. The recorded trees consist of a combination of ornamental, fruit-bearing, and culturally important species, including mango, tamarind, jackfruit, and coconut, which contribute to both ecological and socio-economic value. Many of these species are planted along roadsides and in backyards for shade, decorative purposes as well as to improve air quality, reduce pollution, and support biodiversity. All these planted tree species are widely distributed and occur throughout the country.

Table 5.37 Recorded planted trees in the study area

Sr. No	Family name	Scientific name	Common name/ Myanmar name	IUCN status
1	Combretaceae	*Terminalia catappa*	ဗန်ဒါ	LC
2	Annonaceae	*Polyalthia longifolia*	လမ်းတမာ	NL
3	Fabaceae	*Acacia auriculiformis A. Cunn.*	မလေးရှားပိတောက်	LC
4	Fabaceae	*Pterocarpus macrocarpus Kurz*	ပိတောက်	EN
5	Sapotaceae	*Mimusops elengi* L.	ခရေ	NL
6	Anacardiaceae	*Mangifera indica* L.	သရက်	DD
7	Bignoniaceae	*Oroxylum indicum* (L.) Kurz	ကြောင်ရှာ	NL
8	Fabaceae	*Albizia lebbeck* (L.) Benth	ကုက္ကို	DD
9	Fabaceae	*Delonix regia* (Bojer ex Hook.) Raf.	စိန်ပန်း	LC
10	Fabaceae	*Tamarindus indica* L.	မန်ကျည်း	LC
11	Moraceae	*Artocarpus heterophyllus* Lam.	ပိန္နဲ	NE
12	Moringaceae	*Moringa ovalifolia* Dinter & Berger	ဒန့်သလွန်	NE
13	Myrtaceae	*Eucalyptus camaldulensis* Dahnh.	ယူကလစ်	NT
14	Myrtaceae	*Syzygium cumini* (L.) Skeels	သပြေ	LC
15	Fabaceae	*Senna siamea* Lam.	မဲဇလီ	LC
16	Arecaceae	Borassus flabellifer L.	ထန်းပင်	EN
17	Arecaceae	Cocos nucifera L.	အုန်းပင်	NE
18	Poaceae	Dendrocalamus longispathus (Kurz) Kurz	ဝါးနက်	LC
19	Poaceae	*Bambusa wamin E.G. Camus*	ဝါးမင်း	NL

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Natural plants

A total of nine species across seven plant families, with Moraceae being the most represented. In the following Table includes the scientific name, common or Myanmar name, IUCN conservation status, and DAFOR scale rating, which indicates the conservation status and species' relative abundance. Most species are classified as "Least Concern" (LC) under the IUCN Red List. The DAFOR scale indicated a wide range of distribution patterns, from rare species like *Albizia procera* and *Lannea coromandelica* (rated R) to dominant ones like *Microcos paniculata* (rated D). Most of these plants were observed at patches of religious site and undeveloped area. All plant species are widely distributed and occur throughout the country.

Table 5.38 Recorded natural plants in the study area

Sr. No	Family name	Scientific name	Common name/ Myanmar name	IUCN status	DAFOR scale
1	Fabaceae	*Albizia procera (Roxb.) Benth.*	white siris/ စစ်ပင်	LC	R
2	Moraceae	*Ficus rumphii* Bl.	Mock peepal tree/ ညောင်ပင်	LC	F
3	Moraceae	*Ficus obtusifolia Roxb.*	Amate/ ညောင်ကြွတ်	LC	F
4	Moraceae	*Streblus asper* Lour	Sandpaper tree /အုန်းနဲ	NE	O
5	Rhamnaceae	*Ziziphus jujuba Mill.*	Chinese date/ ဇီးပင်	LC	O
6	Moraceae	*Ficus glaberrima Blume*	Fig tree / သဖန်း	LC	A
7	Anacardiaceae	*Lannea coromandelica (Houtt.) Merr.*	Indian ash tree/ နဘဲ	LC	R

8	Malvaceae	*Microcos paniculata L.*	Myaya/ မြရာ	LC	D
9	Poaceae	*Bambusa arundinacea (Retz.) Willd.*	Spiny Bamboo/ ကြခတ်ဝါး	LC	O

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Description for DAFOR scale:

D: Species covers a very large proportion of the area (>50% coverage)

A: Very frequent and widely distributed; covers a large area (31–50%)

F: Seen often but not dominant (16–30% coverage)

O: Found intermittently or in patches (5–15% coverage)

R: Found very sparsely, in very small amounts (<5% coverage)

Natural plants (herbs, shrubs, and grass)

A total of eight species of natural plants (herbs, shrubs, and grasses) belonging to six different families were identified in the study area. The dominant families include Asteraceae (two species) and Gramineae/Poaceae (two species), while other families such as Amaranthaceae, Fabaceae, Malvaceae, and Araceae are each represented by a single species. Most of the recorded plants are categorized as Least Concern (LC) under the IUCN Red List. Overall, the vegetation consists mainly of common and resilient species that are well adapted to disturbed or semi-natural habitats. These plants were observed at patches of religious site, roadside and few undeveloped areas. All plant species are widely distributed and abundant occur throughout the country.

Table 5.39 Recorded natural plants (Herbs, shrubs, and grass) in the study area

Sr. No	Family name	Scientific name	Common name/ Myanmar name	IUCN status
1	Amaranthaceae	*Alternanthera sessilis*	dwarf copperleaf/ ပုစွန်စာ	LC
2	Asteraceae	*Eupatorium odoratum*	Christmas bush/ ဘီစပ်	LC
3	Fabaceae	*Mimosa pudica*	sensitive plant/ ထိကရုန်း	LC
4	Malvaceae	*Sida carpinifolia*	Common wireweed/ ကပ်စေးနှဲ	LC
5	Poaceae	*Dactyloctenium aegyptium*	crowfoot grass/မြက်လေးခွ	LC
6	Gramineae	*Saccharum spontaneum L*	Kans grass/ ကိုင်း	LC
7	Asteraceae	*Mikania scandens*	climbing hempvine, /ဘီစပ်နွယ်	LC
8	Araceae	*Colocasia affinis*	Dwarf Elephant Ear /ပိန်းပင်	NE

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened



***Albizia procera* (Roxb.) Benth**



***Ficus rumphii* Bl.**



***Ficus obtusifolia* Roxb**



***Streblus asper* Lour**



***Ziziphus jujuba* Mill.**



***Ficus glaberrima* Blume**



***Lannea coromandelica (Houtt.)* Merr.**



***Microcos paniculata* L.**



***Bambusa arundinacea (Retz.)* Willd.**

Figure 5.24 Recorded natural plant species in the survey area

5.4.6 Fauna Survey Results

Species composition of fauna groups in project environment

A total of 50 animal species were recorded in the present study, comprising 22 bird species, 17 amphibians and reptiles, 3 small mammals, and 8 butterfly and dragonfly species across five fauna groups. The species composition of these fauna groups within the study areas of the industrial zone is illustrated in the following Figure. The data reveals that birds form the largest group, accounting for 44% of the recorded fauna, followed by reptiles at 23%. Amphibians constitute 10% of the total, while insects, specifically butterflies and dragonflies, make up 17%. Mammals represent the smallest group, comprising only 6% of the fauna.

The dominance of birds (44%) in the fauna composition suggests a relatively healthy avian population, possibly due to available food sources or suitable habitats within the project areas. Reptiles, at 23%, indicate a significant presence, which may reflect diverse microhabitats supporting their survival. Amphibians contribute 10% with their population is low.

The presence of insects, including butterflies and dragonflies, which account for 17% of the fauna, indicates a functional ecosystem with roles in pollination and as prey for other species while a small mammal, at a low 6%, may indicate limited suitable habitats.

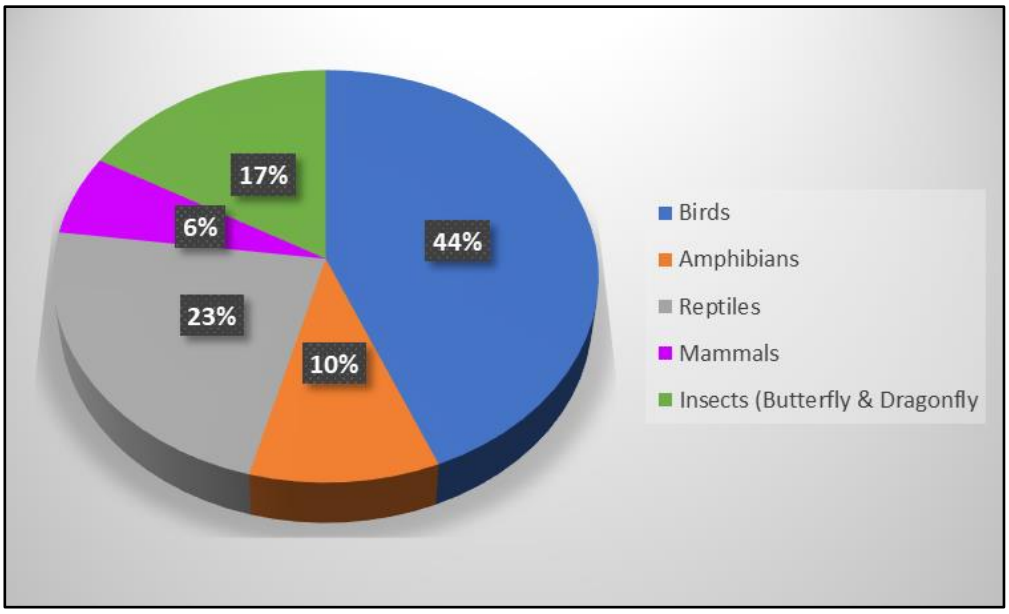


Figure 5.25 Species composition of recorded fauna groups in study areas

Birds

During the survey, a total of 22 bird species recorded in the study area, belonging 13 families including Columbidae, Pycnonotidae, and Ardeidae. All species are classified as "Least Concern" (LC) under the IUCN Red List, indicating no immediate threat to their global populations. Their local encounter rate (ER) status varies, with species like the House crow (*Corvus splendens*) and domestic pigeon (*Columba livia domestica*) showed as "Very Common", while others such as the Garden sunbird (*Cinnyris jugularis*) and Copper smith barbet (*Psilopogon haemacephalus*) are considered "Rare". The data, sourced entirely from direct observation, reflects a diverse avian presence, with varying degrees of abundance in the study area. Most of the species are common and inhabit areas with human presence and are well adapted to human environments.

Table 5.40 Recorded birds in the study area

Sr. No	Family	Scientific name	Common name	IUCN status	Source
1	Columbidae	*Streptopelia chinensis*	Spotted dove	LC	Observed
2	Columbidae	*Streptopelia tranquebarica*	Red color dove	LC	Observed
3	Dicruridae	*Dicrurus macrocercus*	Black drongo	LC	Observed
4	Sturnidae	*Acridotheres tristis*	Common myna	LC	Observed
5	Sturnidae	*Acridotheres fuscus*	Jungle myna	LC	Observed
6	Pycnonotidae	*Pycnonotus jocosus*	Red whiskered bulbul	LC	Observed
7	Pycnonotidae	*Pycnonotus goiavier*	Bended bulbul	LC	Observed
8	Pycnonotidae	*Pycnonotus blanford*	Ayeyarwady bulbul	LC	Observed
9	Passeridae	*Passer domesticus*	House sparrow	LC	Observed
10	Passeridae	*Passer montanus*	Tree sparrow	LC	Observed
11	Estrildidae	*Lonchura punctulata*	Scaly-breasted munia	LC	Observed

12	Corvidae	*Corvus splendens*	House crow	LC	Observed
13	Columbidae	*Columba livia domestica*	Pigeon	LC	Observed
14	Meropidae	*Merops orientalis*	little green bee-eater	LC	Observed
15	Ardeidae	*Egretta garzetta*	Little egret	LC	Observed
16	Ardeidae	*Ardeola grayii*	Indian pond heron	LC	Observed
17	Ardeidae	*Botaurus sinensis*	Yellow bitten	LC	Observed
18	Apodidae	*Cypsiurus balasiensis*	Asian palm swift	LC	Observed
19	Cisticolidae	*Orthotomus sutorius*	Common tailor bird	LC	Observed
20	Cisticolidae	*Prinia inornata*	Plain prrinia	LC	Observed
21	Nectariniidae	*Cinnyris jugularis*	Garden sunbird	LC	Observed
22	Megalaimidae	*Psilopogon haemacephalus*	Copper smith barbet	LC	Observed

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Amphibians & reptiles

During the survey, a total of 17 species of amphibians and reptiles in the study area, categorized into frogs and toads, snakes, lizards, and freshwater turtle species. They include five species of frog and toad such as *Fejervarya limnocharis* and *Duttaphrynus melanostictus*, all listed as Least Concern (LC) by the IUCN, with recorded frequency ranging from common to rare, eight species of snakes across families like Colubridae, Viperidae, and Elapidae, including such nonpoisonous of *Ahaetulla nasuta* and poisonous species such as *Daboia russelli* (Russell's viper) and *Naja kaouthia* (Monocellate cobra), all also classified as LC in the IUCN Red List and were confirmed through interviews, three species of lizards with *Calotes versicolor* and *Eutropis multifasciata* observed directly, while Gekko gecko was only heard and a single freshwater turtle species, *Lissemys scutata*, was recorded via interview. Data sources include direct observation, interviews, and auditory detection. All recorded species are common and can be found throughout the country.

Table 5.41 Recorded of amphibians & reptiles in the study area

Sr. No	Family	Scientific name	Common name	IUCN	Source
Frog and toad					
1	Dicroglossidae	*Fejervarya limnocharis*	Indian cricket frog	LC	Observed
2	Dicroglossidae	*Hoplobatrachus tigrinus*	Indian bullfrog	LC	Interview
3	Ranidae	*Hylarana erythraea*	Green Paddy Frog	LC	Observed
4	Rhacophoridae	*Polypedates leucomystax*	Common tree frog	LC	Observed
5	Bufonidae	*Duttaphrynus melanostictus*	Asian common toad	LC	Observed
Snakes					
1	Colubridae	*Xenochrophis flavipunctatus*	Water snake	LC	Interview
2	Colubridae	*Ahaetulla nasuta*	Long-nosed whip snake	LC	Interview
3	Colubridae	*Ptyas korros*	Indo-Chinese Rat Snake	LC	Interview
4	Viperidae	*Daboia russelli*	Russell's viper	LC	Interview
5	Elapidae	*Naja kaouthia*	Monocellate cobra	LC	Interview
7	Colubridae	*Coelognathus radiatus*	Radiated rat snake	LC	Interview
8	Elapidae	*Bungarus fasciatus*	Banded krait	LC	Interview
Lizards					
1	Agamidae	*Calotes versicolor*	Garden fence lizard	LC	Observed
2	Gekkonidae	*Gekko gecko*	Tockay		Heard

3	Mabuyidae	*Eutropis multifasciata*	Common sun skink	LC	Observed
Fresh water					
1	Trionychidae	*Lissemys scutata*	Myanmar flapshell turtle	LC	Interview

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Mammalian fauna

During the survey, a total of three species of small mammal were identified within the study area through interview. All three species reported through interviews are not abundant and are classified as Least Concern (LC) in the IUCN Red List. These species are common and wide distributed animals.

Table 5.42 Recorded mammals in the study area

Sr. No	Family	Scientific name	Common name	IUCN	Source
1	Sciuridae	*Callosciurus pygerythrus*	Irrawaddy squirrel	LC	Interview
2	Herpestidae	*Urva auropunctata*	Small Inian mongoose	LC	Interview
3	Vespertilionidae	*Scotophilus kuhlii*	Lesser Asiatic Yellow House Bat	LC	Interview

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Insect fauna: Butterfly & Dragonfly

During the survey, butterfly and dragonfly species recorded in the study area, detail their taxonomic classification, conservation status, and observation sources. A total eight species included five species of butterfly and three species of dragonfly. Among butterflies, six species from the Pieridae and Nymphalidae families are listed as Least Concern (LC) by the IUCN, though their encounter rates vary from uncommon and rare. The species such as *Eurema hecabe* and *Euploea core* are commonly found while the species like *Danaus chrysippus* (Plain

tiger) and *Melanitis leda* (Common evening brown) were classified as rare in the study area. For dragonflies, three species from the Libellulidae family were recorded, also all LC, with encounter frequency ranging from common (*Pantala flavescens*) to rare (*Neurothemis tullia*). All recorded fauna are common and wide distributed species.

Table 5.43 Record of butterfly and dragon fly in the study area

Sr. No	Family	Scientific name	Common name	IUCN	Source
Butterfly					
1	Pieridae	*Eurema hecabe*	Common grass yellow	LC	Observed
2	Nymphalidae	*Euploea core*	Common crow	LC	Observed
3	Nymphalidae	*Danaus chrysippus*	Plain tiger	LC	Observed
4	Nymphalidae	*Melanitis leda*	Common evening brown	LC	Observed
5	Pieridae	*Pieris rapae*	Cabbage White	LC	Observed
6	Nymphalidae	*Neptis hylas*	common sailor	LC	Observed
Dragonfly					
1	Libellulidae	*Pantala flavescens*	Wandering glider	LC	Observed
2	Libellulidae	*Diplacodes trivialis*	ground skimmer	LC	Observed
3	Libellulidae	*Neurothemis tullia*	pied paddy skimmer	LC	Observed

Description for IUCN Red list: EN= Endangered, DD= Data Deficient, LC= Least concern, NL= Not listed, NE= Not evaluated, NT= Near threatened

Species diversity, richness, and evenness of recorded fauna groups in Study Area

The diversity indices indicate varying levels of ecological health across the fauna groups able 6 summarizes the diversity index values and corresponding statuses for the five recorded groups such as birds, amphibians, reptiles, mammals, and insects (butterflies and dragonflies) within the project area. The Shannon-Wiener Index, Margalef Species Richness, and Pielou Evenness indices were calculated to assess biodiversity.

Birds exhibit a Shannon-Wiener Index of 2.23 (moderate status), Margalef richness of 3.16 (semi-disturbed), and Pielou evenness of 0.72 (semi-balanced). Amphibians show a Shannon-Wiener Index of 1.25 (poor), Margalef richness of 0.89 (disturbed), and Pielou evenness of 0.77 (semi-balanced). Reptiles have a Shannon-Wiener Index of 2.19 (moderate), Margalef richness of 2.81 (semi-disturbed), and Pielou evenness of 0.91 (balanced). Mammals display the lowest Shannon-Wiener Index at 0.86 (bad), Margalef richness of 0.73 (disturbed), and Pielou evenness of 0.78 (semi-balanced). Insects (butterflies and dragonflies) have a Shannon-Wiener Index of 1.90 (poor), Margalef richness of 1.52 (disturbed), and Pielou evenness of 0.91 (balanced).

Birds, with a moderate Shannon-Wiener Index (2.23) and a semi-disturbed richness (3.16), indicate a relatively stable population, aligning with their 44% dominance in species composition. The semi-balanced evenness (0.72) suggests some variability in species distribution, possibly due to available habitats or food sources.

Amphibians, with a poor status of Shannon-Wiener Index (1.25) and disturbed richness (0.89), show significant vulnerability, likely due to their sensitivity to water quality and habitat disruption common issues in industrial areas. The semi-balanced evenness (0.77) indicates a slight uniformity in remaining species. Reptiles, with a moderate Shannon-Wiener Index (2.19) and semi-disturbed Margalef richness (2.81), suggest a moderately diverse community, supported by diverse microhabitats. The balanced Pielou evenness (0.91) reflects an even distribution among species, indicating adaptability to the industrial environment.

Mammals exhibit the poorest diversity, with a bad Shannon-Wiener Index (0.86) and disturbed Margalef richness (0.73), reflecting their low 6% species composition. This likely results from limited suitable habitats. The semi-balanced evenness (0.78) suggests some species persistence, but their low diversity signals.

Insects (butterflies and dragonflies), with a poor Shannon-Wiener Index (1.90) and disturbed Margalef richness (1.52), indicate a stressed community despite their 17% contribution. The balanced Pielou evenness (0.91) suggests even species distribution.

Table 5.44 Different diversity index values and their respective status of recorded fauna group in project areas

Recorded fauna	Different Index values and status					
	Shannon & Wiener index		Margalef species richness		Pielou evenness	
	Value	Status	Value	Status	Value	Status
Birds	2.23	Moderate	3.16	Semi disturbed	0.72	Semi-balanced
Amphibians	1.25	Poor	0.89	Disturbed	0.77	Semi-balanced
Reptiles	2.19	Moderate	2.81	Semi disturbed	0.91	Balanced
Mammals	0.86	Bad	0.73	Disturbed	0.78	Semi-balanced
Insects (Butterfly and Dragonfly)	1.90	poor	1.52	Disturbed	0.91	Balanced

Diversity Shannon & Wiener index		Margalef Richness index		Evenness Pielou index	
Range	0-5	Range	0-> 5	Range	0-1
High status	>4-5	Integrated	>5	Balanced	>0.8-0.9
Good status	>3-4	Semi disturbed	>2.05-5	Semi-balanced	>0.5-0.8
Moderate status	>2-3	Disturbed	<2.05	Unbalanced	<0.5
Poor status	>1-2				
Bad status	0-1				



Streptopelia chinensis



Streptopelia tranquebarica



Dicrurus macrocercus



Acridotheres tristis



Acridotheres fuscus



Pycnonotus jocosus



Pycnonotus goiavier



Pycnonotus blanford



Passer domesticus



Passer montanus



Lonchura punctulata



Corvus splendens



Columba livia domestica



Merops orientalis



Botaurus sinensis



Prinia inornata



Cinnyris jugularis



Psilopogon haemacephalus

Figure 5.26 Recorded bird species in the survey area



Fejervarya limnocharis



Hylarana erythraea



Calotes versicolor



Ahaetulla nasuta



Pantala flavescens



Diplacodes trivialis



Eurema hecabe



Euploea core



Pieris rapae

Figure 5.27 Recorded bird species in the survey area

5.5 Socio-economic Components

The description of these socio-economic environmental sections included demographic and social services such as education and health, economic, cultural, and local community.

Methodology and Approach: First of all, the data needed are usually collected from respective government offices, Myanmar Population and Housing Census, Myanmar Information Management Unit, and records from the project developer as secondary data. Quantitative and qualitative methods are used in this assessment. Structured, semi-structured, open and close interview methods are used for Primary data and other needed data. The information about a wide variety of them in the affected villages is collected with the help of a questionnaire survey and focus group discussion.

Stakeholder engagements, consultation meetings, disclosure, and social surveys were carried out. In the stakeholder engagement process, township-level engagement and local-level engagement are undertaken. The social team met officers, village heads, and local villagers who live in targeted villages for discussion and consultation about the project and observed actual condition of the communities. And then household data are collected using questionnaire, and social data are gathered from respective villages. Qualitative/qualitative interpretation and examination are applied to assess the socio-economy of villagers in the project area. Questionnaire survey was systematically conducted in during this study. The approaches are as follows:

- ✓ Target area: Two villages such as Kan Hla and Kyon Su village, are assumed as the project-affected area
- ✓ Target group: related village heads, villagers, members of health services, and the elderly group
- ✓ Methodology: disclosure, consultation, and surveying, etc.

Social Survey: The villages adjacent to the project site within a 500-meter radius is included in the Social AOI because it is the potential to be affected by the activities of the project site.

Calculation of sample size: The ESIA team engaged key local stakeholders, including the affected communities, through the quantitative and qualitative baseline study and focus group discussions. According to the General Administration Department township profile data, Hlaingtharya (west) had 7429 households. In the determination of sample size, one household for every 100 households is taken, instead of using the formula devised by any other prominent study. The sample size of 74 households was defined for the social survey. Structured, semi-structured, open, and closed interview methods for Primary data and other needed data are used. Field surveys will be made in the EIA stage, and determinations of Sample Sizes are as follows:

Total households in Hlaingtharya (west) Township	=	7429 Households
Sample one percent	=	74

Identification of Households for Sampling: Sample households included in different areas are identified by leaders from Local institutions, Wards, and Village Tracts. The following Table presents the total household and social survey sample size for each village.

Table 5.45 Number of Sample Size

No.	Township	Village	Household	Sample Size
1	Hlaingtharya (west) Township	Kan Hla	3488	35
2	Hlaingtharya (west) Township	Kyon Su	3941	39
Total			**7429**	**74**

Other participatory exercises are as follows:

- Data collection, including acquisition of the location map with updated demarcation of the household and land use/ownership type within the AOI ("social maps") at the Township level
- Individual household interview (Questionnaire-based household survey)
- Semi-structured in-depth interviews with key informants, including community leaders and heads of villages/wards
- Focused group discussions (FGD) of particular interest groups among the project-affected people, including: farmers, local businessmen and women
- Review activities conducted in the field and initial analysis of findings and feedback from key stakeholders, project-affected persons, and other key local stakeholders
- Data analysis, including data entry, data cleaning, data processing, recording, and feedback to key project staff.

Questionnaires: The Structured questionnaire survey method is used to obtain the necessary primary data. The sample size and location are mentioned above. The questions are mainly asked of the households. The questionnaires contain five sections. The first section is related to the demographic and social services situations of household members. The second section is related to the economic condition of the household (agricultural, livestock, household assets, occupation, household income and expenditure, and credit facility). The third section is energy usage and water usage, and the fourth section is concerned with the health care and educational services conditions of the local area. Finally, the questionnaire is about opinions on the project. Field surveys were made from 24.9.2025 - 26.9.2025. Appendix 1 presents social questionnaire survey forms.

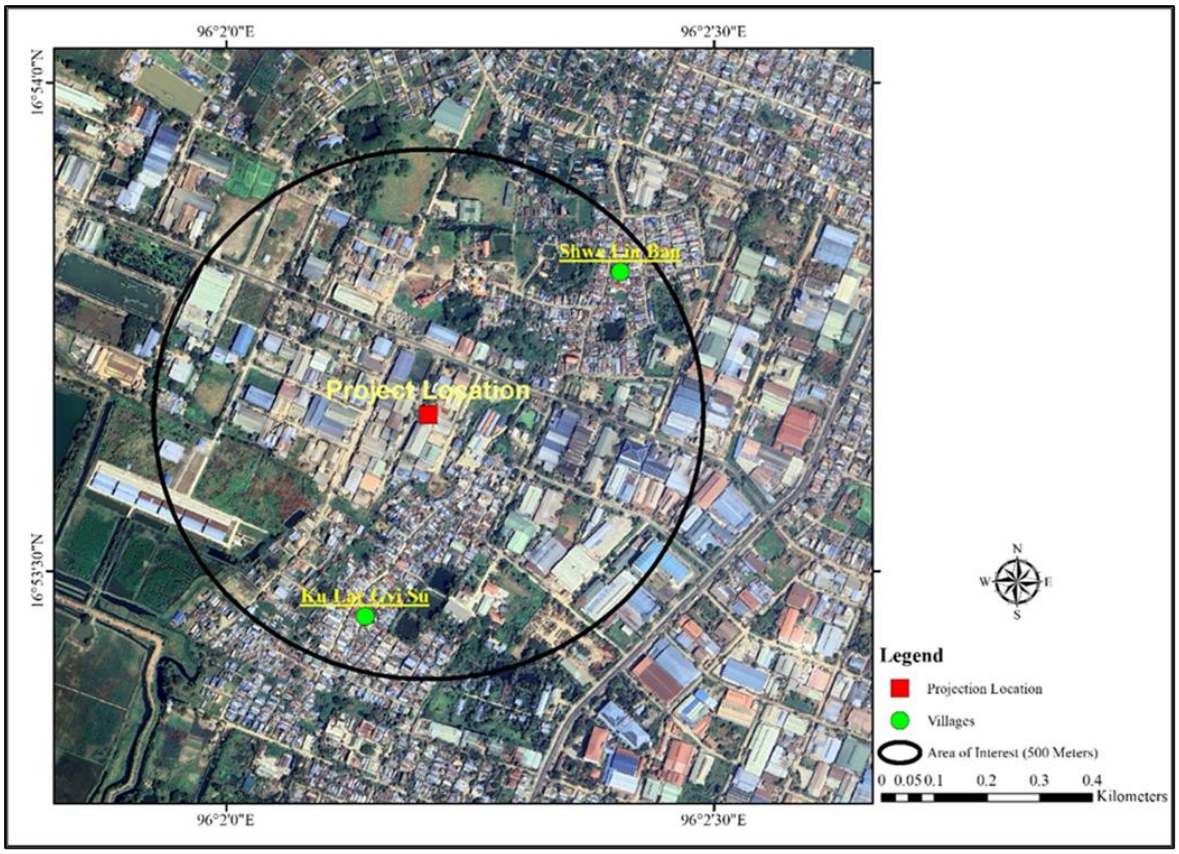


Figure 5.28 Socio-Economic Survey Villages Point

5.5.1 Township Boundary and Population

The project area is located in Hlaingtharya (West) Township, Yangon Region, and is shown in the Figure below. The township is between North Latitude between 16° 47" and 20° 12" and East Longitude between 96° 12" and 100° 13". The total area is 12.24 square miles. According to the 2023 township profile data of the General Administration Department, Hlaingtharya (West) Township consisted of eleven wards, four village tracts, and nine villages.

Ward	Village Tract	Village
11	4	9

Source: Township General Administration Department 2023

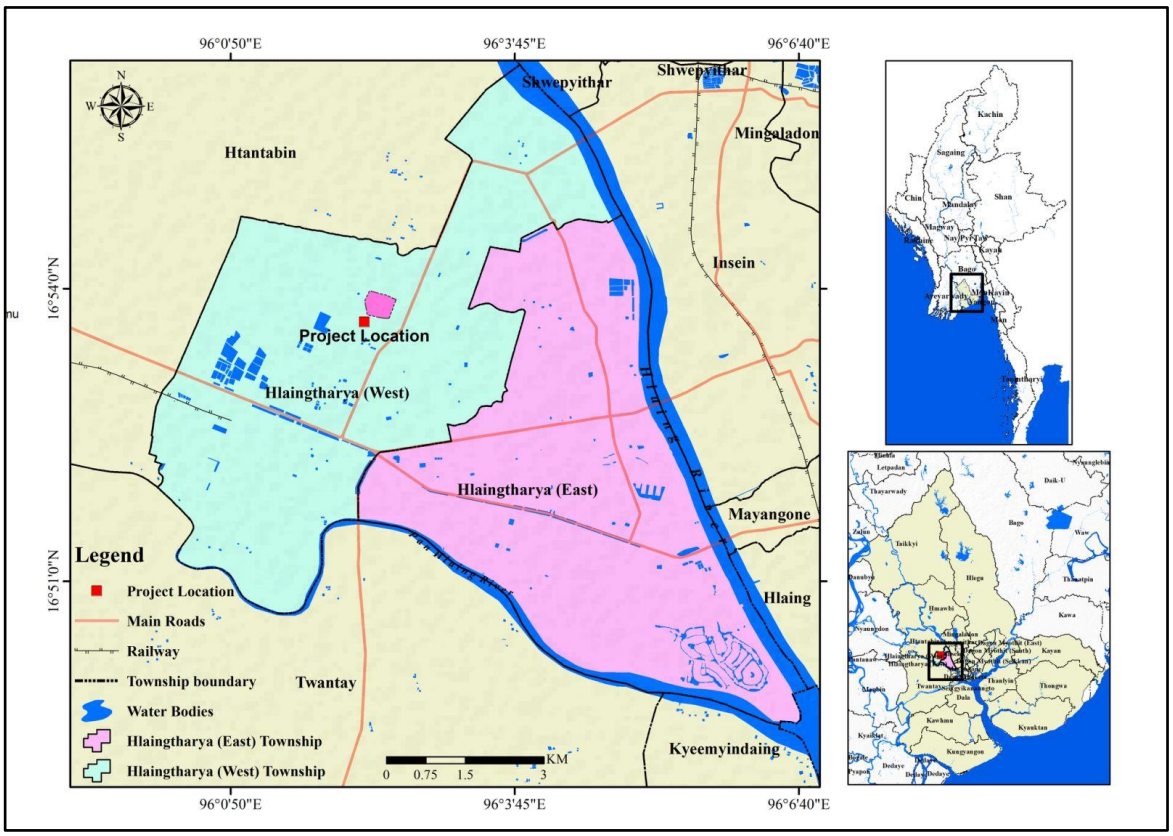


Figure 5.29 Project Area Location

5.5.2 Social Profile

Demographic Condition: The following Table shows the condition of urban, rural, and total population by male and female. According to the township profile data of the General Administration Department, the total population was 329,492 in Hlaingtharya (West) Township in 2023.

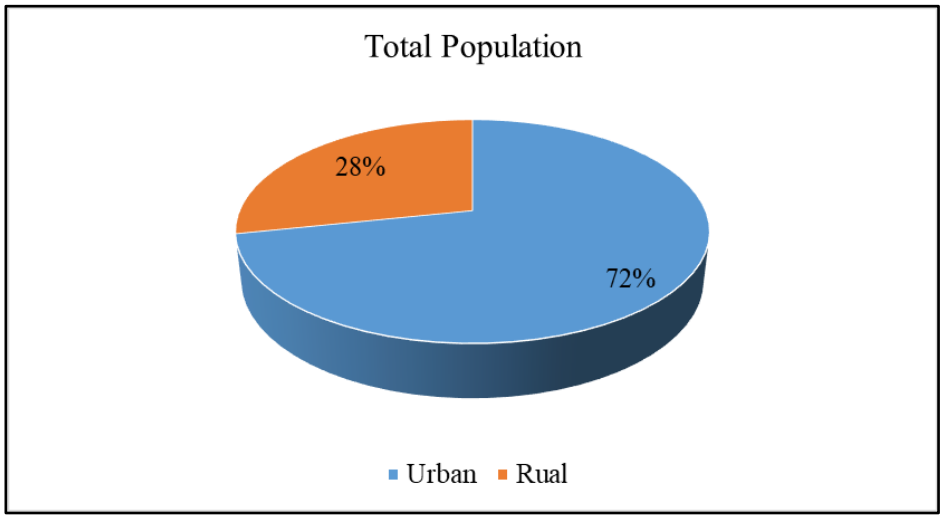
a) Urban and Rural Population by Gender

According to the Urban and Rural Population Table, among the township population of 329492, above 72 percent of the total population lives in urban areas, and 28 percent lives in rural areas.

Table 5.46 Urban and Rural Population

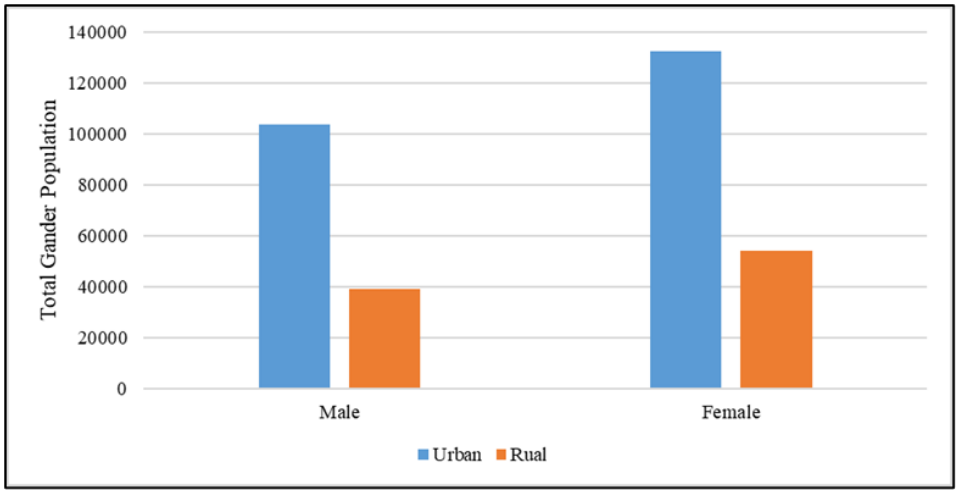
Township	Male	Female	Total Population
Urban	103739	132493	236232
Rural	39174	54086	93260
Total	**142913**	**186579**	**329492**

Source: Township General Administration Department 2023



Source: Township General Administration Department 2023

Figure 5.30 Urban and Rural Population



Source: Township General Administration Department 2023

Figure 5.31 Urban and Rural Population by Gender

b) Population in the Studied Area

According to the following Table, Kan Hla and Kyon Su villages have a combined total of 7,429 households. Among them, Kan Hla Village accounts for 3,488 households, while Kyon Su Village has a slightly higher number with 3,941 households. This means Kyon Su represents the larger share of households between the two villages, contributing just over half of the total.

A total of 74 respondents participated in the survey. Among them, 20 respondents (27.0%) were male, while 54 respondents (73.0%) were female. This indicates that female respondents constituted a significant majority of the survey participants.

Table 5.47 Population in the Studied Area

No	Village	Household
1	Kan Hla	3488
2	Kyon Su	3941
Total		**7429**

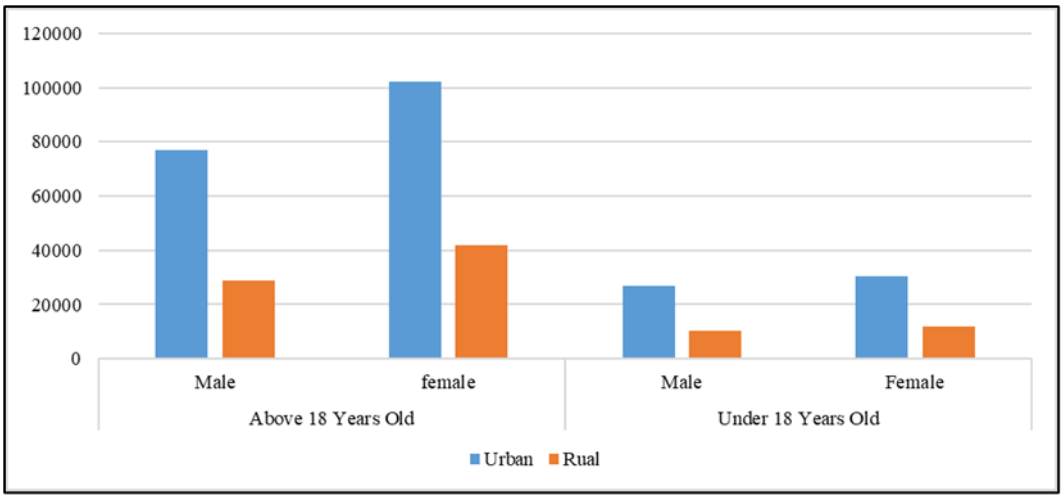
c) Age Group

Age Group can be a factor in social stratification, influencing access to resources, opportunities, and social status. 329492 persons of the township population, 249741 persons were above 18 years old, and 79751 persons were under 18 years old in 2023.

Table 5.48 Population of Above 18 and Under 18

Township	Above 18 Years Old			Under 18 Years Old			Township Population
	Male	female	Total	Male	Female	Total	
Urban	76983	102046	179029	26756	30447	57203	236232
Rural	28679	42033	70712	10495	12053	22548	93260
Total	**105662**	**144079**	**249741**	**37251**	**42500**	**79751**	**329492**

Source: Township General Administration Department 2023



Source: Township General Administration Department 2023

Figure 5.32 Population of Above 18 and Under 18

d) Distribution of Marital Status among Respondents

Among the 74 respondents, the majority were married, accounting for 61 respondents (82.4%). Single respondents represented a small proportion with 4 respondents (5.4%), while 9 respondents (12.2%) were widowed. This distribution shows that most participants in the survey were married.

Table 5.49 Marital Status in the Social Survey

Marital Status	Respondent	Percent
Single	4	5.4
Married	61	82.4
Widowed	9	12.2
Total	74	100.0

Sources: Social Field Survey, 24th to 26th 9. 2025

e) Religious in Hlaingtharya Township

The following Table shows the religious condition of Hlaingtharya (West) Township, where Buddhism is the major religion, followed by Christian.

Table 5.50 Religion Group in Hlaingtharya (West) Township

Buddhism	Christian	Hindu	Islam	Other	Total
303364	14526	6479	4926	197	329492

Source: Township General Administration Department 2023

f) Religion of respondents

Among the 74 respondents, the vast majority were Buddhist, with 71 respondents accounting for 95.9% of the total. A small proportion of respondents, 3 individuals (4.1%), identified as Christian. This indicates that Buddhism is the predominant religion among the survey participants.

Table 5.51 Religion of respondents

Religion	Respondent	Percent
Buddhist	71	95.9
Christian	3	4.1
Total	74	100.0

Sources: Social Field Survey, 24th to 26th 9. 2025

5.5.3 Economic Condition

This title presents information about the township's general land use, employment and unemployment, occupational conditions, per capita income, and transportation.

a) General Land Used

General Land use management helps control the allocation of land for specific uses. This ensures resources are available for future generations. It minimizes the effect of economic activities and development on the environment. The best use of available resources is

achievable through organized usage. More specifically, the goals of modern land use planning often include environmental conservation, restraint of urban sprawl, minimization of transport costs, prevention of land use conflicts, and a reduction in exposure to pollutants. The general land used area of each township is presented in the following:

Table 5.52 General Land Used of Hlaingtharya (West) Township

No	Land used Types	Area (Acre)
1	Net Cultivated Area	-
2	Fallow Land	-
3	Pasture Area	-
4	Industrial Land	1917
5	Settlement (Urban)	2150
6	Settlement (Rural)	4353
7	Other	86
8	Reserved Forest	-
9	Wild Forest	-
10	Wilde Land	-
11	Uncultivatable Area	429
Total		**8935**

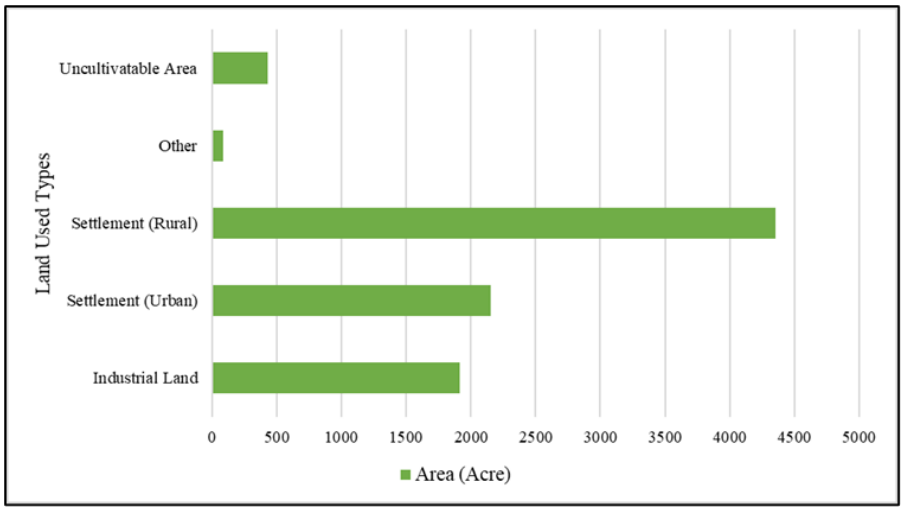


Figure 5.33 General Land Used of Hlaingtharya (West) Township

b) Employment and Unemployment

Employment is defined as the engagement of a person in the labor force in some occupation, business, trade, or profession. Unemployment is a situation where people in the labor force are actively looking for jobs but are currently unemployed. The unemployed persons was less, and about 76 percent of the labor force were employed persons in the township.

Table 5.53 Employment and Unemployment

Township	Labor Force	Employed person	Unemployed person
Hlaingtharya (West)	222300	168584	53716

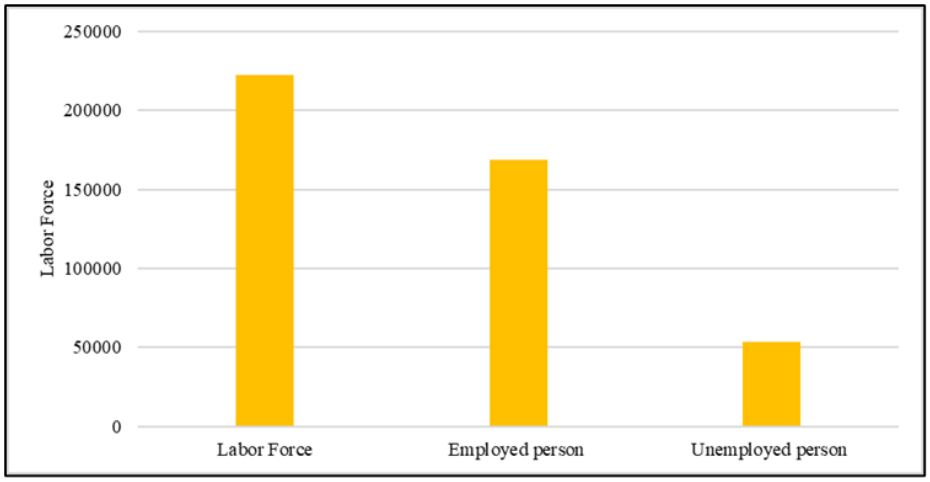


Figure 5.34 Employment and Unemployment

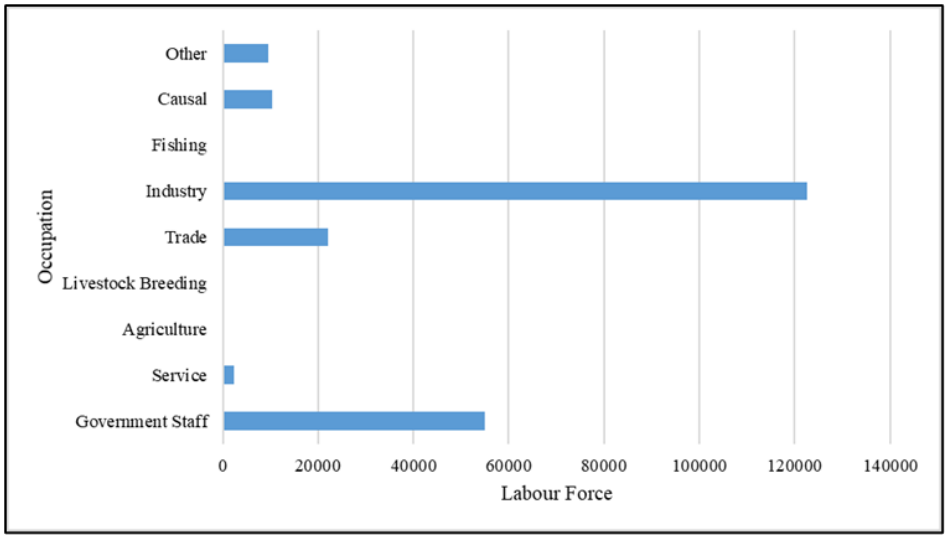
c) Occupation condition

The total employed population of the township was 222,300 persons in 2023. According to the following Table and Figure, most of the workable persons are working in industry, Hlaingtharya is one of the industrial zones in Yangon Region: Government Staff, Trade, and Casual work are also dominant in the township.

Table 5.54 Types of Occupation

No	Occupation	Total
1	Government Staff	55013
2	Service	2382
3	Agriculture	40
4	Livestock Breeding	106
5	Trade	22101
6	Industry	122689
7	Fishing	
8	Causal	10396
9	Other	9573

Source: Township General Administration Department 2023



Source: Township General Administration Department 2023

Figure 5.35 Types of Occupation

d) Occupation Status in the Studied Area

The occupational profile of the respondents shows a diverse range of livelihoods. Nearly half of the respondents (48.6%) fall under the "Other" category, indicating engagement in occupations not specifically listed in the survey. Small business owners form the second-largest group, accounting for 32.4% of respondents, highlighting the importance of self-employment in the study area. Casual laborers represent 8.1%, followed by skilled laborers at 4.1%. A small proportion of respondents are engaged in tailoring (2.7%). Occupations such as agriculture, government service, and private employment each account for 1.4% of the total respondents. Overall, the results suggest that informal and self-employed occupations dominate the local economic structure.

Table 5.55 Occupation Status in the Studied Area

No.	Occupation types	Respondent	Percent
1	Agriculture	1	1.4
2	Small business	24	32.4
3	Government staff	1	1.4
4	Private employee	1	1.4
5	Skilled labor	3	4.1
6	Casual labor	6	8.1
7	Other	36	48.6
8	Tailor	2	2.7
Total		74	100.0

Sources: Social Field Survey, 24th to 26th 9. 2025

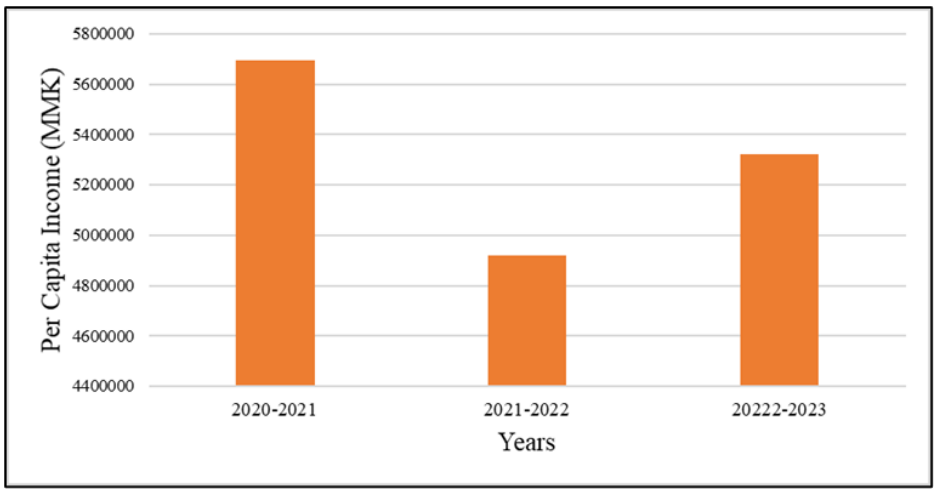
e) Per Capita Income

Based on the secondary data received from the related GAD office, the income of the person for a year from 2020 to 2023 could be identified as follows. Although the annual per capita income of Hlaingtharya Township had MMK 5,695,334 in 2020 - 2021, it decreased to MMK 4,919,688 in 2021 - 2022. The township's per capita income increased again to MMK 5,321,592 in 2022 - 2023.

Table 5.56 Per Capita Income (MMK) Status of Hlaingtharya (West) Township

2020-2021	2021-2022	2022-2023
5695334	4919688	5321592

Source: Township General Administration Department 2023



Source: Township General Administration Department 2023

Figure 5.36 Per Capita Income of Hlaingtharya Township

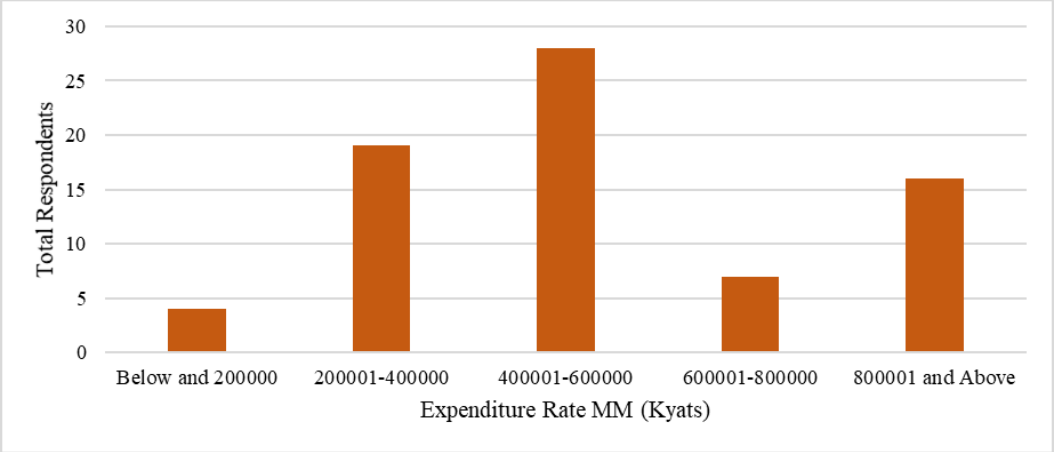
f) Monthly Household Expenditure Level of Respondents

The expenditure pattern of respondents shows that the largest proportion falls within the 400,001–600,000 range, accounting for 37.8% of the total respondents. This is followed by those spending 200,001–400,000 (25.7%) and 800,001 and above (21.6%). A smaller share of respondents spend 600,001–800,000 (9.5%), while only 5.4% report expenditures below 200,000. Overall, the findings indicate that most households fall within the middle expenditure levels, with a notable portion in the higher expenditure group, indicating moderate economic capacity among the surveyed population.

Table 5.57 Monthly Household Expenditure Level of Respondents

No.	Expenditure	Respondents	Percent (%)
1	Below and 200000	4	5.405405
2	200001-400000	19	25.67568
3	400001-600000	28	37.83784
4	600001-800000	7	9.459459
5	800001 and Above	16	21.62162
Total		74	100

Sources: Social Field Survey, 24th to 26th 9. 2025



Sources: Social Field Survey, 24th to 26th 9. 2025

Figure 5.37 Monthly Household Expenditure Level of Respondents

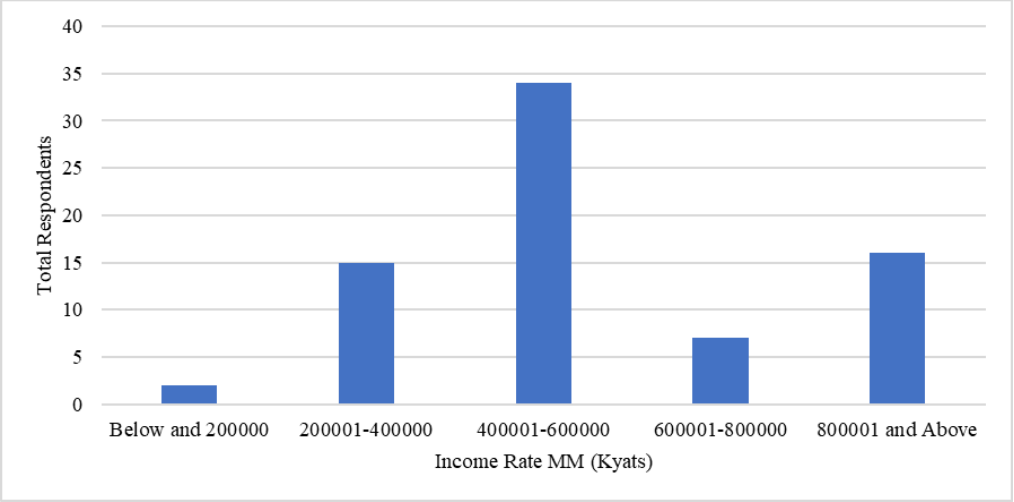
g) Respondents' Monthly Income

The income distribution of the 74 respondents shows that the majority earn between 400,001 and 600,000 MMK, accounting for 45.9% of the total. This is followed by respondents earning 800,001 MMK and above (21.6%) and those in the 200,001–400,000 MMK range (20.3%). Only a small proportion of respondents earn below 200,000 MMK (2.7%) or between 600,001–800,000 MMK (9.5%). These results indicate that most respondents belong to the middle-income group, while lower-income individuals are relatively few. The data suggest a skew toward moderate earnings among the surveyed population.

Table 5.58 Respondents' Monthly Income

No.	Income	Respondents	Percent
1	Below and 200000	2	2.7
2	200001-400000	15	20.3
3	400001-600000	34	45.9
4	600001-800000	7	9.5
5	800001 and Above	16	21.6
Total		**74**	**100.0**

Sources: Social Field Survey, 24th to 26th 9. 2025



Sources: Social Field Survey, 24th to 26th 9. 2025

Figure 5.38 Respondents' Monthly Income

h) Ownership of housing unit

The results indicate that the majority of respondents live in owner-occupied housing. Out of the total 74 respondents, 48 households (64.9%) reported that they own their housing units. In contrast, 26 respondents (35.1%) live in rented accommodations. The result shows that home ownership is relatively common in the study area, while a little over one-third of the population depends on rental housing.

Table 5.59 Results of Ownership and Rental Housing

No.	Ownership Unit	Respondent	Percent
1	Owned	48	64.9
2	Rented	26	35.1
Total		74	100.0

Sources: Social Field Survey, 24th to 26th 9. 2025

i) Duration of residence of Respondents

The duration of residence of respondents in the village indicates a highly stable community. A large majority (73.0%) have lived in the area since birth or for more than 10 years, while 9.5% have resided there for 5 years and above. Additionally, 13.5% have lived in the village for 2-5 years, and only 4.1% have stayed for less than one year. This distribution shows that most respondents have long-term familiarity with local environmental, social, and economic conditions. Therefore, their opinions and perceptions can be considered reliable and valuable for Environmental Impact Assessment (EIA), as long-term residents are more likely to understand historical changes, seasonal patterns, and community-level impacts.

Table 5.60 Duration of residence of Respondents

No	Duration	Frequency	Percent
1	Less than 1 year	3	4.1
2	2 to 5 years	10	13.5
3	5 years and above	7	9.5
4	Since birth / over 10 years	54	73.0
Total		**74**	**100.0**

Sources: Social Field Survey, 24th to 26th 9. 2025

j) Household Borrowing Money Status in the studied area

The survey results show that the majority of households (85.1%) did not borrow money in the last 12 months, while only 14.9% reported borrowing. This indicates that most households in the surveyed population are financially self-reliant, with a relatively small proportion depending on credit during the past year.

Among the households that borrowed money in the past 12 months, 9 households (12.2%) relied on friends or neighbors, while 2 households (2.7%) obtained loans from savings and loan groups. This indicates that informal lending networks are the predominant source of credit, with relatively few households using formal or organized financial institutions.

Table 5.61 Borrowing Money Status

Did your household borrow money in the last 12 months?	Frequency	Percent
Yes	11	14.9
No	63	85.1
Total	74	100.0

Sources: Social Field Survey, 24th to 26th 9. 2025

k) Sources of Lighting

All surveyed households (100%) reported using government electricity as their main source of energy for lighting. This indicates that electricity supply in the studied area is universal for lighting purposes, and alternative energy sources such as solar or kerosene are not used by the respondents for this purpose.

l) Sources of Energy for Cooking

The majority of households (97.3%) reported using government electricity as their main source of energy for cooking, while a small minority (2.7%) rely on firewood. This indicates that electricity is the dominant energy source for cooking in the studied area, with very few households depending on traditional fuels.

Table 5.62 Sources of Energy for Cooking

No.	Sources of energy	Household	Percent
1	Government electricity	72	97.3
2	Firewood	2	2.7
Total		**74**	**100.0**

Sources: Social Field Survey, 24th to 26th 9. 2025

m) Transportation Condition

Hlaingtharya has good transport conditions, it is accessible to the Ayeyarwady Region.

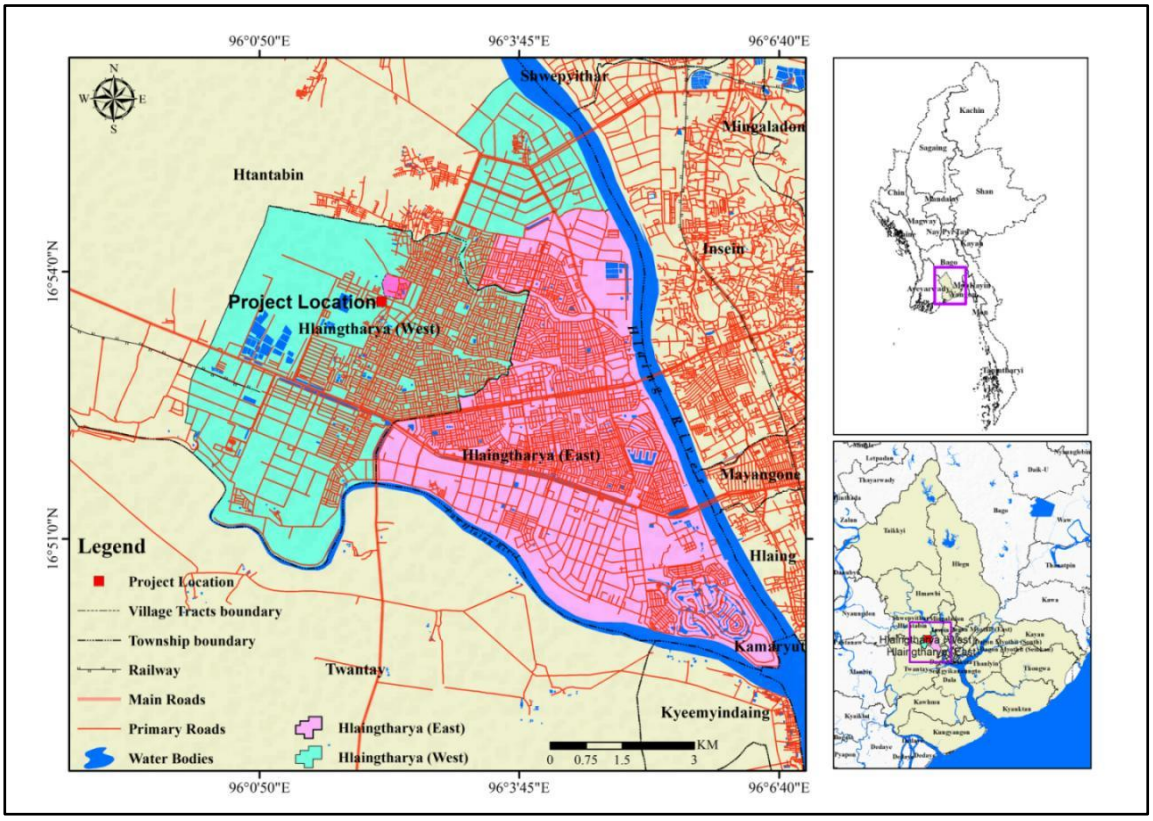


Figure 5.39 Transportation Condition

5.5.4 Education

West Yangon Technological University, higher education, is located in the study area, the basic educational schools of Hlaingtharya (west) show as follow Table. Although monastic education school are especially found in remote area of Myanmar, many monastic educations school are in the study township.

Table 5.63 Education Infrastructures

No	School	Number	Student	Teacher	Student/Teacher Ratio
1	Basic Education High School	11	17160	395	1:43
2	Basic Education High School (branch)	3	3090	79	1:39

3	Basic Education Middle School	2	1545	29	1:53
4	Basic Education Middle School (branch)	-	-	-	-
5	Basic Education Basic School	1	128	5996	1:47
6	Basic Education Basic School (branch)	-	-	-	-
7	Monastic Education School	12	117	3442	1:29

Source: Township General Administration Department 2023

a) Education Level of Respondents

Regarding educational attainment, the largest proportion of respondents had completed primary education, accounting for 27 respondents (36.5%). This was followed by middle school education with 25 respondents (33.8%) and high school education with 13 respondents (17.6%). A smaller number of respondents had attended monastic schools (5 respondents, 6.8%). Very few respondents reported no formal schooling or graduate-level education, each representing 1 respondent (1.4%), while 2 respondents (2.7%) were currently attending university. Overall, the findings indicate that most respondents had attained education up to the primary and middle school levels.

Table 5.64 Education Level of Respondents

No.	Education Level	Respondent	Percent
1	No schooling	1	1.4
2	Monastic school	5	6.8
3	Primary	27	36.5
4	Middle school	25	33.8
5	High school	13	17.6
6	University (attending)	2	2.7
7	Graduate	1	1.4
Total		**74**	**100.0**

Sources: Social Field Survey, 24th to 26th 9. 2025





Figure 5.40 Education Infrastructures in the Studied Area

5.5.5 Public Health Condition

a) Health Care Condition of Hlaingtharya (West) Township

Two private hospital, 86 clinic, and four rural health care center are located in the township, but there is not public hospital in Hlaingtharya (west) Township.

Table 5.65 Health Care Center of Hlaingtharya (west) Township

No	Health Care Center	Number
1	Public Hospital	-
2	Private Hospital	2
3	Clinic	86
4	Rural Health Care Center	4

Source: Township General Administration Department 2023

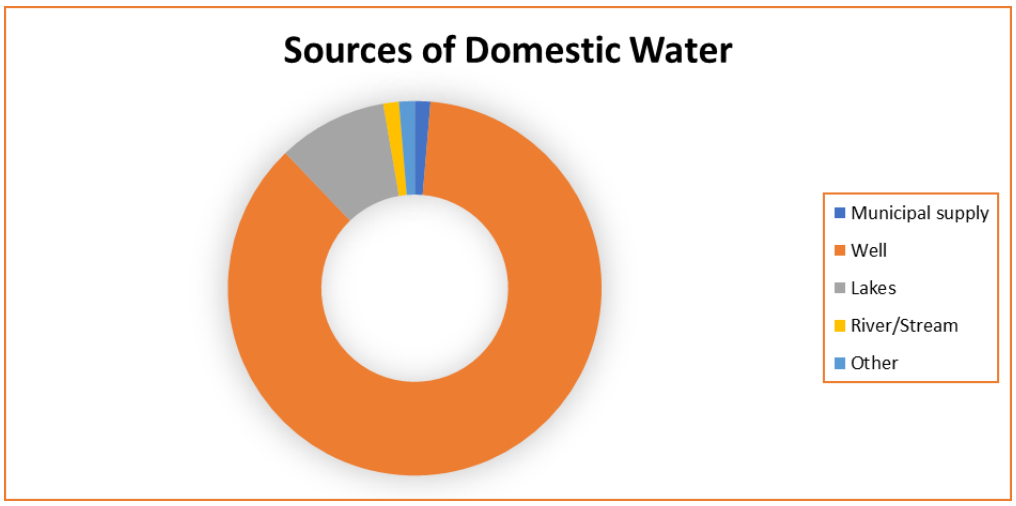
b) Domestic Water Supply in the Studied Area

The survey results show that the majority of households (86.5%) rely on wells as their main source of domestic water. A smaller proportion uses lakes (9.5%), while only a few households depend on municipal supply, rivers/streams, or other sources (1.4% each). This indicates that groundwater is the predominant source of domestic water in the studied area, with very limited access to municipal or surface water supplies.

Table 5.66 Sources of Domestic Water

No.	Sources of Domestic Water	Household	Percent
1	Municipal supply	1	1.4
2	Well	64	86.5
3	Lakes	7	9.5
4	River/Stream	1	1.4
5	Other	1	1.4
Total		**74**	**100.0**

Sources: Social Field Survey, 24th to 26th 9. 2025



Sources: Social Field Survey, 24th to 26th 9. 2025

Figure 5.41 Sources of Domestic Water

c) Sources of Drinking Water

The majority of households (97.3%) use purified water as their main source of drinking water, while a small minority (2.7%) rely on rainwater. This indicates that purified water is the dominant source for safe drinking in the studied area, reflecting a high level of awareness and access to potable water among the respondents.

d) Types of Toilets

All surveyed households (100%) reported using fly-proof latrines as their main type of toilet. This indicates that the studied area has universal access to hygienic sanitation facilities, which helps in preventing the spread of waterborne and sanitation-related diseases.

e) Waste Disposal System

The survey findings indicate that waste management practices among households are highly uniform. All respondents (100%) reported that their household waste is collected and disposed of through a garbage cart system.

f) Major Diseases

Five kinds of diseases were the major in the township that shows in the following Table. According to the types of disease Table, 2955 people were suffered Tuberculosis disease and 43 people death in 2023.

Table 5.67 Types of Major Diseases

Malaria		Diarrhea		Tuberculosis		Dysentery		Hepatitis	
Suffered	Death	Suffered	Death	Suffered	Death	Suffered	Death	Suffered	Death
2	-	18	-	2955	43	-	-	-	-

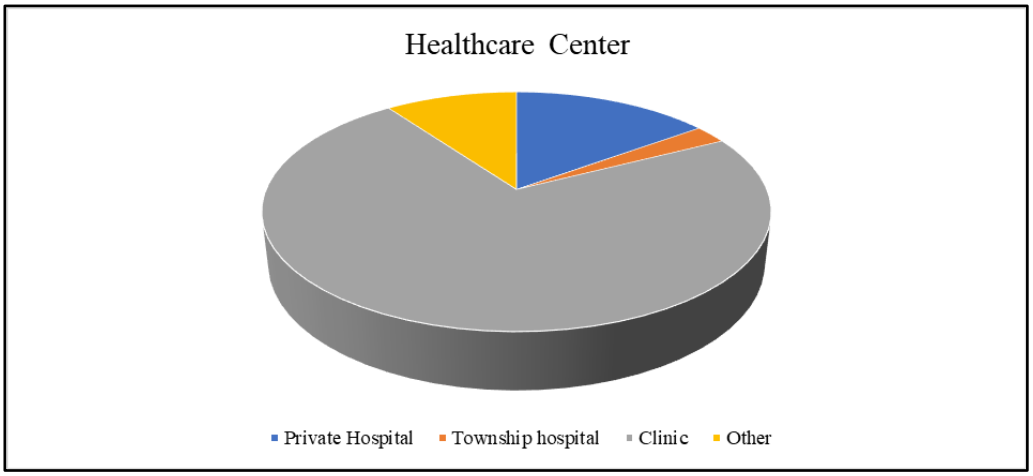
Source: Township General Administration Department 2023

g) Household Illness Occurrence

Survey results indicate that 55.6% of households reported that at least one family member experienced illness during the past month, while 44.4% reported no illness. This suggests that short-term health issues are relatively common within the study area. The baseline health survey identified several illnesses affecting households in the study area. Reported conditions include acute rheumatic fever, gastrointestinal illnesses, hemorrhoids, diarrheal diseases, hepatitis, influenza (flu), hypertension, heart disease, and respiratory diseases. These findings indicate the presence of both communicable diseases (such as influenza, diarrhea, hepatitis, and respiratory infections) and non-communicable diseases (including hypertension and heart disease).

h) Healthcare Facilities Utilized by Respondents

Survey results show that among households reporting illness, the majority sought treatment at clinics, accounting for 29 respondents (72.5% of valid responses). A smaller proportion visited private hospitals (15.0%), while very few sought care at the township hospital (2.5%). Additionally, 10.0% reported seeking treatment from other sources, which may include traditional healers, pharmacies, or informal providers. Out of the total sample, 40 households (54.1%) provided responses to this question, while 34 households (45.9%) had no illness cases and therefore did not seek healthcare services.



Sources: Social Field Survey, 24th to 26th 9. 2025

Figure 5.42 Healthcare Facilities Utilized by Respondents

5.6 Cultural Characteristic

Hlaingtharya Township was established in 1989 to resettle squatters, becoming a major industrial center and home to the Hlaingtharya Industrial Zone and the FMI City housing development after 1991. In 2020, the Hlaingtharya Township was split into two townships- Hlaingtharya (east) Township and Hlaingtharya (west) Township.

In 2022, the two townships were split off from North Yangon District into the newly formed Insein District. According to the cultural and heritage aspect, the cultural and heritage sites weren't found in Hlaingtharya (west) Township and around the project area. Hteinbin Cemetery located in Hlaingtharya (west) Township and it is one of Yangon's largest cemeteries. The cemetery is maintained by the Yangon City Development Committee's environmental maintenance department.

Shwe Yin Aye Pagoda and Sat Ta Mee Pagoda are located around the project. The history of Hteinbin Cemetery and the two pagodas weren't long and their established period were nearly same with Hlaingtharya (west) Township. There is no heritage site in Hlaingtharya Township. Two pagodas, 134 monasteries and five nun schools are located in the study township. The distance of the cemetery, two pagodas and the project are shown on the following Table.

Table 5.68 The Distance between project area and the cemetery & two pagodas

No	Cemetery and Pagoda	Distance from project (meter)
1	Shwe Yin Aye Pagoda	216.97
2	Sat Ta Mee Pagoda	322.95
3	Hteinbin Cemetery	1328.22



Figure 5.43 Religious Buildings in the Studied Area

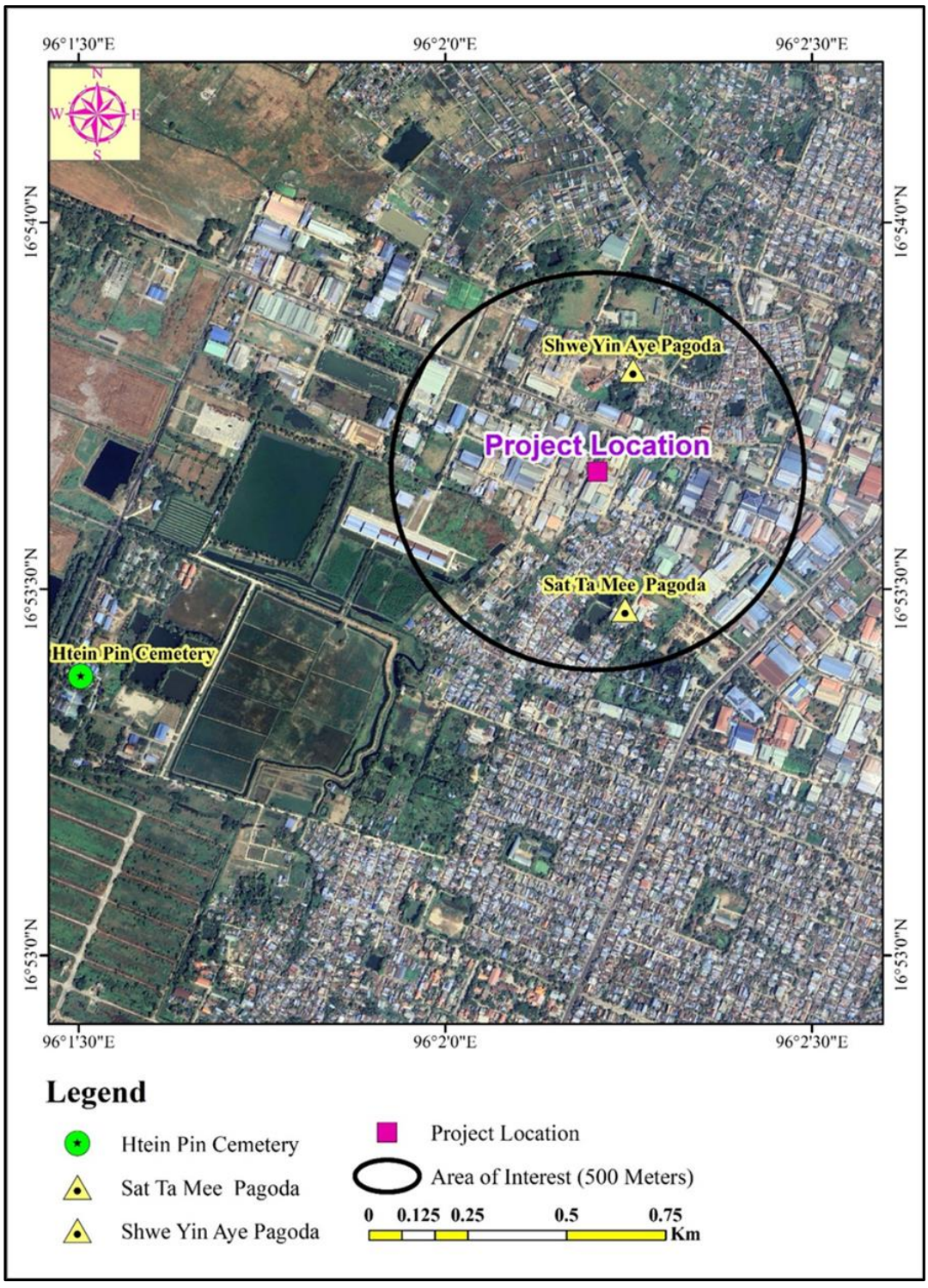


Figure 5.44 The Distance between project area and the cemetery & two pagodas

6. IMPACT ASSESSMENT AND MITIGATION MEASURE

6.1 Method and Approach to Impact Assessment and Mitigation Measure

Considering the Project description and the biophysical baseline results, this chapter presents the environmental and biodiversity impacts potentially generated by the Project during the Construction, Operation and Decommissioning phases and indicate the mitigation measures to be adopted for avoiding or reducing such impacts. Currently, the existing animal feed mill factory has been already in preparing stage for operation.

To prepare the impact assessment, assessment team has referred the information provided by the project developer and as well as all possible secondary data information, also from field through site observation, primary data collection and public consultation with the combination of professional judgments. The impact assessment was done according to the following methodology.

6.1.1 Impacts Nature and Type

Whether an impact is beneficial or adverse (impact nature), and the way in which it is related to the Project (impact type, e.g., direct, indirect) are relevant to the EIA process. In particular, the degree to which an impact may be managed or modified by the mitigation measures is dependent upon the impact nature and type.

6.1.2 Impact Magnitude

The magnitude of an impact is a measure of change from baseline conditions. This measure of change will be described in terms of its spatial extent (site, local, regional, and international), duration (temporary, short-term, long-term, and permanent), frequency (intermittent, seasonal, and constant), importance (low and high), magnitude of change (small, medium, and large) and reversibility (irreversible, short-term recovery and long-term recovery).

Table 6.1 Criteria of Evaluating the Significance of Impacts

Criteria	Definition	Attribute
Spatial extent	The geographic area of the impact	▪ Site ▪ Local ▪ Regional ▪ International
Duration	The time scale for activity	▪ Temporary ▪ Short-term ▪ Long-term ▪ Permanent
Frequency	The rate at which activity occurs or is repeated over a particular period.	▪ Intermittent ▪ Seasonal ▪ Constant
Importance	The value that is attached to a specific environmental component in its current condition.	▪ Low ▪ High: - Human health - Subsistence Agriculture - Protected area or species - Global or national importance - Commercially Valuable - Culturally Important
Magnitude of change	The amount of change in environmental component	▪ Low ▪ Moderate ▪ High
Reversibility (Resilience)	The ability of the environmental components to recover their value after an impact has occurred	▪ Irreversible ▪ Short term recovery ▪ Long term recovery

6.1.3 Impact Significance

The impact significance of the project will be classified into the following categories.

Table 6.2 Assigning Significance

No Impact:	The potential impact of project activity will be assessed as No Impact if the project activity is physically removed in space or time from the environmental parameter.
Significant Impact:	An impact is said to be Significant if the activity has potential to affect an environmental or social component; and if the a) Importance of environmental or social component is - high; or b) Spatial extent of the impact is - regional, national, or international; or c) Time scale of the impact is - long term or permanent; or d) Magnitude of the change in the environmental or component is - moderate or high; or e) Impact is irreversible or the recovery of the component will take a long period of time.
Insignificant Impact:	If an impact occurs but does not meet the criteria for significance it is assigned the category Insignificant.
Unknown Impact:	The potential impact of a project activity will be assessed as being Unknown if: a) The nature and location of the project activity is uncertain. b) The occurrence of the environmental component within the study area is uncertain. c) The time scale of the effect is unknown. d) The spatial scale over which the effect may occur is unknown; or e) The magnitude of the effect cannot be predicted.

Although beneficial impacts of the Project will be identified within the EIA, beneficial impacts will not be assessed in terms of impact magnitude. The reasoning behind each evaluation will be explained in the EIA report.

6.2 Assessment of Potential Future Impact

6.2.1 Animal Feed Mill Factory Development Phase

Table 6.3 Potential Impact on Environmental Component during Pre-construction and Construction Phase

Activities	Affected Environment	Potential Environmental Impact
Site Preparation activities	Air Quality	Vehicle emissions and fugitive dust
	Noise and Vibration	Noise and vibration from construction activities
	Biodiversity	Disturbance of natural habitats in the surrounding area.
Construction of building, office, and warehouses	Air Quality	Exhaust gas emissions from mobile sources (dump trucks and heavy equipment).
	Noise and Vibration	Noise and vibration from construction activities

6.2.2 Animal Feed Mill Factory Operation Phase

Table 6.4 Potential Impact on Environmental Component during Operation Phase

Activities	Affected Environment	Potential Environmental Impact
Animal Feed Mill Factory Operation Activities	Air Quality and Odor Emission	Dust Emission from raw material storage, handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material. Exhaust emissions from mobile sources (vehicle, forklift, and generator). Odor emission from the raw material and feed additive.
	Noise and Vibration	Potential Impacts on Noise and Vibration Noise impact from the delivering and handling of raw material and finished product by forklift and the operation of various machinery and equipment.
	Water Pollution	Potential impacts from wastewater generated from offices, and canteens Potential impact on water quality degradation from spills

Activities	Affected Environment	Potential Environmental Impact
	Solid Waste	Potential impact from solid waste generate from crushed cereal grain dust, packing bags and packing materials, other domestic waste from canteen, and general office waste.
	Health and Safety	Physical hazards such as lifting, carrying, repetitive work, and work posture injuries Exposure of grain dust and particulate matter (respiratory hazards)
	Biodiversity	Disturbance of natural habitats in the surrounding areas Potential impacts from wastewater generated from offices, and canteens (Organic matter in discharge water)
	Socioeconomic	Effects on the local community, economy, and social dynamics

6.3 Assessment of Impact on Key Environment Component during Development Phase

6.3.1 Physical Component

a) Air Quality

During the development phase, the primary impacts on air quality may arise from dust and gaseous emissions generated during site clearing, construction of factory buildings and warehouses, and the installation of machinery.

Movement of construction vehicles and the operation of heavy machinery (e.g., excavators, cranes, heavy equipment, and dump trucks) will result in the release of exhaust gases such as Nitrogen Oxides (NO_x), and Sulphur Dioxide (SO_2). Additionally, earthworks and land preparation activities will generate Particulate Matter (PM_{10} and $PM_{2.5}$). These emissions may affect site workers and nearby industrial plots within the Livestock and Livestock Products Manufacturing Industrial Zone. However, the impacts are generally localized and reversible once construction is completed.

Mitigation Measures

The following measures shall be implemented to minimize air quality impacts during construction:

- Apply regular water spraying on active excavation areas, unpaved internal roads, and soil stockpiles to suppress fugitive dust.
- Install a fence around the site boundary to act as a barrier against the migration of dust to adjacent plots.
- Cover all construction materials (fine-grained materials such as sand and cement) with tarpaulin or protective sheets when not in use.
- Limit vehicle speed (below 20 km/h) within the project area to reduce dust generation.
- Perform regular maintenance for all construction machinery and generators to ensure fuel efficiency and reduce exhaust smoke.
- Provide a dedicated tire-washing area at the site exit to clean vehicle tires, preventing the transport of mud and dust onto public industrial roads.

- Provide environmental awareness training and Personal Protective Equipment (PPE) for all personnel working in the project area.

Impact Nature and Type	Beneficial	**Adverse**	**Direct**	Indirect
	Construction activities directly release dust and gaseous pollutants, negatively affecting the ambient air quality.			
Spatial Extent	Site	**Local**	Regional	National
	The impact is confined within the project site and the surrounding area.			
Duration	**Temporary**	Short term	Long term	Permanent
	Impacts occur only during construction period and will cease once the factory structures are completed.			
Frequency	**Intermittent**	Seasonal	Constant	
	Dust and emissions are not continuous; they only occur during specific work hours and active construction tasks.			
Importance	**Low**	High		
	While air quality is important, there are no highly sensitive receptors in the vicinity.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	Air quality will return to its baseline level almost immediately after construction activities complete.			
Magnitude (size) of the Change	**Low**	**Moderate**	High	
	Dust and emissions are noticeable but can be managed effectively with mitigation measures. The change in air quality parameters is detectable but manageable within the context of an existing industrial area.			

Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is temporary, the frequency is intermittent and reversible with a short recovery time, and the magnitude of the change in the air quality is low. The overall impact on this component can be considered insignificant.			

b) Noise and Vibration

During the development phase, noise and vibration will be generated by the operation of heavy construction equipment such as excavators, concrete mixers, and cranes. The movement of heavy-duty trucks for material delivery and the installation of factory machinery also contribute to the acoustic environment. Since the project site is situated within the Livestock and Livestock Products Manufacturing Industrial Zone, the ambient noise level is already influenced by existing industrial activities. Potential impacts will mainly affect on-site workers and immediate neighbors. However, these impacts are considered temporary and will occur the potential noise and vibration impacts are expected to remain minor and insignificant.

Mitigation Measures

The following measures shall be implemented to minimize noise and vibration impacts during the Development Phase:

- Limit high-noise construction activities to daytime working hours.
- Maintain all construction machinery and vehicles regularly to minimize mechanical noise and vibration.
- Avoid simultaneous operation of multiple noisy machines near the same area.
- Regulate vehicle speed inside and near the project area.
- Provide earplugs or earmuffs to workers operating in high-noise areas (e.g., near generators).

Impact Nature and Type	Beneficial	Adverse	Direct	Indirect
	Machinery operation and construction activities directly generate noise and vibration, impacting the local acoustic environment.			
Spatial Extent	Site	Local	Regional	National
	Impacts are confined to the project site and within the Livestock and Livestock Products Manufacturing Industrial Zone.			
Duration	Temporary	Short term	Long term	Permanent
	Noise and vibration occur only during the construction period and cease once building work is completed.			
Frequency	Intermittent	Seasonal	Constant	
	Noise is not constant; it occurs only during specific active working hours and the operation of heavy equipment.			
Importance	Low	High		
	The site is in the Livestock and Livestock Products Manufacturing Industrial Zone with no sensitive receptors like schools, hospitals, or residential areas nearby.			
Reversibility/ Recovery Time	Irreversible	Short term recovery	Long term recovery	
	Ambient noise levels return to baseline immediately after machinery is switched off or work stops.			
Magnitude (size) of the Change	Low	Moderate	High	
	The increase in noise levels is noticeable but consistent with the existing industrial background noise			
Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact

	The spatial extent of the impact is local, the duration is temporary, the frequency is intermittent and reversible with a short recovery time, and the magnitude of the change in the noise and vibration is low. The overall impact on this component can be considered insignificant.

c) Water Quality

During the development phase, potential impacts on water quality may arise from surface runoff carrying sediments from loose soil, excavation areas, and construction materials stockpiles during rainy periods. Additionally, the improper management of domestic wastewater from construction workers and the accidental leakage of oils or grease from heavy machinery could contaminate nearby drainage systems. Since the project is located within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, maintaining the integrity of the existing drainage network is essential. However, because there are no natural water bodies (rivers or lakes) within the immediate project boundary, the impacts are expected to remain minor and insignificant.

Mitigation Measures

The following measures shall be implemented to minimize water quality impacts during the Development Phase:

- Construct temporary drainage and silt traps to collect and filter surface runoff before it enters the industrial drainage system.
- Provide adequate portable toilets or temporary septic tank for construction workers to prevent the direct discharge of domestic sewage.
- Store all hazardous materials, such as fuel, oil, and lubricants, in a bunded, paved area with secondary containment to prevent soil and water contamination.
- Cover construction materials with tarpaulins during the rainy season to minimize sediment runoff.
- Perform regular inspections and maintenance of construction machinery to prevent oil and fuel leaks.

- Prohibit the washing of vehicles and equipment in areas where wastewater can flow directly into the industrial drain without treatment.
- To comply with NEQEG guideline for effluent prescribed by ECD (2015),

Impact Nature and Type	Beneficial	**Adverse**	**Direct**	Indirect
	Impact occurs directly through surface runoff or accidental spills reaching the drainage system.			
Spatial Extent	**Site**	**Local**	Regional	National
	Impacts are confined to the project site and the immediate secondary drains of the industrial zone.			
Duration	Temporary	**Short term**	Long term	Permanent
	Risks are present only during the construction period and end once the site is paved and stabilized.			
Frequency	**Intermittent**	Seasonal	Constant	
	Runoff occurs primarily during rainfall events, while other risks are dependent on specific maintenance activities.			
Importance	**Low**	High		
	No sensitive water bodies or drinking water sources are located in the immediate vicinity of the project.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	Water quality in the drains will normalize quickly once the source of sediment or pollutant is removed.			
	Low	Moderate	High	

Magnitude (size) of the Change	Mitigation measures are expected to reduce the magnitude of impact to low levels. The volume of wastewater and runoff is small relative to the industrial zone's capacity and can be controlled easily.			
Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is short term, the frequency is intermittent and reversible with a short recovery time, and the magnitude of the change in the water quality is low. The overall impact on this component can be considered insignificant.			

6.3.2 Biological Component

Impacts on Flora, Fauna and Biodiversity

The project site lies within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region, and is heavily urbanized with factories, buildings, and roads. Natural habitats are rarely found. Planted trees are mainly found along roadsides and in backyards, planted for ornamental and shade purposes. The area supports low-diversity natural vegetation, with similar plant types distributed around the project site. In a few remaining swamp patches of habitats and within a nearby religious area, scattered natural trees occur alongside shrubs, grasses, artificial aquatic habitat of small man-made ponds, offering only limited ecological value. Common fauna such as birds, amphibians, reptiles, small mammals, and flying insects are present, mostly adapted to human-modified environments. No endangered species of natural flora and fauna found in the project site and surrounding area. Two planted tree species, (*Pterocarpus macrocarpus Kurz*) and (*Borassus flabellifer L.*), recorded in the religious area are listed as Endangered, but they are not counted in the EIA since they are planted/not natural and will not be directly impacted. However, there are potential risks that would likely occur when the project is implemented. The ecological risk and impact assessment focused on the sensitive issues within the project area.

Habitat Loss of Flora and Fauna on Construction Phase

The project site lies within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region, and is heavily urbanized with factories, buildings, and concrete roads. Natural habitats are rarely found. During the construction phase, main activities will include earth balancing, land preparation, transportation of construction materials, and building works. No new access roads are required, as existing roads will be used. Since the project site is bare land within the Livestock and Livestock Products Manufacturing Industrial Zone, vegetation clearance and forest cutting will not be necessary. Construction activities, including vehicle movement and noise from transportation and machinery, may cause temporary disturbance to fauna in the surrounding area. However, no habitat loss or damage is anticipated. The impact on biodiversity and ecosystems in the project area was evaluated in consideration of the biodiversity and ecosystems of the surrounding area.

Loss of Important Species and Their Habitats

Most of the recorded flora and fauna species are common, widely distributed, and found throughout the country. No ecologically sensitive or protected areas are present within or around the project site. Two planted tree species, (*Pterocarpus macrocarpus Kurz*) and (*Borassus flabellifer L.*), recorded in the religious area are listed as Endangered, but they are not counted in the EIA since they are planted/not natural and will not be directly impacted. The economically important fauna species were not observed. However, the loss of important species due to the project's development would be carefully evaluated, taking into consideration their habitats and specific living behaviors.

Impact on Biodiversity and Ecosystem

Through the field survey, it was observed that biodiversity in the study area was not rich because of the fact that the area is heavily urbanized with factories, buildings, and concrete roads. Natural habitats are rarely found. Therefore, the development of the project would not cause any significant impact on biodiversity and ecosystem of the region.

Protected and environmentally sensitive Areas

Protected area one of the most important tools for biodiversity conservation, safeguarding ecosystem services and preserving cultural landscapes. As of 2018, Myanmar has 42 protected Areas. Seven of the Protected Areas are ASEAN Heritage Parks (AHPS) - recognized for their biodiversity value with ASEAN countries; and five are Ramsar Sites (Wetland of international importance). There are no protected and ecologically sensitive areas in the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region.

Mitigation Measure

- To avoid accidental harm to animals moving in the surrounding environment,
- To promote local greening and habitat enhancement - planting native or locally adapted trees and shrubs around the project boundary can provide shade, improve air quality, support common urban fauna (birds, butterflies, and insects), thereby enhancing the limited ecological value of the industrial zone, and
- To raise environmental awareness to the workers for the protection of local biodiversity.

Assessment of the impact

Assessment of the impact is conducted using simple analytical methods that are descriptive and qualitative. The impact assessment is summarized in the following.

Impact Nature and Type	Beneficial	Adverse	Direct	Indirect
	Based on the baseline survey results, it was observed that biodiversity in the survey area was not rich. No sensitive ecosystem and species in the project area. Therefore, the development of the project would not cause any significant impact on biodiversity and ecosystem of the region.			
Spatial Extent	Site	Local	Regional	National
	Impacts that is limited to the boundaries of the project site and do not affect surrounding areas.			

Duration	Temporary	Short term	Long term	Permanent
	Impacts that cause a short-term change in the affected area (e.g. removal of habitats and disturbance to the natural behavior of species).			
Frequency	Intermittent	Seasonal	Constant	
	Impacts can be predicted to be of intermittent during project construction development.			
Importance	Low	High		
	Project site area was no found threatened species and endangered species. There is no important ecosystem/habitat around the proposed project site based on IUCN red list. The impact was assessed as low to negligible, particularly for bird species.			
Reversibility/ Recovery Time	Irreversible	Short term recovery	Long term recovery	
	Impacts can be reversed through the implementation of proper restoration and rehabilitation plan.			
Magnitude (size) of the Change	Low	Moderate	High	
	The change is expected to be low where the affected biological environment is slightly altered but natural functions and processes continue, in a modified way.			
Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact
	Insignificant Impact. Impacts are expected to be small limited to the site, Short Term, intermittent, and reversible with a short recovery time.			

6.4 Assessment of Impact on Key Environment Component during Operation Phase

6.4.1 Physical Component

a) Air Quality and Odor

During the operation phase, air quality impacts result from particulate matter (PM) generated during raw material storage, handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material. Odor is an additional factor, primarily arising from the storage of raw materials and feed additive. However, the facility will utilize lower-capacity butterfly conveyors and install exhaust fans within the factory to minimize dust emissions. Exhaust emission from mobile sources (vehicle, forklift, and generator). Since the project is located within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, the ambient environment already includes industrial odors, and the project's impact is expected to be localized.

Mitigation Measures

The following measures shall be implemented to minimize air quality and odor impacts during the Operation Phase:

- Install bag filter or collector to capture dust from handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material.
- To control dust and odor release, raw materials and feed additives will be stored in sealed containers or covered storage areas.
- Butterfly conveyors (lower-capacity) will be used to limit material transfer rates and reduce dust generation. Transfer points will be covered, and drop heights minimized.
- Maintain and service all transport vehicles and machinery regularly to minimize exhaust emissions.
- Keep the animal feed mill factory area dry and well-ventilated; will be implemented to prevent fugitive dust emissions.
- Provide respiratory masks and proper PPE for animal feed mill factory workers.

Impact Nature and Type	Beneficial	**Adverse**	**Direct**	Indirect
	Animal feed mill process directly releases fugitive dust, exhaust emissions, and odors into the surrounding air.			
Spatial Extent	**Site**	**Local**	Regional	National
	Impacts are mostly contained within the factory, with potential minor odors detectable within the immediate industrial plot.			
Duration	Temporary	Short term	**Long term**	Permanent
	Impacts persist throughout the operational life of the feed mill.			
Frequency	**Intermittent**	Seasonal	Constant	
	According to the working time, emissions and dust will occur intermittently during feed mill operation activities.			
Importance	Low	**High**		
	Due to the presence of factory worker and potential occupational health risk.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	Dust and odor levels dissipate rapidly once the machinery is stopped or via the ventilation system.			
Magnitude (size) of the Change	**Low**	Moderate	High	
	With dust collector and utilize lower-capacity butterfly conveyors, the change in air quality parameters will remain within industrial standards.			
Impact Significance	No Impact	**Insignificant Impact**	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is long term, the frequency is intermittent and reversible with a short recovery time, and the magnitude of			

	the change in the air quality is low. The overall impact on this component can be considered insignificant.

b) Noise and Vibration

During the operation phase, the primary sources of noise and vibration include the handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material and the operation of exhaust fan. Machinery and equipment (forklift and dump truck) movement for raw material delivery and finished product distribution also contributes to the ambient noise levels. Since the project is located within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, the surrounding environment is already characterized by industrial noise. However, prolonged exposure to high decibel levels can affect the health and safety of factory workers. The animal feed mill factory will implement appropriate emission mitigation measures to ensure compliance with the National Environmental Quality (Emission) Guidelines.

Mitigation Measures

The following measures shall be implemented to minimize noise and vibration impacts during the Operation Phase:

- Regularly maintain all operational machinery such as grinding, hammer, fans, and generators to prevent excessive noise.
- Use rubber mounts under machine to minimize vibration transfer.
- Restrict transportation of raw material and feed additives to daytime hours.
- Provide mandatory Personal Protective Equipment (PPE), such as earplugs or earmuffs, for all workers stationed in the production and utility areas.
- Ensure compliance with the Myanmar National Environmental Quality (Emission) Guidelines (NEQEG).

Impact Nature and Type	Beneficial	**Adverse**	**Direct**	Indirect
	Noise and vibration impact occur from the handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material and the operation of exhaust fan.			
Spatial Extent	**Site**	**Local**	Regional	National
	Impacts are concentrated within the factory and the immediate industrial plot.			
Duration	Temporary	Short term	**Long term**	Permanent
	Noise and vibration will persist throughout the functional lifespan of the animal feed mill factory.			
Frequency	**Intermittent**	Seasonal	Constant	
	According to the working time, noise and vibration will occur intermittently during feed mill operation activities.			
Importance	**Low**	High		
	Due to the presence of factory worker and potential occupational health risk.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	Noise and vibration cease immediately upon the shutdown of machinery at the end of shifts.			
Magnitude (size) of the Change	**Low**	Moderate	High	
	While the machinery is noisy, the change is minimal compared to the existing baseline noise of the industrial zone.			
Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is long term, the frequency is intermittent and reversible with a short recovery time, and the magnitude of			

	the change in the noise is low. The overall impact on this component can be considered insignificant.

c) Water Quality

During the operation phase, the main source of wastewater is domestic sewage and greywater from the factory's workforce. This includes water from toilets, handwashing, and canteen facilities. Since animal feed production is primarily a dry process, industrial wastewater is minimal, limited only to occasional floor cleaning or equipment washdown. However, the spillage of oil, engine oil, and fuel oil on the soil can enter the bodies of water through the runoff water could contaminate surface runoff. Wastewater must be treated to meet the National Environmental Quality (Emission) Guidelines before discharge into the drain.

Mitigation Measures

The following measures shall be implemented to minimize water quality and wastewater impacts during the Operation Phase:

- Wastewater generated from offices, canteens, and staff accommodation is treated by septic-seepage system
- Install a properly sized septic tank and soak pit system to treat all domestic sewage from staff restrooms and office facilities.
- Implement a dry-cleaning method (vacuuming or sweeping) for the production floor to minimize the need for water-based washing and reduce wastewater volume.
- Create a special storage for lubricants and oil
- To take care not to spill the fuel, engine oil and grease to prevent the surface runoff water bodies pollution,
- To clean the fuel spillage systematically if the spillage is occurred,
- Perform periodic wastewater quality testing to ensure effluent meets the NEQG standards.

Impact Nature and Type	Beneficial	Adverse	Direct	Indirect
	Impact occurs directly if domestic wastewater or contaminated runoff enters the industrial drainage system.			
Spatial Extent	Site	Local	Regional	National
	Impacts are localized to the factory's internal drainage and the immediate industrial zone network.			
Duration	Temporary	Short term	Long term	Permanent
	Wastewater generation will continue daily throughout the operational life of the project.			
Frequency	Intermittent	Seasonal	Constant	
	Domestic wastewater discharge occurs during factory operating hours.			
Importance	Low	High		
	Proper treatment is required to prevent local drain contamination and to comply with regulations.			
Reversibility/ Recovery Time	Irreversible	Short term recovery	Long term recovery	
	Water quality in the drains recovers quickly once the source of pollution is treated or stopped.			
Magnitude (size) of the Change	Low	Moderate	High	
	Wastewater volume is relatively small for a feed mill and can be fully managed with a septic system.			
Impact Significance	No Impact	Insignificant Impact	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is long term, the frequency is intermittent and reversible with a short recovery time, and the magnitude of			

	the change in the water quality is low. The overall impact on this component can be considered insignificant.

d) Solid Waste

During the operation phase, solid waste will be generated from various animal feed mill factory activities. The primary sources include organic waste such as crushed cereal grain dust, and rejected raw materials. Packaging waste, including packing bags, packing materials, and paper pallets, will also be generated in significant quantities. Additionally, other domestic waste from the staff canteen and general office waste (food scraps, paper, plastics) will be occur. If not handled properly, organic waste can attract pests, create odors, and clog drainage systems. However, most organic by-products from feed milling are recyclable or can be sold.

Mitigation Measures

The following measures shall be implemented to minimize solid waste impacts during the Operation Phase:

- Follow the 5Rs principles for solid waste: reduce, reuse, recover, recycle, and redesign, where possible.
- Provide clearly labeled, color-coded bins throughout the facility for the segregation of organic, recyclable (plastic/paper), and non-recyclable wastes.
- Coordinate with Livestock and Livestock Products Manufacturing Industrial Zone and Hlaingtharya (West) Township Development Committee for domestic and sewage disposal
- Comply with NEQEG guideline for effluent prescribed by ECD (2015)

Impact Nature and Type	Beneficial	Adverse	Direct	Indirect
	Animal feed mill factory operations and staff activities directly generate various types of solid waste.			
Spatial Extent	Site	Local	Regional	National

	Impacts are confined to the project site and the local waste management infrastructure.			
Duration	Temporary	Short term	**Long term**	Permanent
	Waste generation will continue throughout the operational life of the factory.			
Frequency	**Intermittent**	Seasonal	Constant	
	Solid waste is produced daily during production cycles and administrative hours.			
Importance	**Low**	High		
	Proper waste management is essential to prevent impacts like pests, odors, and drain blockage.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	The impact is reversed once the waste is collected and removed from the site.			
Magnitude (size) of the Change	Low	**Moderate**	High	
	The volume of waste is manageable and typical for a medium-scale industrial facility.			
Impact Significance	No Impact	**Insignificant Impact**	Significant Impact	Unknown Impact
	The spatial extent of the impact is local, the duration is long term, the frequency is intermittent and reversible with a short recovery time, and the magnitude of the change in the solid waste is moderate. The overall impact on this component can be considered insignificant.			

6.4.2 Biological Component

Habitat Loss of Flora and Fauna on Operation Phase

No additional loss of flora and fauna habitats is expected during operational activities, given the nature of the project and its limited interaction with biological components. However, the impact on biodiversity and ecosystems in the project area was evaluated in consideration of the biodiversity and ecosystems of the surrounding area, resulting in a slightly negative impact on local biodiversity.

Loss of Important Species and Their Habitats

Similar to the construction phase, vehicle movement and noise during the operation phase may disturb local fauna. However, the loss of important species due to the project's development would be carefully evaluated, taking into consideration their habitats and specific living behaviors. The project area has no sensitive habitat, natural habitat, or protected area. Therefore, the significance of the impact was assessed as low.

Mitigation Measure

- Do not disturb the vegetation and animals outside the designated area,
- Maintain all mature trees within the project development area, and
- Raise environmental awareness to the workers for the protection of local biodiversity.

Assessment of the impact

Assessment of the impact is conducted using simple analytical method that is descriptive and qualitative. The impact assessment is summarized in the following.

Impact Nature and Type	Beneficial	Adverse	Direct	Indirect
	Based on the baseline survey results, it was observed that biodiversity in the survey area was not rich. No sensitive ecosystem and species in the project area. Therefore, the operation of the project would not cause any significant impact on biodiversity and ecosystem of the region.			
Spatial Extent	Site	Local	Regional	National

	Impacts that is limited to the boundaries of the project site and do not affect surrounding areas.			
Duration	Temporary	Short term	**Long term**	Permanent
	Impacts that cause a long-term change in the affected area (e.g. removal of habitats and disturbance to the natural behavior of some species).			
Frequency	**Intermittent**	Seasonal	Constant	
	Impacts are predicted to be of intermittent during project operation activity.			
Importance	**Low**	High		
	Project site area was no found threatened and endangered species. There is no important ecosystem/habitat around the proposed project site based on IUCN red list. The impact was assessed as low.			
Reversibility/ Recovery Time	Irreversible	**Short term recovery**	Long term recovery	
	Impacts can be reversed through the implementation of proper restoration and rehabilitation plan.			
Magnitude (size) of the Change	**Low**	Moderate	High	
	The change is expected to be low where the affected biological environment is slightly altered but natural functions and processes continue, in a modified way.			
Impact Significance	No Impact	**Insignificant Impact**	Significant Impact	Unknown Impact
	Insignificant Impact. Impacts are expected to be small limited to the site, Long Term, intermittent, and reversible with a short recovery time.			

6.5 Assessment of Impact on Key Environment Component during Closure Phase

No detailed assessment of environmental impacts associated with decommissioning can be made at present. The project is tentatively scheduled to operate for 20 years and so only general principles can be established at the present time.

In broad terms, the process of decommissioning is likely to give rise to impacts similar to those experienced in the construction phase. The methods and techniques selected are expected to be in accordance with national and international standards prevailing at the time of decommissioning.

Decommissioning will require the following activities:

- Removal of all surface equipment and units.
- In the removal of animal feed mill factory, the removal of the tools and all the safety tools should be done to improve the inspection, check the first step is to clean up the environmental building, store, and other equipment.
- Potential removal of hard standing and surface cover.
- Animal feed mill factory will develop closure plan during the later stages and maintain the plan throughout the life of the development. The plan should include arrangements for decommissioning the animal feed mill factory in a manner which avoids any pollution and return to an acceptable state. In addition, any decommissioning plan should take into account the social and economic impacts and include mitigation measures where necessary.
- The animal feed mill factory of closure plan will need to be reviewed and updated in the light of experience with implementing the ecological mitigation and compensation measures.
- Overall, decommissioning activities are transitory, and are likely to be similar in magnitude to construction impacts.

6.6 Social Impact Assessment

The potential impacts on the existing socio-economic environment arising from Project-related activities are identified and assessed. Information within the project description and the baseline socio-economic characteristics has been used to assist the evaluation of the potential impacts and their significance. Social impacts will be considered on the interaction between the project activities and receptors in the project's social area of influence. Project activities include the following;

- Operation of the animal feed mill factory
- Transportation of goods

Because of the project site being within the Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region, there are two villages (local community) located within the area of influence that may be impacted or influenced by the Project (as a result of their proximity to the Project site and/ or Project-associated infrastructure).

6.6.1 Impact Assessment Methodology

The objective of a Social Impact Assessment (SIA) is to assess the possible social impacts that may be brought about by a project development, to understand, manage, and control changes, to formulate and implement mitigation measures to minimize adverse social impacts or prevent from extension. In this chapter, the anticipated impacts induced by the project on the social environment (i.e., local community) will be focused on the main receptor. The assessment of socio-economic impacts has been undertaken with respect to the receptors across natural capital, human capital, social capital, economic capital, and physical capital to have a significant interaction with the activities linked to the project across its lifecycle. The existence of the animal feed mill factory is also an aspect of the socio-economic condition, especially in view of the local community's perceptions towards food security, employment, and business opportunities.

The social impact assessment is carried out by identifying, predicting, and evaluating the socioeconomic changes based on the significance of impacts, their nature, and severity. When considering impacts on people, severity is typically a complex interaction of some or all such

factors. The degree of significance is determined by comparing the predicted outcome with IFC performance standards.

The degree of significance is not an absolute concept; it involves:

- Professional judgment
- Dialogue with rights - holders
- Consideration of the interrelatedness of impacts
- Consideration of long - term consequences

Table 6.5 Significant Level of Socioeconomic Impact

Level of Impacts	Explanation	Mitigation Requirement
Severity	Death or adverse health effects that could lead significant reduction in quality of life and/or longevity Affected to > 1000 people (or) >50 % of identified group No viable replacement for loss and less acceptance of vulnerable group (Difficult technical requirement) Impact to vulnerable groups, or if entire community is vulnerable to this impact due to recent trends and events (conflicts, natural disasters, cumulative impacts, etc.)	- No mitigation measure is enough. - Change the alternative plan such as design or location.
Major	Impact to a tangible human right infringement of access to basic life necessities (education, livelihood, cultural, economic, natural and social infrastructure/assets, etc.) Affected to 100 - 1000 people or 11 – 50% of identifiable group Impact groups not found vulnerable in the given context Acceptance of identified group	√
Moderate	Impact to a tangible human right infringement of access to basic life necessities (education, livelihood, cultural, economic, natural and social infrastructure/assets, etc.) Impact groups not found vulnerable in the given context Affected to <100 people or <10% of identifiable group Acceptance of identified group	√

Minor	All other impacts Affected to > 1000 people (or) >50 % of identified group Impact groups not found vulnerable in the given context Acceptance of identified group	x
Insignificant	All other impacts Affected to <100 people or <10% of identifiable group Impact groups not found vulnerable in the given context Acceptance of identified group	x

The above matrix and significance definitions will be used to assess adverse impacts of the Project. For beneficial impacts, the beneficial nature of the impact has been noted and the context of the potential benefit will be discussed.

6.6.2 Socioeconomic Components

Based on the project activities, the socioeconomic components will be considered as follows:

1. Land Acquisition
2. Local Economy
3. Existing Social Infrastructure and Service
4. Cultural Components
5. Aesthetic views
6. Social Concerns

1) Impacts on Land Acquisition/Resettlement

The project has commissioned by the government to lease the total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The land acquisition process is clear, and no issue was raised.

2) Impacts on Local Economy

Employment Generation

For the operation of the project, it is likely to generate opportunities for employment. Operation of the project is carried out by the local workers. Because the project site is in the Livestock and Livestock Products Manufacturing Industrial Zone, and overall project activity would have the positive impact on the socio-economic conditions in general and the employment scenario in particular in the study area.

Mitigation and Enhancement Measures

Local people (especially from the nearest villages of the project site) may have expectations to be employed by the project and there will be competition among the locals. To avoid the disputes through employment and to enhance the project benefits, the project will implement the following mitigation measures:

- To have clear stipulation of using local labour in accordance with the needs of the project
- To ensure that the project site responsibilities liaise closely with local village leaders and local government authorities to agree on appropriate procedures for recruitment and hiring
- Inform local villagers of job opportunities in a timely manner
- To track and monitor concerns associated with project employment or workforce recruitment

3) Impacts on Existing Infrastructure and Service

An increase in population in the project area (due to employment opportunities) and project activities is likely to place additional pressure on existing infrastructure and services (e.g., healthcare, roads). Due to additional population by the project, Health care facilities may have more workloads than before. Road traffic may increase because of project activities.

Mitigation and Enhancement Measures

Even though the population is increased in the project area at operation phase, pressure on existing infrastructure and services is not significant because the factory does not provide on-site accommodation for employees. At the operation stage, the following measures should be implemented for existing infrastructures and services.

- Develop site safety management plan and provide appropriate and adequate health care services on site and at the accommodation camp to address/ manage worker illnesses and injuries
- Develop and implement traffic management plan

4) Impacts on Cultural Components

There is no indication that a large, complex archaeological site is located within the Project site. However, two pagoda such as the Shwe Yin Aye Pagoda and Sat Ta Mee Pagoda are located around the project within the 500-meters area of interest. But any disturbance from the project operation will not affect them. Nuisance due to noise (fan, generator) and odor is likely to occur from the operation of the project. But the pagoda are unlikely to be impacted by noise and odor from the operation activities because of the distance. It is quite far away to get smell and hear noise.

5) Impacts on Aesthetic View

In accordance with the Livestock and Livestock Products Manufacturing Industrial Zone, the project sites and plantations can be seen most of the areas. Moreover, housing for the project is not too big to have disturbances on visual site of the residence. The project is covered by the built up area and it is separated from the village. The residence cannot even see animal feed mill factory. Besides, based on the social baseline survey, there is no issues concerned with visual disturbance raised by the residents.

6) Social Concerns

The majority of respondents (68 out of 74, 91.9%) did not provide specific suggestions regarding the project, indicating either limited awareness or satisfaction with the current development. A small number of respondents reported positive impacts, including job opportunities (2 respondents, both from Kyon Su). Some concerns were raised regarding nuisances from odors, with 1 respondent from Kan Hla reporting bad smells from the plastic factory, industries, and Hteinbin Dumpsite and another mentioning occasional bad smells. Overall, the data suggest that while the project has minor positive impacts, environmental nuisances such as odors are a concern for a small portion of the community.

Table 6.6 Survey results of Social Concerns

No.	Suggestions on the project	Village		Total
		Kyon Su	Kan Hla	
1	Positive Suggestions on the project	1	0	1
2	Get a bad smell from the plastic factory, industries, and Hteinbin Dumpsite	0	1	1
3	Get a bad smell sometimes	0	1	1
4	Got Job	2	0	2
5	No suggestions	36	33	69
Total		**39**	**35**	**74**

Sources: Field Survey Results

Conflicts concerned with the project activities are not observed in the studied area. According to the social survey, the results suggest that informal and self-employed occupations dominate the local economic structure, and local people have no issues with the operation of the animal feed mill factory. But it is said that sometimes, some of the villagers get smells from the plastic factory, industries, and Hteinbin Dumpsite.

And, some concerns and expectations are found through interview surveys as follows;

- To ensure project activities not to be hazardous on the villages
- To create job opportunities
- To support for repairing the road to have good transportation
- To help the construction of school, well and dhamma-yon

Mitigation and Enhancement Measures

For odor of the operation of the project, odor meter is measured at both of project site and the villages. It is within the standards mentioned in Chapter 5. For general social concerns of the project life cycle, the project proponent should implement the followings;

- Recruitment should be prioritized on local sources based on the needs of project activities.
- The project should prepare CSR programs to support the village developments asked by the villagers.
- The project should appoint a communication officer to listen and reply social concerns and complaints.

6.7 Risk Assessment Method and Approach

The risk assessment was done according to the following methodology. The ranking or prioritizing of hazards is one way to help determine which risk is the most serious and thus which to control first. Priority is usually accounting for the employee exposure and the potential for incident, injury, or illness. Ranking hazards requires knowledge of workplace activities, the urgency of situations, and most importantly, objective judgment. The identification of all health and safety hazards (and potential hazards) at animal feed mill factory involves compiling all sources of potential harm, injury, or adverse health effects to workers that exist at that workplace. In establishing a comprehensive list of hazards, all processes and work activities that occur or are about to occur should be considered. Once a complete list of health and safety hazards has been established for a animal feed mill factory, a level of risk needs to be assigned to each hazard on the list.

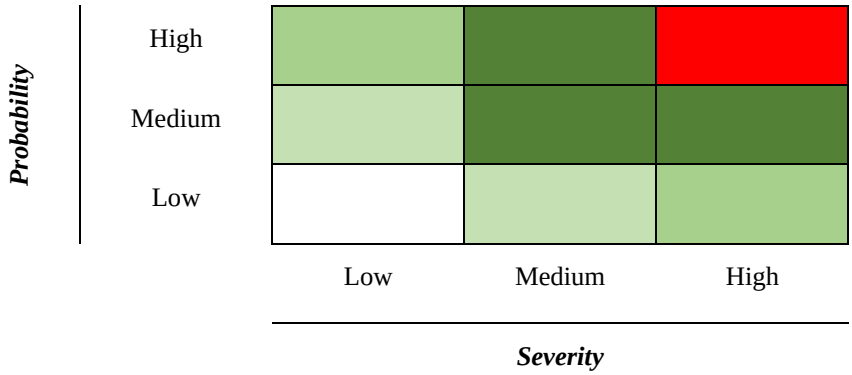
Severity ratings represent:

- High: major fracture, poisoning, significant loss of blood, serious head injury, or fatal disease
- Medium: sprain, strain, localized burn, dermatitis, asthma, injury requiring days off work
- Low: an injury that requires first aid only; short-term pain, irritation, or dizziness

Probability ratings represent:

- High: likely to be experienced once or twice a year by an individual
- Medium: may be experienced once every five years by an individual
- Low: may occur once during a working lifetime

Risk Matrix



Risk Rating

Description	***Color Code***
Immediately Dangerous	
High risk	
Medium risk	
Low risk	
Very low risk	

Source: Canadian Center for Occupational Health and Safety

These risk ratings correspond to recommended actions such as:

- Immediately dangerous: stop the process and implement controls
- High risk: investigate the process and implement controls immediately
- Medium risk: keep the process going; however, a control plan must be developed and should be implemented as soon as possible
- Low risk: keep the process going, but monitor regularly. A control plan should also be investigated
- Very low risk: keep monitoring the process

6.7.1 Natural Hazards and Disaster Risk

According to the data of the Government Administration Department (2023), the disasters of fires have occurred as below Table 6.7 in Hlaingtharya Township.

Table 6.7 List of Natural Disasters in Hlaingtharya (West) Township

No.	Types of Disaster	Frequency	Loss of Building
1.	Fires	7	25

Earth Management

- When earthquake hits, all persons shall be encouraged to run out in the open areas designated as Assembly Points.
- Train the workers to apply the earthquake preparedness and response plan
- All the electrical supply should be disconnected
- Steps detailed in Emergency preparedness are to be carried out.
- As soon as earthquake tremor stops - the project responsibilities person shall;
- Check all areas to ensure that all fires and doused.
- Check all areas for persons trapped inside.
- Search and Rescue Operation shall be launched with help of workers, if there is obvious damage to building.

Fire Management

In the event of fire, the person discovering the fire should:

- ✓ Raise the alarm.
- ✓ Call the Central Control Rom and or the Brigade on.
- ✓ If safe to do so tackle the fire, if in doubt get out.
- ✓ Evacuate the premises and report to your designated assembly point.
- ✓ Extinguish the fire if possible and use the fire extinguisher

The company shall also institute the following measures in order to enhance fire safety preparedness:

- ✓ To set up fire barriers in fuel storage buildings, offices, canteens, and staff accommodations to prevent fire
- ✓ To place fuel storage facilities far away from human settlements
- ✓ To provide fire alarms in workplace which will be activated in case of fire
- ✓ To regularly check the strength and conditions of electrical cables
- ✓ To report to the office and the team actively organizes various departments and teams to fight the fire in a timely manner when a forest fire occurs
- ✓ To provide such as water, sand, hook and fire extinguishers which shall be mounted in easily accessible locations.

6.7.2 Risk Assessment

Risk assessment is the process of identifying what hazards currently exist or may appear in the workplace. A risk assessment defines which workplace hazards are likely to cause harm to employees, locals, and public property. Risks need to be considered in all aspects of the working environment.

- Hazards: Physical Health Hazard, Biological Hazard, Chemical Hazard, Electrical Hazard, and Community Health and Safety
- Tasks: 1) loading, and unloading of raw materials and feed additive, 2) weighting, grinding and mixing process, 3) maintenance work and transportation.
- Organizational factors: staffing policies, systems of work, working hours, shift patterns,

The risk assessment must be carried out with five steps;

Step 1: Identify the Hazards.

Step 2: Risk Analysis (Decide who might be harmed and how)

Step 3: Risk Assessment (Evaluate the risks and decide on precautions)

Step 4: Risk Management (Record your findings and implement them)

Step 5: Risk Management (Review the risk assessment and update if. Necessary)

1) Hazard Identification

A hazard is a source or a situation with the potential for harm in terms of human injury or ill health, damage to property, damage to the environment, or a combination of these events. Hazard identification is part of the process used to evaluate if any particular situation, item, or thing may have the potential to cause harm.

The major hazards anticipated for the proposed project are as follows:

1. General workplace health and safety
    - Exposed to dusty environment
    - Noise and Vibration
2. Physical Health
    - Rotating and Moving Equipment
    - Typically related to slips, trips, and falls;
    - Contact with falling /moving objects;
    - Lifting / over-exertion
3. Chemical Hazard
    - Potential for illness or injury due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances
4. Electrical Hazard
    - Fault of electrical wires and connections
5. Community Health and Safety
    - Communicable Diseases
    - Road Accidents

2) Risk Analysis

Analyze and evaluate the risk associated with that hazard (risk analysis, and risk evaluation) of the proposed project. This is followed by consequence analysis to quantify these hazards. The risks and hazards in the proposed project can be broadly classified into the following categories:

Hazard	Risk Analysis
General workplace health and safety ▪ ***Exposed to dusty environment*** ▪ ***Noise and Vibration***	▪ Exposure to fine particulates may occur during dust-generating activities such as raw material storage, grinding, and mixing operations. ▪ Workers with long term exposure to fine particulate dust are at risk for benign pneumoconiosis, emphysema, bronchitis, and fibrosis. ▪ Exhaust fans, grinding and mixing of raw material are the main sources of noise and vibrations in animal feed mill factory. ▪ Noise- exposed workers are more likely hearing impairment, hypertension, ischemic heart disease, annoyance, sleep disturbance.
Physical Health Hazard ▪ ***Rotating and Moving Equipment*** ▪ ***Typically related to slips, trips, and falls;*** ▪ ***Contact with falling /moving objects;*** ▪ ***Lifting / over-exertion***	▪ Injury can occur from being trapped, entangled, or struck by machinery parts due to unexpected starting of equipment or unobvious movement during operations. ▪ Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity (weighting, grinding and mixing process). ▪ Other injuries may occur due to contact with, or capture in, moving machinery (e.g. forklifts). ▪ Accidents such as loading, and unloading of raw materials and feed additive. ▪ Labor-related issues such as labor shortages, and the lack of skills. ▪ The spillage of oil and water can cause slipping and the careless manner of the workers can also cause the slip and serious injury. ▪ Falls from height are occurring during maintenance of the conveyor belts.
Chemical Hazard	▪ Potentially hazardous substances used in animal feed mill factory activities may include feed additives such as Biotronic series, Hiphos - Enzyme, and ProAct Enzyme etc.

	▪ Direct contact with skin may cause irritation or allergic reactions, while accidental contact with eyes may result in eye irritation or discomfort. ▪ Inhalation of fine particles during prolonged exposure may also cause mild respiratory irritation.
Electrical Hazard ▪ ***Fault of electrical wires and connections***	▪ Damage to the wire and overloading electrical socket and electrical malfunction
Community Health and Safety ▪ ***Communicable Diseases*** ▪ ***Road Accidents***	▪ Communicable diseases may occur due to the influx of migrant workers, their associated extended family members, and other service workers at the project site. ▪ Transport activities from and to the site and staff housing may serve as road accidents

3) Risk Assessment

No	Hazard Identification		Probability	Severity	Risk Ranking
1	General workplace health and safety	Exposed to dusty environment	Low	Medium	Low risk
		Noise and Vibration	Low	Medium	Low risk
2	Physical Health	Rotating and Moving Equipment	Low	High	Medium Risk
		Typically related to slips, trips, and falls;	Low	Medium	Low risk
		Contact with falling /moving objects;	Low	Medium	Low risk
		Lifting / over-exertion	Low	Medium	Low risk
3	Chemical Hazard	Potential for illness or injury due to single acute exposure or chronic repetitive exposure to toxic, corrosive,	Low	High	Medium Risk

		sensitizing or oxidative substances			
4	Electrical Hazard	Faults of electric wire and connection	Low	Medium	Low Risk
5	Community Health and Safety	Communicable Diseases	Medium	Low	Low Risk
		Road Accidents	Low	Medium	Low Risk

4) Risk Management

If accidental cases (natural hazards and for every single risk) occur, every single happening will be recorded from time to time for every case not cause the same accidents. If the case is unavoidable, the previous record can be used to assess the more effective plan to minimize the losses. The recorded risks, risk assessment, and surrounding environmental and social conditions will be reviewed, and if the probability of new risks happening for example natural disasters due to climate change and significant population growth of the surrounding area occurred, the risk assessment will be updated.

General workplace health and safety

- Use of dust extraction and recycling systems to remove dust from work areas, especially in grinding and mixing mills;
- Raw materials shall be stored in covered to minimize dust release.
- The workers into uniforms and protective gears such as caps, masks, boots etc.
- Suitable respiratory protective equipment available for use for jobs inside the factory.
- Reduction of noise to acceptable occupational exposure levels.
- Use of PPE, as appropriate (e.g. masks and respirators) to address residual exposures following adoption of the above-referenced process and engineering controls;
- Implementation of specific personnel training on worksite health and safety.

Physical Health

- The working tasks: weighting, grinding and mixing of raw material and feed additive process will be supervised.
- Warning alarms and indicator lights shall be provided for machinery start-up and operation.
- Working on equipment with moving parts will personally ensure the equipment is de-energized, isolated and locked/tagged out;
- Lockout/Tagout procedures shall be implemented during maintenance, cleaning, and repair works to prevent accidental start-up of equipment.
- Working from a position with the potential risk for a fall from height will use fall protection;
- Danger areas are to be clearly marked with suitable safety signs indicating that access is restricted to essential personnel wearing hard hats while the work is in progress; and
- The floor will be cleaned and sure not to spill the oil not cause slip and injury.
- Safety helmets to be used to protect workers below against falling material;
- In case of any accident immediate and proper medical care (first aid kits) shall be provided at the factory.
- Addresses and phone numbers of the Fire Service Department, Red Cross Society office, ambulance services, Hospital's Emergency Department, Police Station, etc. will be displayed so that everyone can see and contact them easily if emergency cases happen.

Chemical Hazard

- Adequate ventilation systems shall be installed in feed additive storage, weighing, and mixing areas to reduce dust.
- To protect skin, workers should wear: gloves and coveralls with long sleeves and full-length trousers
- Material Safety Data Sheets (MSDS) shall be made available and accessible to all relevant workers.
- Training workers in the use of the available information (such as MSDSs), safe work practices, and appropriate use of PPE
- Workers shall be provided with regular training on chemical hazards, safe handling practices, proper use of PPE, and emergency response procedures.
- Eye-wash stations and first-aid facilities shall be installed near feed additive handling areas.

- Support Proper and periodic training for the workers for safe workplace behavior.

Electrical Hazard

- To avoid electrical hazards, regular maintenance of the substations, wiring, and monitoring will be carried out.
- Strict supervision of electrical connections is very important to prevent any untoward incident.
- Addresses and phone numbers of the Fire Service Department, Red Cross Society office, ambulance services, Hospital's Emergency Department, Police Station, etc. will be displayed so that everyone can see and contact easily if an electrical shock happens.

Community Health and Safety

- Health awareness training on communicable diseases, personal hygiene, and preventive measures shall be provided to workers and their family members.
- Preventing illness among workers and their families and in local communities by:
- Undertaking health awareness and education initiatives
- Training health workers in disease treatment
- Providing treatment through standard case management in on-site or community health care facilities (e.g. immunization programs)
- Speed limits shall be enforced within the factory and along access roads.

6.8 Cumulative Impact Assessment

6.8.1 Methodology and Approach

The cumulative impact assessment is assessing the cumulative impacts of operation of the proposed animal feed mill factory in accordance with environmental impact assessment procedure and prepare management actions to be implemented by the proponent and other related parties to minimize cumulative impacts.

The specific methodology used in the cumulative impact assessment is as follows:

a) Selection of Spatial and Temporal Boundaries

The spatial boundary selected was the outermost extent of proposed animal feed mill factory. The temporal boundary of the assessment was operation phase of the proposed animal feed mill factory.

b) Selection of Valued Environmental Components (VECs)

Based on the EIA, four VECs were selected to evaluate cumulative impacts of animal feed mill factory. These were air quality and odor, noise & vibration, and biodiversity.

c) Develop Mitigation Measures

Collaborative management actions were developed to minimize cumulative impacts on each VECs.

d) Limitation of the Assessment

Due to time and scope limitations, no primary data collection was undertaken. Data used in the cumulative impact assessment was solely from secondary sources, compiled from the existing environmental impact assessments for proposed animal feed mill factory.

6.8.2 Existing and future private and public projects and developments

The proposed project of the animal feed mill factory is located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region.

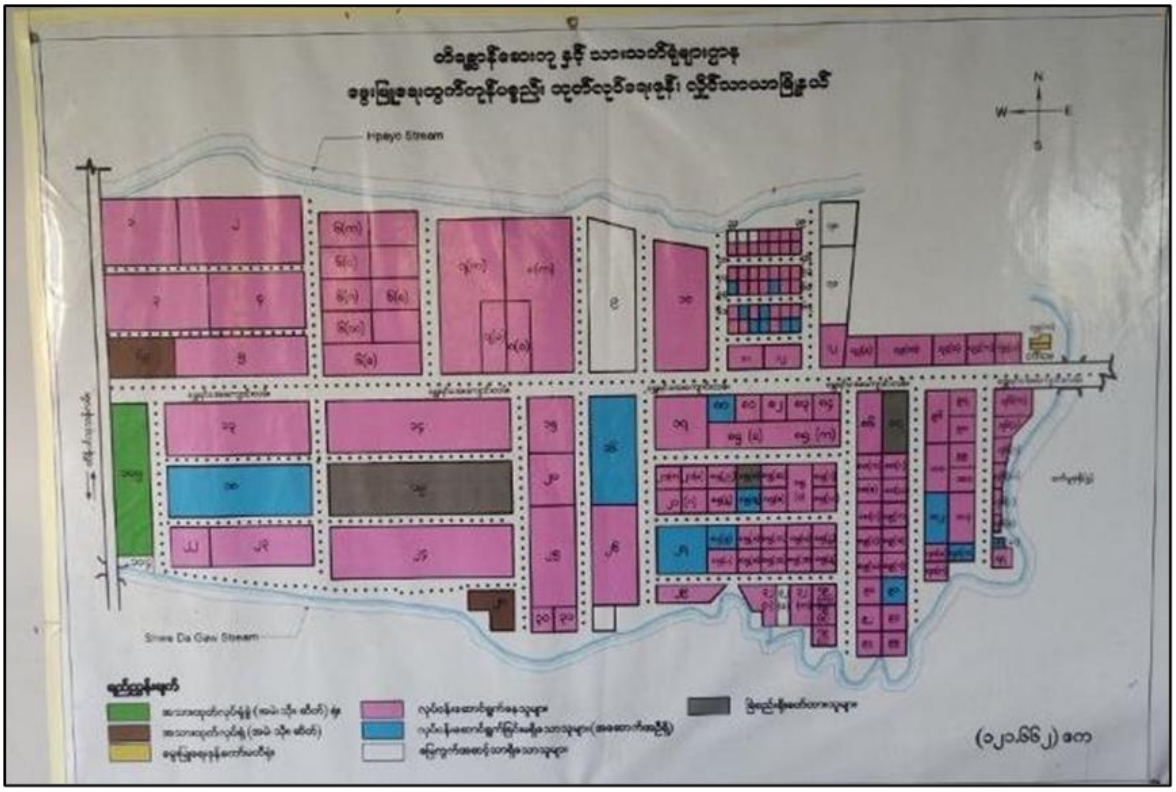


Figure 6.1 Location map of Animal Feed Mill Factory and Livestock and Livestock Products Manufacturing Industrial Zone

6.8.3 Evaluation of Cumulative Impacts

a) Air Quality and Odor

Dust and other emissions generated during the operation could have the potential to affect the local air quality. Considering the absence of nearby sensitive receptors and the adoption of the proposed mitigation measures (section 6.4.1.a), reducing the impacts to an acceptable level will be possible. As such, the incremental effects on air quality from the proposed project are estimated to be insignificant. The contribution of the other existing projects to cumulative effects on air quality cannot adequately be assessed from existing information.

b) Noise and Vibration

According to baseline survey results, noise and vibration levels of the project area are within the guidelines. A potential impact of noise and vibration during the operational phase of the proposed project was identified and mitigation measures are proposed in section 6.4.1.b. The conclusion of the noise assessment is that significant residual effects will not arise. The contribution of the noise and vibration impacts from the operations of the proposed project is estimated to be insignificant.

c) Biodiversity

The project site is located in Livestock and Livestock Products Manufacturing Industrial Zone, and the area has already been cleared for development. As a result, there is no significant wildlife in the study area. Considering the importance of the habitat around the proposed project site and the proposed mitigation measures (section 6.4.2), the change to the biological component is considered insignificance. The proposed animal feed mill factory is not expected to have any cumulative effects on biodiversity.

6.8.4 Mitigation for Cumulative Impacts

Valued Environmental Component (VEC)	Management/Mitigation Actions for Cumulative Impacts
Air Quality and Odor	• Stakeholder consultation and strictly follow to EMP. • Monitoring of air quality and odor around the proposed project during operation activities.
Noise and Vibration	• Avoid repeat action with other noise generation activities and working at nighttime.
Biodiversity	• Stakeholder consultation and implementation of proper restoration and rehabilitation.

7. PUBLIC CONSULTATION AND DISCLOSURE

7.1 Public Consultation

According to Environmental Impact Assessment Procedure, Chapter 5, Section 50, the project proponent shall ensure a public consultation/participation process and disclose information about the proposed project to the public and civil society as part of the Scoping of EIA study. As part of EIA investigation, it is also mentioned in Section 61, Chapter 5 of Environmental Impact Assessment Procedure that the project proponent should undertake consultation process involving project-affected persons, authorities, community-based organizations and civil society and disclosure of all relevant information about the proposed project. Consultations should be carried out on a continuous basis, starting as early as possible in the EIA process.

Involving the public in the EIA preparation is fundamental to increasing the understanding on how the project may affect or improve their living conditions and acceptance of the project. It is also a way to identify and act upon impacts and issues that are not immediately obvious to the EIA preparation team. So, public participation plays a crucial role not only in the earlier stage of the project preparation process but also in the EIA investigation stage to build a trusting relationship and make useful recommendations.

7.1.1 Project Affected Person

At the project's scoping phase, main stakeholders and project affected groups are preliminary to identify. The stakeholders include the local communities, local government authorities, civil society, and the affected localities. Besides, another area that has impacts which may be impacted on agriculture, roads, transportation, land use and ambient air quality are included. Other places that may be somehow concerned with the project in somehow will be considered.

The project area is located within the Livestock and Livestock Products Manufacturing Industrial Zone of Hlaingtharya (west) Township. The project-affected persons are defined within a radius of 500 meters area form the project site. The people who lives adject the project site will be included in Social AOI because it is potential to be affected by the activities of work site. Other villages which have economic activities affected by the project will be considered for AOI of social environment. The following Table shows the villages of AOI for social survey.

Table 7.1 Social Settings in Project AOI

No	Township	Village Tract	Village
1	Hlaingtharya (West)	Ku Lar Gyi Su	Kan Hla
2	Hlaingtharya (East)	Shwe Lin Ban	Kyon Su

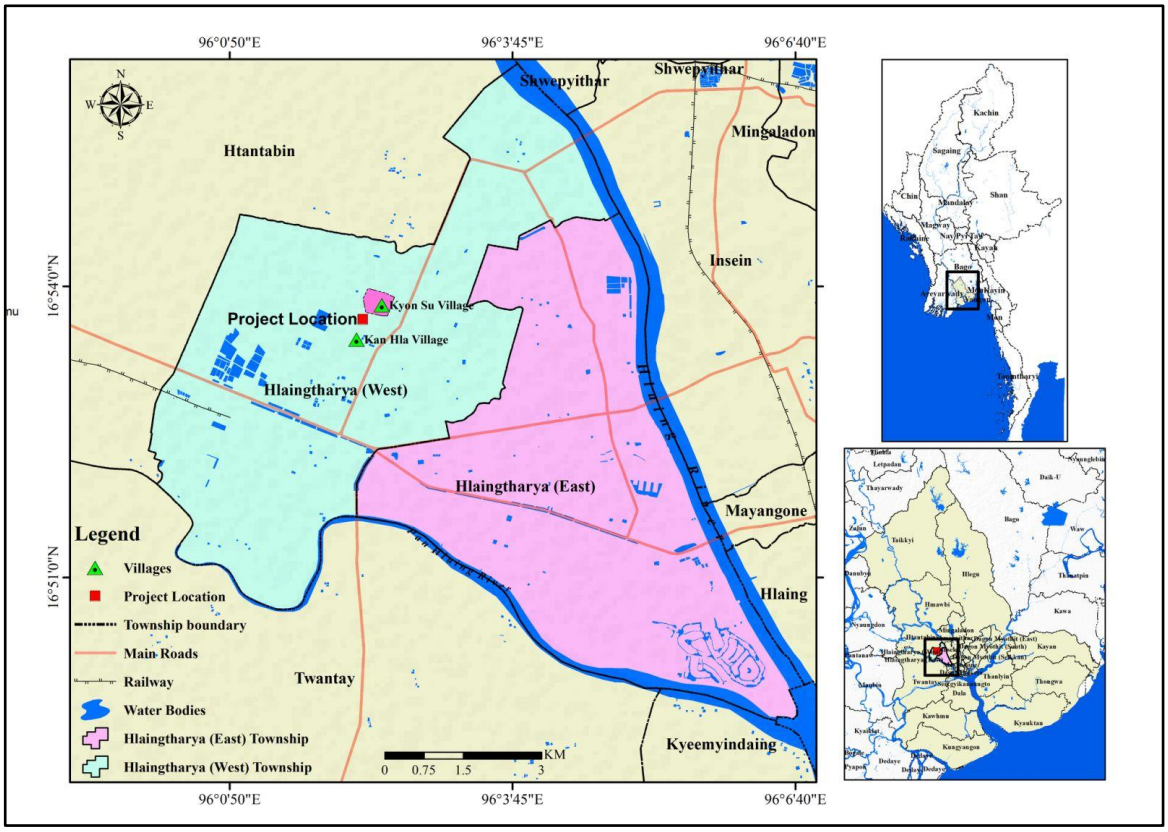


Figure 7.1 Social Settings in Project AOI

7.1.2 Purpose of Consultation

Public participation is the involvement of all parties who potentially have an interest in a development or project, or may be affected by it, directly or indirectly. The process ensures an open, participatory approach to the study, the purpose of which is to ensure that all the impacts are identified and that the decision-making process is undertaken in an informed, transparent, and accountable manner. The objectives of public participation in an EIA are to provide sufficient and accessible information to stakeholders in an objective manner to assist them to:

During the Scoping Phase:

- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been recorded; Assist in commenting on feasible alternatives; and
- Contribute relevant local information and knowledge to the environmental assessment

During the EIA Investigation Phase:

- Contribute relevant local information and knowledge to the environmental assessment;
- Verify that their issues have been considered in the environmental investigations; and
- Comment on the findings of the environmental assessment.

7.1.3 Methodology and Approach

Rigorous identification of project stakeholders is an essential part of preparing for the consultation process. As preliminary identification, the relevant main stakeholders to the project and project affected groups were identified based on

- Preliminary understanding of the project and its components as well as the present setting of the study area
- Understanding the impacts of the project, including its nature, extent, spatial boundary and period

Government authorities, other interested organizations like NGOs and INGOs and the local public are included as the stakeholders in the consultation meeting. The Public Consultation Plan is made through a pre-engagement activity with potential project stakeholders to confirm the meeting style and their availability to attend. Public Consultation Meeting might be a two-way dialogue, so it is tailored to ensure obtaining public participation using an A&Q session. Then, their opinions, concerns, and presented issues are recorded. The proposed project information is disclosed, consultation meetings, and the documents of project information and feedback forms at the respective villages.

At the EIA investigation stage, consultations with concerned government organizations and local stakeholders were primarily conducted to obtain required permission for engagement activities at the township level and get access to data and information of local communities in the Area of Influence. Then, village-level consultations and social surveys are undertaken to

inform project information, to obtain an understanding about the project and its activities, to discuss potential impacts and mitigation measures, to get concerns/opinions of the villagers, and to acquire the environmental and social baseline data of the study area. Public Consultation Meeting is designed to ensure obtaining public participation by using an A & Q session. Then, their opinions and concerns are recorded. Subsequently, all relevant information of the project and its potential impacts were disclosed again to the project-affected persons and local society through stakeholder engagement activities.

Tools and Techniques

At the public consultation meetings, the following meeting materials and techniques are used for the effectiveness of the meeting.

No	Tool/ Technique	Objective
1	PowerPoint Presentation	To give comprehensive and adequate project information, included Project Proponent information, project activities, potential impacts and mitigation measures, and detailed contact for suggestions and grievances.
2	Presentation Handouts	To disclose the project information for others who could not attend the meeting.
3	Maps and Photos	To visualize the location demonstrated in the presentation for discussion
4	Focus Group Discussion	To obtain the thoughts, opinions, concerns, and conditions of a particular group that has the same background
5	Key Informant Interview	To acquire a comprehensive understanding of the study area

7.1.4 Summary of consultations activities

a) Summary of consultation activities undertaken during Scoping Stage

Golden Apex International Trading Co., Ltd conducted consultation meeting concerning with the animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. The public consultation meeting was carried out at Meeting Hall of the General Administrative Department in Hlaingtharya (West) Township, 21st August 2025.

As local public, village heads in respected villages, and representatives of the village's elder persons participated in the consultation meeting. As government authorities, the General Administrative Department, Environmental Conservation Department, the Department of Public Health, Livestock Breeding and Veterinary Department, Township Police, Township Fire Force, Yangon City Development Committee (YCDC), Livestock and Livestock Products Manufacturing Industrial Zone Committee, Local Public communities, and Interested persons around the project area participated in the consultation meeting.

b) Summary of consultation activities undertaken during ESIA Investigation Stage

At EIA Investigation stage, a public consultation meeting of Golden Apex International Trading Co., Ltd was conducted a consultation meeting at the township administrative department in Hlaingtharya (West) Township on 31st March 2026. Local people from Kan Hla and Kyon Su Village attended the consultation meeting.

As government authorities, the General Administration Department, the Environmental Conservation Department, the Department of Public Health, the Livestock Breeding and Veterinary Department, the Township Fire Force, the Township Municipal Council, the Township Police, the Township Management Committees, the Local Public communities, and interested persons around the project area participated in the consultation meeting.

The project proponent discussed about the project and third party expressed the works of Environmental Impact Assessments. At the meeting, village development, creation of job opportunities for local community, complying laws, rules and policy, using understandable usage of words for local people in the presentation, and undertaking village-level public consultation. All the opinions in the meetings were recorded. More detailed information of public consultation meetings and attendee lists is described in Appendix 2.

7.1.5 Results of Consultation Activities

a) Results of Consultation during Scoping Stage

The public consultation meeting was conducted as per the advice of Township General Administration Department. Date, time, and venue were decided through the discussions with village leaders and the Administrative Officer mentioned above, considering the convenience for the villagers.

According to the consultation meeting held on 21st August 2025, some comments and suggestions were raised during discussions at the meeting, and the responses of project proponents are presented in the following Table. The discussion: Public health, Fire Prevention and Emergency Response Plan in the factory, environmental conservation, using understandable words for local people in presentations, undertaking village-level public consultation, job opportunities, and CSR program for the affected village, having a good relationship between the project developer and the affected villages, and security are discussed during the meetings.

Table 7.2 Summary for comments and suggestions of the stakeholders and response of the project developer at the scoping stage

Comments and Suggestion	Response
▪ The term "EIA" (Environmental Impact Assessment) has been widely used over the past decades. EIA for a project that is typically prepared by project proponents in collaboration with third-party firms, such as those under the Environmental Conservation Department. ▪ The local authorities had conducted a field survey to Golden Apex International Trading Co., Ltd	
▪ In this stage, public consultation is conducted to engage the wider community, aiming to inform stakeholders about the operational processes of the proposed project and to explain the measures implemented to minimize potential environmental impacts arising from the project.	
▪ Fire Prevention and Emergency Response Plan	▪ The project has planned to install smoke detectors within the factory premises and equip the facility with speakers connected to the alarm system. In the event of a fire outbreak, the alarm will be automatically activated to alert workers and staff, guiding

	them to evacuate promptly to designated safe areas.
▪ Currently, the village is experiencing emissions from the Htein Pin Cemetery and odors originating from the waste disposal site (Yangon City Development Committee).	▪ The odor monitoring will be carry out EIA stage and monitoring survey point are described in these PowerPoint.
▪ We appreciate that noise pollution and soil pollution are being considered in the EIA stage. As previously mentioned, we also request that measures to minimize pollution related to odors and emissions be carefully evaluated and implemented to the greatest extent practicable.	▪ Air quality, noise, water quality, odor and soil quality baseline survey will be carry out EIA stage. ▪ Survey results and mitigation measures are described in the second Stakeholder Consultation Meeting (EIA Stage).
▪ In the assessment, the request is that consideration also be given to the public residential areas located within a 500-meter radius surrounding the factory.	▪ The social team will conduct social field survey in the two village for social impact assessment.
▪ The public consultation for the scoping report is conducted to define the Terms of Reference (TOR), rather than revisit issues already addressed. The purpose of today's meeting is to identify additional aspects for study, which aligns with the primary objective of the scoping report.	

b) Results of Consultation during the ESIA Investigation Stage

At the ESIA investigation stage consultation meeting held on 31st March 2026, some issues and suggestions concerning the project were recorded during discussions at the meeting. The responses of the project developer were presented in the following Table.

Table 7.3 Summary for comments and suggestion of the stakeholders and response of the project developer at the ESIA stage

Comments and Suggestion	Response
▪ Different about the first and second time of public consultation meetings and disclosure.	▪ EIA procedure - the public consultation will be conducted 2 times as per follows. 1) During Scoping Report Preparation, the disclosure will be complied with Paragraph 50, EIA Procedure, 2015. 2) During EIA Report Preparation The disclosure will be complied with Paragraph 61, EIA Procedure, 2015.
▪ When a new project is about to start, an assessment is conducted to study whether the project will have any positive or negative impacts on the surrounding environment. During the consultation meeting, the results of this assessment would be presented, and local people were allowed to discuss and ask questions about anything they want to know. Since the project will create employment opportunities and other benefits for the local community, while also potentially generating adverse impacts, the assessment is carried out to minimize environmental harm. Participants in the meeting are encouraged to share information about the current condition of their land and surroundings.	
▪ Projects must assess environmental impacts and obtain an Environmental Compliance Certificate (ECC) before implementation. Clear project proposals are essential to determine the need for EMP, IEE, or EIA studies. The EIA process involves three key sectors: the project proponent, consultants, and regulatory bodies, with ongoing monitoring required. Field observations were conducted recently, and it was found that a local entrepreneur is operating a domestic manufacturing and distribution business, and no hazardous liquid waste or dangerous discharges were observed from the facility.	
▪ A responsible representative from Golden Apex International Trading Co., Ltd presented and explained the details of the proposed project.	

▪ A socio-economic consultant from Environmental Compliance Co., Ltd. presented and explained the Environmental Impact Assessment (EIA) process and related environmental considerations.	
▪ Are there any unpleasant odors in your surrounding environment? Is the air quality bad? This is something you need to discuss	▪ The main concern is to prevent unpleasant odors and water pollution. If these can be properly managed, then there is nothing to worry about.
▪ If a public consultation is to be conducted, the relevant General Administration Department (GAD) officer, as the highest authority in the township, will manage the process. Additionally, we would like the respective ward and village administrators to participate and provide their input during the discussion.	
▪ It would be good to have the Fire Safety Certificate and the Fire Department's emergency phone numbers on hand. Fire warning signs should also be displayed, as a fire could potentially start even from the kitchen area. We would also like to know what fire safety plans and measures have been implemented concerning the staff.	▪ In the factories, the Fire Department has provided the designated fire extinguishers. Additionally, the fire hoses and related equipment have been installed. Coordination and consultation with the Fire Department have also been arranged to ensure assistance when needed.

7.2 Disclosure

Disclosure is a formal-sounding term for making information accessible to interested and affected parties. Communicating such information that is understandable to the stakeholders is an important step in the process of stakeholder engagement. All other activities, from consultation and informed participation to negotiation and resolution of grievances, will be more constructive if stakeholders, including affected communities, have accurate and timely information about the project, its impacts, and any other aspects that may have an effect on them.

The EIA procedure of Myanmar (2015) adopted by the Ministry of Natural Resources and Environmental Conservation states the following requirements for public consultation and disclosure with the aim of communicating with local people, organizations, and project-affected people while explaining the projects or coordinating diverse interests in the project at each stage of implementation.

The project disclosure will be conducted 3 times;

1. During Scoping Report Preparation

The disclosure was complied with Article 50, EIA Procedure, 2015. Golden Apex International Trading Co., Ltd. disclosed information about the proposed Project to the public and civil society through Public Consultation meeting on August 2025.

2. During ESIA Report Preparation

The disclosure was complied with Article 50, EIA Procedure, 2015. Golden Apex International Trading Co., Ltd. disclosed all relevant information about the proposed Project and its likely adverse impacts to the public and civil society by Public Consultation on March 2026.

3. After submission of the ESIA Report to ECD

The disclosure will be complied with Article 65, EIA Procedure, 2015.

7.2.1 Summary of disclosure activities undertaken

As mentioned in above, the Disclosure process was carried out in terms of consultation meeting activities, media publication, and delivering the document of the project summary at the respective villages.

Summary of disclosure activities at Scoping Stage

The disclosure process was carried out in terms of consultation meeting activities, media publication and delivering the document of the project summary at the respective villages. Stakeholders were informed about consultation meeting one week in advance by an invitation letter. PowerPoint presentation and handout were used at the meeting. Discussion, suggestions, and recommendations were performed effectively. Meeting duration was based on the comments and suggestions and attendants can participate without worrying time limitations. Notices about the document of the project summary were put on the wall of the village administrative offices. It is declared in the notice that everyone can give feedback and suggestions by reading the document of project summary. It will be put at the village administrative offices for two weeks, and the document of summary are translated in Myanmar Language in order to understand the project information easily. Everyone can read about the project and give feedback on the project.





Figure 7.2 Photo of Project Disclosure Activities

Summary of disclosure activities at ESIA Stage

At the EIA stage, stakeholders were informed about the consultation meeting in advance in collaboration with the relevant Departments. A PowerPoint presentation was used at the meeting. Handouts of PowerPoint slides were left for those who could not attend the meeting. The project summary, including project information, potential impacts, and mitigation measures, was distributed to the villages, and notices about the document of project summary were put on the wall of the respective villages. It is declared in the notice that everyone can give feedback and suggestions by reading the document of project summary. Presentation materials (power point), photo record, and meeting minutes as attachments are enclosed in Appendix 2. The social questionnaire survey form included these questions to know the result of disclosure and the sources of information. The following Table presents information sources that the respondents knew about the project.

The Table shows the sources of information for disclosure activities among the respondents. Out of the total 74 respondents, the majority, 61 respondents (82.4%), obtained information by themselves. A smaller number received information from friends, accounting for 5 respondents (6.8%), and another 5 respondents (6.8%) from other sources. Meanwhile, only 2 respondents (2.7%) received information from the village leader, and 1 respondent (1.4%) obtained information from a family member. This indicates that most respondents relied mainly on their own efforts to obtain information rather than depending on others.

Table 7.4 Information Sources

No	Sources of Information	Respondents	Percent
1	Village leader	2	2.7
2	Family member	1	1.4
3	Friends	5	6.8
4	Themselves	61	82.4
5	Other	5	6.8
Total		74	100.0

Source: survey result,



Figure 7.3 Photos of Project Disclosure activity during ESIA Phase

7.3 Future Consultation and Disclosure

Future additional engagement meetings will be undertaken with relevant authorities and government organizations on the outcomes of the EIA. Consultation meetings with different stakeholders will be conducted throughout the project lifecycle based on the necessity of the situation. The consultation meeting structure and content will be different based on the requirements. After the final EIA has been completed and submitted to ECD, the project proponent will disclose the Executive Summary of the EIA Report in the Myanmar Language at the Township General Administrative Department (GAD) and village administrative offices of project-related villages for the local community, and project information about the proposed

project will be disclosed by posting a signboard in front of the project site. Consultation meetings with local public communities and interested parties will be conducted twice per year.

7.4 Draft Community Development Plan

A Community Development plan is the process of planning to improve the quality of people's lives for the strength and effectiveness of local communities. It seeks to maximize the positive impacts on the local communities in operational areas, Hlaingtharya (west) Township, while it is trying to minimize the adverse impacts through mitigation measures. It is tailored for the enhancement of their livelihood and wellbeing to co-exist. Community development aims to empower and help communities to improve their social and physical environments, increase equity and social justice, overcome social exclusion, build social capital and capacities. It is a kind of building relationship with the local community for social license to operate the project. In order to meet the basic needs of the local community, a community development plan should be prepared using a participatory approach. Need assessment should be conducted through repeated community engagement and the cooperation of the local community and administrators for effectiveness and priority.

Suggestions for Village development needs: The survey respondents provided several suggestions for village development needs. Road development was the most frequently mentioned priority, with 34 respondents highlighting it (Kyon Su: 23; Kan Hla: 11). The second most common concern was the development of drainage systems, reported by 25 respondents. Healthcare facilities and electricity were noted by 2 and 1 respondents, respectively, while job opportunities were suggested by a single respondent. A notable number of respondents (10 households) did not provide any suggestions. These findings indicate that infrastructure improvements, particularly roads and drainage systems, are the primary development needs in both villages, which should be considered in future regional planning and development initiatives.

Table 7.5 Suggestions for Village development needs

No.	Suggestions for Village development needs	Villages		Total
		Kyon Su	Kan Hla	
1	Electricity	1	0	1
2	Health Care Facilities	1	1	2
3	Road Development	23	11	34
4	To Develop the Drainage System	11	14	25
5	Job opportunity	1	0	1
6	No suggestions	2	8	10
Total		**39**	**34**	**73**

Sources: Field Results,

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

8.1 Institutional Arrangements for Implementation of the ESMP

8.1.1 Environmental and Social Management System

Golden Apex International Trading Co., Ltd, has committed to fully protection the environment in the proposed project area by developing and implementing of environmental management plan which will act as an adequate tool to mitigate the potential adverse impact and enhance the beneficial impacts associated with the project during the operation phase. This environmental management plan shall be treated as a dynamic and live document. Reviewing, revising, and updating are subject to do as deem necessary in line with the variation of proposed activities described in this document ensuring it remains appropriate to ongoing aspects of the project.

8.1.2 Responsibilities

Responsibilities for the implementation of environmental social considerations lie with Golden Apex International Trading Company management shall be accountable for delivering commitments made in this document. Implementation of the EMP will primarily be the responsibility of the General Manager assisted by the Environmental officer and Occupational Health & Safety officer. However, the specific management interventions will be the responsibility of each respective Head of Department and specific individuals identified in the EMP for each specific intervention who will ensure that all the staff under their supervision work towards the realization of the objectives set out in the management plan.

The Environmental Protection Management Section will be established under the Project Company for the implementation of EMP.

Position	Responsibilities
General Manager	The environmental responsibilities of the General Manager are given below; Establish Environmental policy, objectives, targets, and Environment Management Plans available for the project. Ensure that all activities are carried out in compliance with relevant laws and regulations. Identify potential risks from the environment section and establish and implement preventive actions in a bid to curb environmental impacts. Control the training, recognition, and competency.
Supervisor/s	Environmental responsibilities of the Supervisor/s are given below; Implement and follow the Environmental policy, objectives, targets, and Environment Management Plans available for the project. Ensure that all activities are carried out in compliance with relevant laws and regulations. Identify potential risks from the environment section and establish and implement the preventive actions in a bid to curb environmental impacts. Control the training, recognition, and competency.
Environmental Officer	The responsibilities of an Environmental Officer are listed below: Assist Golden Apex International Trading Company assigned Environmental Staff in managing stipulated environmental requirements.

	Prepare and impact training (including toolbox talks) to contract personnel on various environment-related topics like Environmental awareness, Solid waste management, etc. Prepare and assist in the implementation of factory project environmental documents. Arrange & conduct environmental campaigns on environmental topics.
Site HSE officer/ Representative	The Site HSE officer/ Representative will identify significant environmental aspects of the project. He will prepare environmental resources to provide information to the top management of the project. The responsibilities of the Site HSE officer are listed below: Identify all possible risks and their environmental consequences to prevent them and act in case of an accident. Provide environmental training to all employees. Compliance with requirements, including legal requirements relevant to the environment.

8.1.3 Organization Structure

The Occupational Health and Safety Committee which was established by Golden Apex International Trading Company operates and manages to implement EMP. The Occupational Health and Safety Committee will consist of the General manager and operation section management of the corporation. The Occupational Health and Safety Committee will assign an Environmental officer and Environmental, health, and Safety Officers. The organization structure for the implementation of the Environmental Management Plan (EMP) during the operation phase is shown in the following Figure.

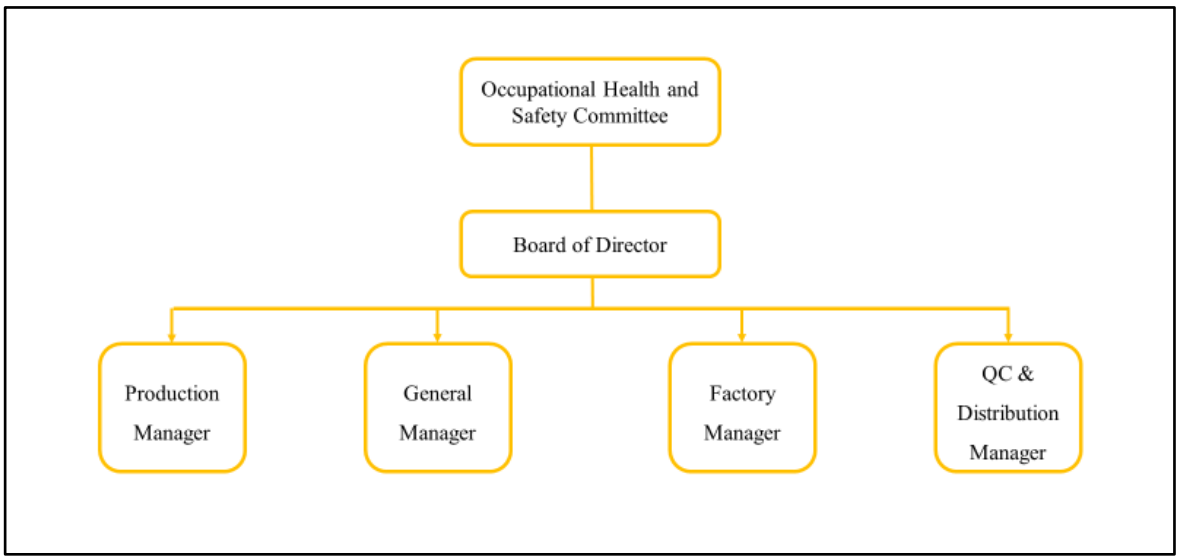


Figure 8.1 Occupational Health and Safety Committee

8.2 Environmental and Social Management Sub-plans

8.2.1 Air Quality Management Plan

Objectives	To minimize dust generation and gaseous emissions from animal feed mill factory operations (raw material storage, handling, grinding, and crushing, weighting, and mixing of premix, feed additive and raw material)
Legal Requirements	Environmental Conservation Law (2012), Environmental Conservation Rules (2014), EIA Procedures (2015), National Environmental Quality (Emission) Guidelines 2015 (Odor and air emission)
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	**Dust Control and Ventilation** ▪ Install bag filter or collector to capture dust from handling, grinding, crushing, weighting, and mixing of premix, feed additive and raw material.

	▪ Store raw materials and feed additives in sealed containers or covered storage areas. ▪ Utilize lower-capacity butterfly conveyors to limit material transfer rates and reduce dust generation; cover transfer points and minimize drop heights. ▪ Maintain and service all transport vehicles and machinery regularly to minimize exhaust emissions. ▪ Keep the animal feed mill factory area dry and well-ventilated to prevent fugitive dust emissions. ▪ Provide respiratory masks and proper PPE for animal feed mill factory workers.  
Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.2 Noise and Vibration Management Plan

Objectives	To control noise and vibration levels from animal feed mill factory operations and protect worker health and safety
Legal Requirements	Environmental Conservation Law (2012), Environmental Conservation Rules (2014), Myanmar National Environmental Quality (Emission) Guidelines (2015) EIA Procedures (2015)
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	▪ Regularly maintain all operational machinery such as grinding, hammer, fans, and generators to prevent excessive noise. ▪ Restrict transportation of raw material and feed additives to daytime hours. ▪ Provide Personal Protective Equipment (PPE), such as earplugs or earmuffs, for all workers stationed in production and utility areas. ▪ Ensure compliance with the Myanmar National Environmental Quality (Emission) Guidelines (NEQEG).
Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.3 Water Quality Management Plan

Objectives	To prevent water contamination and ensure proper treatment of all wastewater (domestic sewage and greywater from the factory's workforce)
Legal Requirements	Environmental Conservation Law (2012), Environmental Conservation Rules (2014), EIA Procedures (2015), Myanmar National Environmental Quality (Emission) Guidelines (2015)
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	There is no generation of effluent from the project activities. Treat wastewater generated from offices, canteens, and staff facilities is treated by the sewage system. Sewage from the offices, canteens, and staff facilities must be collected using a pit system and disposed of by municipal sewage trucks. Implement a dry-cleaning method (vacuuming or sweeping) for the production floor to minimize the need for water-based washing and reduce wastewater volume. The storage for fuel and lubricants/oil is a closed building, and it is protected from rainwater.
Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.4 Solid Waste Management Plan

Objectives	To manage all solid waste in an environmentally sound manner
Legal Requirements	Environmental Conservation Law (2012), Environmental Conservation Rules (2014), EIA Procedure (2015) Public Health Law (1972), Occupational Safety and Health Law (2019)
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	**Organic Waste** ▪ Most organic by-products from feed milling are recyclable or can be sold. **Domestic Waste** ▪ Recyclable waste e.g., plastic, food scraps, paper etc. should reused/recycled as much as possible. ▪ Follow the 5Rs principles for solid waste: reduce, reuse, recover, recycle, and redesign, where possible. ▪ Placing containers for collection of solid wastes and garbage at office and residence. ▪ Maintaining hygienic conditions in canteens and toilets. ▪ Non-recyclable wastes will be transported, in coordination with relevant authorities, to a landfill site approved by the Livestock and Livestock Products Manufacturing Industrial Zone and the Hlaingtharya (West) Township Development Committee.
Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.5 Flora and Fauna Management Plan

Objectives	To avoid and minimize impacts to flora and fauna habitat features within the vicinity of project area.
Legal Requirements	The Protection of Biodiversity and Natural Protected Areas Law
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	▪ Do not disturb the vegetation and animals outside the designated area. ▪ Maintain all mature trees within the project development area. ▪ Raise environmental awareness among workers for the protection of local biodiversity.
Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.6 Transportation Management Plan

Objectives	To manage potential adverse impacts on traffic flow.
Legal Requirements	The Motor Vehicle Law (2015), Social Security Law (2012)
Implementation Schedule	During Construction, Operation and Closure phase.
Management Action	▪ Adequate training on traffic and road safety operations will be provided to the drivers. ▪ Appropriate signage will be displayed at important traffic junctions in the Livestock and Livestock Products Manufacturing Industrial Zone. ▪ Signage for the speed limit will be placed and maintained. ▪ Allow transportation vehicles to the transportation of raw material and feed additives to daytime hours.

Responsibilities	Monitoring by HSE section of Golden Apex International Trading Co., Ltd and/or Environmental Contractor

8.2.7 Community Engagement and Development Plan

a) Grievance Mechanism Management

A Grievance Mechanism is a system that allows a person or villagers to provide feedback to implementers of a given service and allows implementers to respond. The grievance mechanism will be disclosed to the stakeholders through written and verbal communication. The grievance mechanism disclosure will be solved along with the disclosure of other management plans. The purpose of grievance mechanism is to ensure that all requests and complaints from individuals, groups and local communities throughout the Project life, from planning and design through construction and operations, are dealt with systematically in a timely manner, with appropriate corrective actions being implemented and the complainant being informed of the outcomes.

All complaints will be logged and processed and addressed within a fixed time, communicated to the complainant, as follows.

- First, concerns and complaints will be received by public relation department of the company. Then project proponent analyzed the problem.
- Second, project proponent will negotiate with complainant cooperating with village authorities and compensate.
- For the problems that are not solved or negotiated at village level, the project proponent asked related government departments and follow the instructions.

Golden Apex International Trading Co., Ltd will communicate this procedure to its external stakeholders to raise awareness and offer transparency on how stakeholders can voice their grievances. Various channels for external stakeholders to vocalize their grievances formally include:

Telephone:	Stakeholders can call Golden Apex International Trading Co., Ltd. Head Office at (959-5098028) and request to speak to a stakeholder contact officer.
Email:	Grievances can be sent to (goldenapexmyanmar@gmail.com).
Face to Face:	Stakeholders can voice their grievance to any Golden Apex International Trading Co., Ltd. employee who will then escalate using the correct process.
Complaint Box:	The grievance box shall be kept at the entrance of the project site or office as the stakeholders can complain about their grievance at this box.

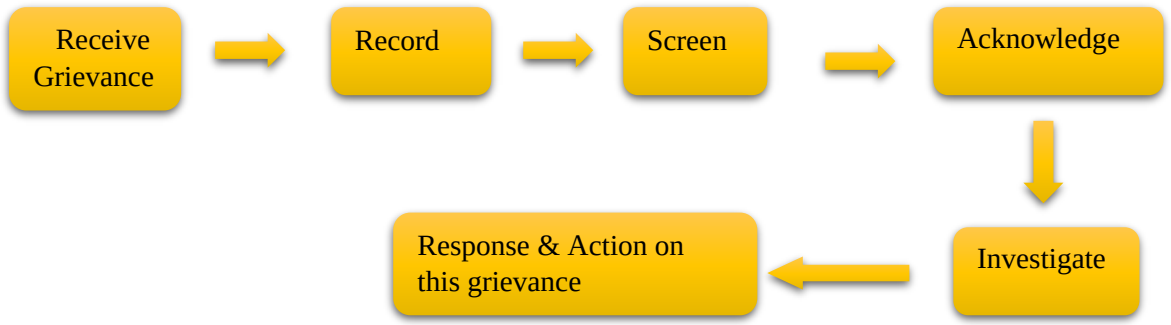


Figure 8.2 Grievance Mechanism

b) Employment Plan

The survey respondents provided several suggestions for village development needs. The respondents suggest that to develop road conditions in the village, to upgrade current drainage systems, and some of the respondent suggest to get job opportunities. Golden Apex International Trading Co., Ltd. will continue to give priority to local residents and will provide opportunities to both males and females if they meet the education and skills/experience criteria.

c) Local Economic Development

Based on the socio-economic survey results, the Project Proponent has identified key community priorities for regional development and infrastructure enhancement. Feedback from Kyon Su and Kan Hla villages indicates that the rehabilitation of road networks and the modernization of drainage systems are the most critical requirements for local stakeholders.

While some residents also highlighted the need for expanded healthcare facilities, consistent electricity access, and increased employment opportunities, a small portion of the surveyed population offered no specific suggestions. These findings underscore a significant demand for physical infrastructure improvements to support community connectivity and public health. In response to these needs, the Project Proponent will integrate these priorities into its long-term corporate social responsibility initiatives and regional planning strategies to ensure that project activities contribute meaningfully to the sustainable development of the surrounding villages.

d) Corporate Social Responsibility (CSR) Program

A Community Development plan is the process of planning to improve the quality of people's lives for the strength and effectiveness of local communities. It seeks to maximize the positive impacts on the local communities in the operational area, Hlaingtharya (West) Township, while it is trying to minimize the adverse impacts through mitigation measures. It is tailored for the enhancement of their livelihood and well-being to coexist. Community development aims to empower and help communities to improve their social and physical environments, increase equity and social justice, overcome social exclusion, and build social capital and capacities. It is a kind of building relationship with the local community for social license to operate the project. To meet the basic needs of the local community, a community development plan should be prepared using a participatory approach. A needs assessment should be conducted through repeated community engagement and the cooperation of the local community and administrators for effectiveness and priority. The Golden Apex International Trading Co., Ltd. will subscribe to corporate social responsibility (CSR) (2%) from the net profit.

8.2.8 Occupational Health and Safety Management Plan

Golden Apex International Trading Co., Ltd. organized the Health and Safety Committee to implement the Occupational Health and Safety Management Plan according to the instruction of the Factory and General Labor Laws Inspection Department (FGLLID). Five members are leading the Health and Safety Committee.

Table 8.1 Occupational Health and Safety Committee

No	Name	Responsibility
1	Board of Director	President
2	General Manager	Vice President
3	Production Manager	Member
4	Factory Manager	Member
5	QC & Distribution Manager	Member

Golden Apex International Trading Company Limited will be fully aware of the pre-existing health conditions during the construction of an animal feed mill factory project. Golden Apex International Trading Co., Ltd. will ensure that its employees are medically fit and healthy and have undergone pre-employment medical examination and ensure that adequate health levels are maintained with due consideration to the project area conditions, and in particular for:

1. Potable water is to be provided and meet the water quality standards.
2. Food storage and processing.
3. Toilet and Hand wash areas
4. Sheltered rest areas, including seating, are segregated from the worksite so that workers may safely remove helmets and other items of PPE. Such rest areas will have sufficient waste bins.

Golden Apex International Trading Co., Ltd. will;

- Ensure through periodic medical check-ups and monitoring to detect disease occurrence that workers are physically and mentally capable of their job position. The report will be included in the HSE Monthly Report.
- Ensure that workers can have treatment for small injuries and illnesses. In addition, Golden Apex International Trading Co., Ltd. will have a system to diagnose epidemic risks at their early stage of development and undertake necessary actions following the advice of the designated hospital or local authority.
- Provide education and training to workers on the relevant health hazards, safe work practices, and proper use of PPE.
- Medical personnel will provide medical services to the staff advise personnel on health-related issues and promote high standards of health in order to maximize their presence at work and optimize their performance.

Detailed responsibilities of the medical staff will be:

1. Deal with medical emergencies and common illnesses to promote good health and advise staff on measures to protect themselves from health hazards. Depending upon the job in the project, the emergencies could be of various natures e.g., fractures, burns, cardiac problems, heat stroke, exhaustion, and snake bites, etc.
2. Depending on the nature and seriousness of the injury, the Medical Staff will either arrange transport or request the ambulance to assist in transporting the injured person to the hospital. In the event of any doubt, and provided the injured person is not in a dangerous area, the Medical Staff will await the arrival of the ambulance to transport the injured person.
3. To carry out inspections/audits for monitoring health and hygiene conditions and give suggestions for remedial actions.
4. To maintain factory project clinic equipment and provide requisite medical services to the staff by utilizing the given resources most cost-effectively.
5. To maintain records of the first aid treatment rendered including date, time, name of injured person, identity card or passport number, address, telephone, injury, circumstances, treatment rendered, and action taken, etc.

6. To develop a pest and vector control program to address site conditions (e.g. mosquito spraying, scorpion stings, snake bites, vipers, sand fly, etc.)

First Aid Provision / Medical Facilities

The medical facility will be fully equipped to treat illnesses and non-serious injuries which can normally be expected to occur in the worksite. For the treatment of these cases, licensed personnel will be mobilized. Other serious injuries in case of lost time accidents, and injured personnel will be evacuated to the designated hospital for proper medical treatment.

First aid supplies will be stocked in the types and quantities. First Aid Facilities and suitably trained personnel within its working areas. The ratio of First aiders to workers is 1:50 when the peak workforces.

Medical Facilities will have suitable signs displayed to indicate their existence. These facilities will normally be managed by trained medical staff. The medical facilities will be properly maintained and inspected on a frequent basis by members of the HSE Management Section. Golden Apex International Trading Co., Ltd. will arrange First Aid Training courses to be conducted by approved training institutions to ensure that adequate numbers of trained first aiders are available.

8.2.9 Community Health and Safety

If the occupational disease is found in the workers or there are outbreaks of infectious disease, the public health department, Hlaingtharya Township, Yangon Region will be notified, and the project will cooperate by the instructions.

Besides the performance of this report for other health impacts on the project workers and the public around the project site, if it is necessary, health programs will be carried out by contacting with Public Health Department and instructions will be followed.

8.2.10 Emergency Response Plans

The purpose of Emergency Response is to ensure that all potential emergencies that might arise during the Project are properly identified, reported, and dealt with safely and effectively.

Emergency Response Plan covers but not limited to:

1. Nomination of persons responsible for managing an emergency situation;
2. Definition of roles/responsibilities in Emergency Response Team; (ERT)
3. The identification of events that could give rise to major events involving fire, explosion, major oil spill or other loss of containment; and other events that may require the evacuation or escape of personnel.
4. Procedures for reporting, communicating, and response action in an emergency;
5. Provision of necessary emergency equipment in adequate quantities to handle all foreseeable emergency scenarios. Includes monitoring, testing, and maintenance of alarm systems and early warning devices;
6. Periodic testing of response procedures
7. Provision of qualified Rescue and medical response personnel
8. Training requirements

Emergency Cases

Emergencies that might develop during operation include:

1. Fire (involving fuels, and other materials);
2. Personnel injuries (e.g. vehicle slipping on road, landslide, etc.);

Means of Communication

The primary means of communication shall be:

1. Telephone;
2. Mobile (only in authorized areas);

Emergency Response Team and External emergency service contacts such as the Fire Services Department of Hlaingtharya (West) Township and township hospitals.

Contact Numbers for Emergency Response

Name & Designation	Telephone Work	Mobile
Internal Contact (Animal Feed Mill Factory)		
Daw Kay Thwe Aung	-	+95 9 5098028
External Emergency Contact		
Fire Service Department	09 440024344	-
Doctor, Township Hospital	+ 95 1640814	-

Emergency Response Action

In the event of an emergency and upon hearing the alarm:

1. Do not panic;
2. Stop work, and leave the area immediately to the designated assembly points;
3. Do not re-enter the building to save property;
4. Shut off power or machines if safe to do so;
5. Ensure you are counted at the assembly point;
6. Return to work only if instructed by the emergency response team.

8.3 Environmental Quality Monitoring Requirements

Table 8.2 Monitoring Schedule for Environmental Parameters

No	Indicator	Environmental Parameters	Location of Data Collection	Monitoring Method	Frequency	Responsible Institution
1	Air Quality and Meteorology data	NO_2, SO_2, CO, Ozone, Dust ($PM_{2.5}$, PM_{10})	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (24 hours continuous monitoring)	Two times per year (Dry and wet season)	Environmental Contractor
2	Noise	Noise Level (dB)	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (24 hours continuous monitoring)	Two times per year (Dry and wet season)	Environmental Contractor
3	Vibration	Vibration Level	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (24 hours continuous monitoring)	Two times per year (Dry and wet season)	Environmental Contractor

No	Indicator	Environmental Parameters	Location of Data Collection	Monitoring Method	Frequency	Responsible Institution
4	Surface Water Pollution Monitoring	BOD, COD, Oil & Grease, pH, Temperature increase, Total Coliform Bacteria, Total Nitrogen, Total Phosphorus, Total suspended solids	▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (One time)	2 times (dry & wet Season)	Environmental Contractor
5	Ground Water Pollution Monitoring	pH, Color, Turbidity, TDS, TSS, Total Solids, Conductivity, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Sodium Chloride, Iron, Manganese, Total Alkalinity, Carbonate,	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (One time)	2 times (dry & wet Season)	Environmental Contractor

No	Indicator	Environmental Parameters	Location of Data Collection	Monitoring Method	Frequency	Responsible Institution
		Bi-Carbonate, Sulfate, Salinity, Arsenic, Dissolved Oxygen				
6	Odor	Odor	▪ 1 Point (Within project area) ▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (One time)	2 times (dry & wet Season)	Environmental Contractor
7	Soil Quality	Moisture, pH, Organic Matter, Water Soluble (SO4), Water Soluble (CL), Iron (Fe), AI	▪ 1 Point (At Kyon Su village) ▪ 1 Point (At Kan Hla village)	Using field and analytical methods (One time)	Two times per year (Dry and wet season)	Environmental Contractor
8	Solid Waste Management		Project Area	Monitor the amount and types of generated wastes. (Visual observation of whether wastes are properly disposed and wastes	Regularly	EHS Department

No	Indicator	Environmental Parameters	Location of Data Collection	Monitoring Method	Frequency	Responsible Institution
				bins are sufficiently provided or not.)		
9	Terrestrial Biodiversity		Within the project area	Monitoring visual observation of whether plants are cultivated or not.	Two times per year	HSE Department or Environmental Contractor
10	Grievance Mechanism				Daily monitoring and documenting	EHS Department

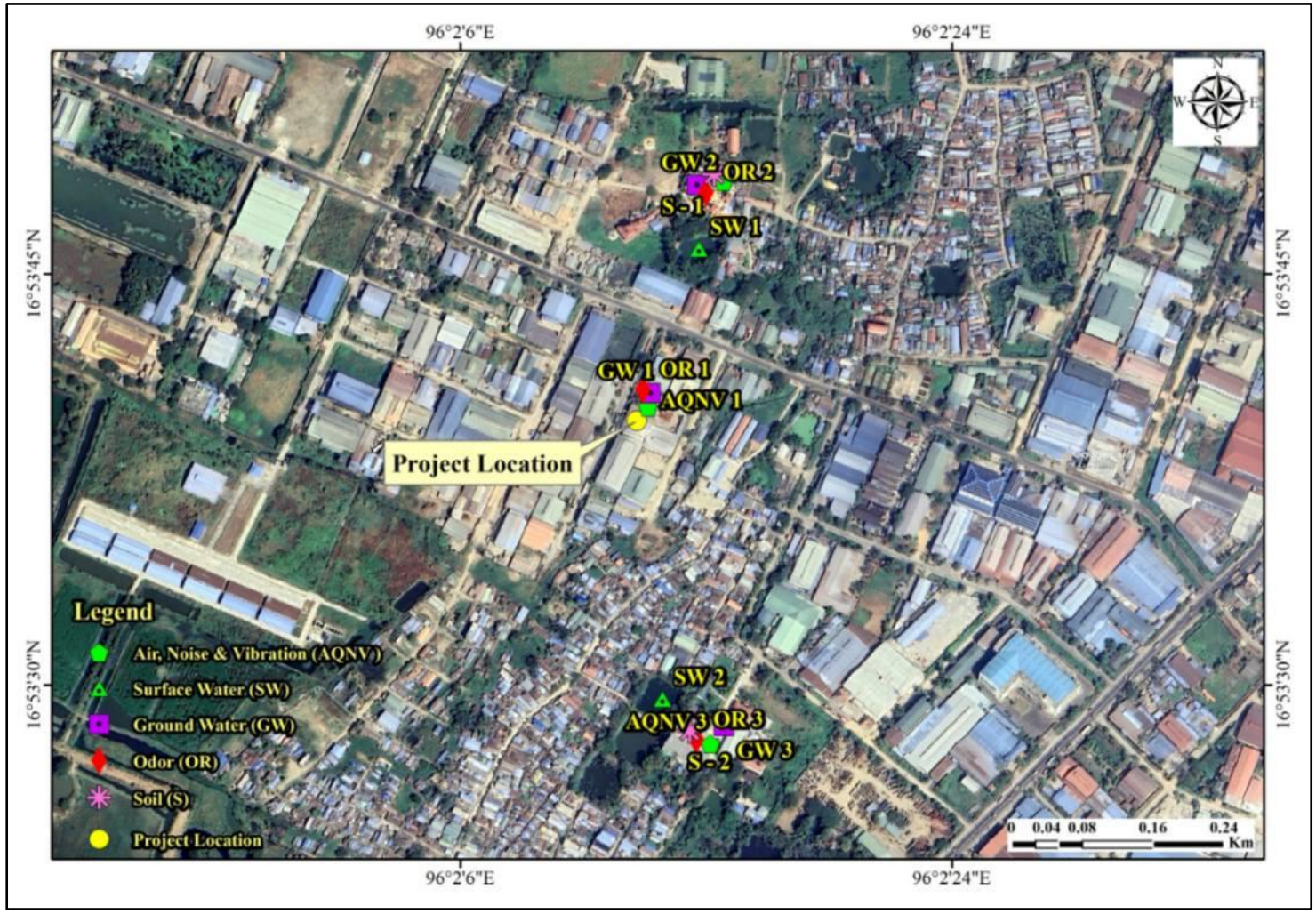


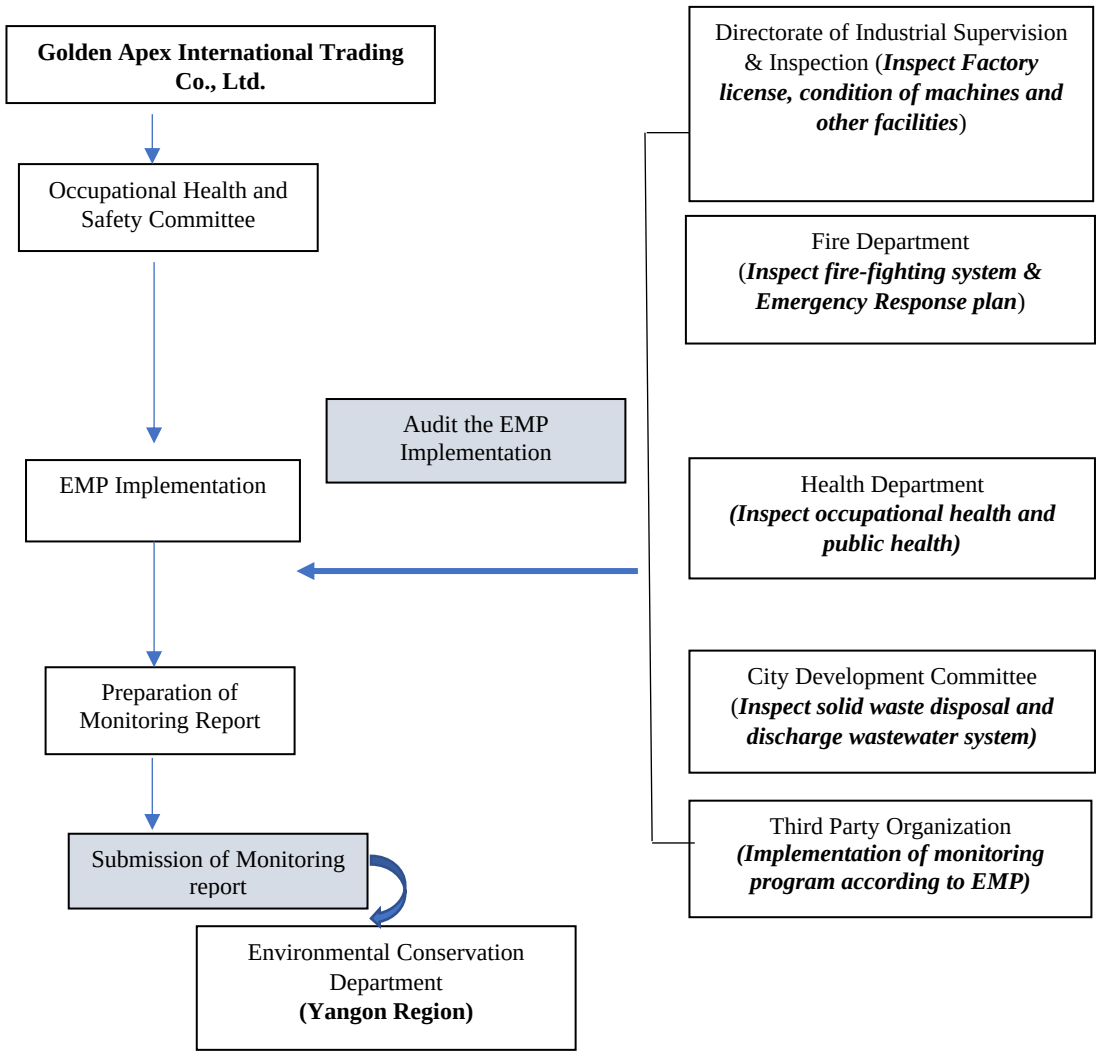
Figure 8.3 Location of Monitoring Point

Table 8.3 Coordinates of Monitoring Points

No	Sampling Point	Latitude	Longitude
1	AQNV 1	16°53'40.14"N	96° 2'12.86"E
2	AQNV 2	16°53'48.37"N	96° 2'15.64"E
3	AQNV 3	16°53'27.85"N	96° 2'15.15"E
4	SW 1	16°53'45.92"N	96° 2'14.73"E
5	SW 2	16°53'29.48"N	96° 2'13.40"E
6	GW 1	16°53'40.66"N	96° 2'12.96"E
7	GW 2	16°53'48.26"N	96° 2'14.66"E
8	GW 3	16°53'28.51"N	96° 2'15.64"E
9	OR 1	16°53'40.78"N	96° 2'12.68"E
10	OR 2	16°53'47.97"N	96° 2'15.00"E
11	OR 3	16°53'28.00"N	96° 2'14.64"E
12	S 1	16°53'48.62"N	96° 2'15.30"E
13	S 2	16°53'28.33"N	96° 2'14.40"E

8.4 Implementation Schedule

Golden Apex International Trading Co., Ltd. shall measure and monitor water quality, air quality, noise, odor, vibration, wastewater, soil, biodiversity, etc. every six months. Golden Apex International Trading Co., Ltd. will summarize the monitoring report based on the results of the implementation of EMP including monitoring. Accordingly, Golden Apex International Trading Co., Ltd. will submit the monitoring report to Ministry of Natural Recourses and Environmental Conservation (MONREC).



8.5 EMP and Monitoring Cost

Golden Apex International Trading Co., Ltd. has earmarked a budget for the implementation of the Environmental Management Plan for controlling pollution and improving the socio-economic status of the area. Golden Apex International Trading Co., Ltd. shall be used 21,700,000.00 kyat (estimated cost) for Environmental Management Plan (Annual) and 29,300,000.00 kyat (estimated cost) for Environmental Monitoring Plan (Annual). The amounts may be increased in the future as per the actual requirements from time to time. ***If the estimated cost is not sufficient for the implementation of Environmental Management and Monitoring Plans, the budget will be set up again.*** The proposed capital expenditure and recurring costs/ annum under various heads for Environmental Management are summarized in the following Table.

Table 8.4 Estimated Cost for Environmental Management Plan (Annual)

Item	Cost (MMK)
Air Quality and Odor Management Plan	2,400,000
Noise & Vibration Management Plan	2,400,000
Soil and Geology Management Plan	800,000
Water Quality Management Plan	2,100,000
Solid Waste Management Plan	500,000
Flora and Fauna Management Plan	1,000,000
Transportation Management Plan	500,000
Community Engagement and Development Plan	500,000
Occupational Health and Safety Management Plan	2,000,000
Community Health and Safety Management Plan	1,000,000
Emergency Response and Rescue Management Plan	500,000
CSR	3,000,000

Cost for EHS Department (Including Salary)	5,000,000
Total	**21,700,000**

Table 8.5 Estimated Cost for Monitoring Plan (Annual)

Item	Cost (MMK)
Air Quality and Odor Monitoring	6,000,000
Noise & Vibration Monitoring	4,800,000
Soil Quality Monitoring	2,000,000
Water Quality Monitoring	7,000,000
Monitoring Cost for Solid Waste Management	500,000
Monitoring Cost for Terrestrial Biodiversity (including flora and fauna management)	3,000,000
Monitoring Cost for Transportation Activities	500,000
Monitoring Cost for Grievance Mechanism (Community Engagement and Management)	500,000
Monitoring Cost for Occupational Health and Safety Management	2,000,000
Monitoring Cost for Community Health and Safety Management	1,000,000
Monitoring Cost for Emergency Response and Rescue Plan	500,000
Monitoring Cost for CSR Activities	1,000,000
Monitoring Cost for EHS Department (General Expenses)	500,000
Total	**29,300,000**

9. CONCLUSION AND RECOMMENDATION

9.1 Conclusion

Golden Apex International Trading Co., Ltd, a 100% Myanmar citizen-owned company, proposes to establish and operate an animal feed mill factory on a total land area of 0.688 acres, located at Plot No. (100 + 101), Livestock and Livestock Products Manufacturing Industrial Zone, Hlaingtharya (West) Township, Yangon Region. Golden Apex International Trading Co., Ltd, is engaged in the distribution and production of animal nutrition feed and feed additive in Myanmar. Recognizing the critical role of the livestock sector in the country's livestock economy, the company aims to support the sector by ensuring a stable supply of high-quality animal feed, a key input in livestock production. Its operations focus on producing nutritionally balanced, hygienic, and fresh feed pellets that contribute to increased productivity in livestock farming. The expected total investment for this project is 4,939.919 million kyat and expected investment period is 22 years. The proposed investment is planned to be implemented over an estimated construction period of two (2) years, with commercial operations scheduled to commence in December 2026.

An EIA report for Animal Feed Mill Factory has been prepared for the Project in accordance with Myanmar EIA Procedures 2015. The EIA identified potential impacts through a systematic scoping process whereby the activities associated with the Project have been considered with respect to their potential to interact with environmental and social resources or receptors. Interactions which may generate potentially significant environmental and social impacts have been further assessed in the EIA, with appropriate mitigation and enhancement measures recommended for alleviating potential negative impacts or enhancing potential positive impacts from the Project.

The EMP provide a mechanism for a systematic and well-coordinated implementation of the proposed management interventions for management of all environmental, health and safety concerns associated with operation of the animal feed mill factory. Management and staff at Golden Apex International Trading Co., Ltd.'s animal feed mill factory is committed and keen to follow through and ensure efficient implementation of the same. With careful planning and implementation of all the proposed interventions it is most unlikely that the project will continue to generate unacceptable impacts.

It is concluded in the EIA that with proper implementation of the recommended mitigation measure and social impacts causing by the operation of the Project would be no larger than low significance.

9.2 Recommendation

- Findings and suggestion of EIA study in project planning, design and operation should be considered and implemented with strong monitoring.
- Environmental Management Plan and Monitoring Program and, Hazard and Safety Management Plan should be implemented at every suggested steps of project.
- Establishing Institutional arrangement with proper logistic and training for Environment, Health and Safety in Environmental Protection Agency of the project.

Implementing this project will also have the positive effects such as providing employment to local people. In addition, the Golden Apex International Trading Co., Ltd.'s CSR initiatives will have a positive indicator for the regional environments to improve socioeconomic and health status.

9.3 List of Commitments

A consolidated summary list of environmental and social impacts and mitigation measures commitments that Golden Apex International Trading Co., Ltd. will be expected to adopt in order to manage and mitigate potential impacts associated with the project development is provided below in Table 9.1.

Table 9.1 Project Key Commitments

Components	Commitments
ESIA Report, Chapter 3, Section 3.5 - Related Environmental laws, Rules, Regulations and Policies	Golden Apex International Trading Co., Ltd. will follow Related Environmental laws, Rules, Regulations and Policies.

ESIA Report, Chapter 3, Section 3.7 - Project's Environmental and Social Standards	Golden Apex International Trading Co., Ltd. will follow National Environmental Quality Standards for the air emission, Effluent Standards for Poultry Production, Odor, and noise levels., etc.
ESIA Report, Chapter 3, Section 3.8 - International Finance Corporation Environmental, Health and Safety Guidelines	Golden Apex International Trading Co., Ltd. will follow International Finance Corporation Environmental, Health and Safety Guidelines.
ESIA Report, Chapter 4, Section 4.7 - Environmental Protection Measures	Golden Apex International Trading Co., Ltd. will develop Environmental Protection Measures for the animal feed mill factory.
ESIA Report, Chapter 6, Section 6.3.1 (a) Air Quality Impact	Golden Apex International Trading Co., Ltd. will implement control measures for air quality.
ESIA Report, Chapter 6, Section 6.3.1 (b) Noise and Vibration	Golden Apex International Trading Co., Ltd. will implement protection, mitigation and monitoring measures for noise and vibration impacts.
ESIA Report, Chapter 6, Section 6.3.1 (c) Water Quality Impact	Golden Apex International Trading Co., Ltd. will implement pollution control measures for wastewater discharge from domestic use.
ESIA Report, Chapter 6, Section 6.3.2 Biological Component	Golden Apex International Trading Co., Ltd. will implement mitigation measures to minimize further potential impacts on biodiversity.
ESIA Report, Chapter 6, Section 6.4.1 (a) Air Quality Impact	Golden Apex International Trading Co., Ltd. will implement control measures for air quality.

ESIA Report, Chapter 6, Section 6.4.1 (b) Noise and Vibration	Golden Apex International Trading Co., Ltd. will implement protection, mitigation and monitoring measures for noise and vibration impacts.
ESIA Report, Chapter 6, Section 6.4.1 (c) Water Quality Impact	Golden Apex International Trading Co., Ltd. will implement pollution control measures for wastewater discharge from domestic use.
ESIA Report, Chapter 6, Section 6.4.1 (d) Solid Waste	Golden Apex International Trading Co., Ltd. will implement mitigation measures for solid waste.
ESIA Report, Chapter 6, Section 6.4.2 Biological Component	Golden Apex International Trading Co., Ltd. will implement mitigation measures to minimize further potential impacts on biodiversity.
ESIA Report, Chapter 6, Section 6.6 Social Impact Assessment	Golden Apex International Trading Co., Ltd. will implement mitigation measures to minimize further potential impacts on socioeconomic component.
ESIA Report, Chapter 8, Environmental and Social Management Plan	Golden Apex International Trading Co., Ltd. will develop Management Plan and Monitoring Plan for the animal feed mill factory.
ESIA Report, Chapter 8, Section 8.3 - Environmental Quality Monitoring Requirement	Golden Apex International Trading Co., Ltd. will develop Environmental Monitoring Plan and monitoring report will be submitted to the Environmental Conservation Department.
ESIA Report, Chapter 8, Section 8.5 EMP and Monitoring Cost	Golden Apex International Trading Co., Ltd. shall be used 21,700,000.00 kyat (estimated cost) for Environmental Management Plan (Annual) and 29,300,000.00 kyat (estimated cost) for Environmental Monitoring Plan (Annual). The amounts may be increased in the future as per the actual requirements from time to time. If the estimated cost is not sufficient for the implementation of Environmental Management and Monitoring Plans, the budget will be set up again.

Overall Commitment	Golden Apex International Trading Co., Ltd. will ▪ Strictly carry out the relevant local standards and guidelines in areas of environmental protection, labor safety, and industrial hygiene etc., ▪ The project team has blend in the local society and carry out its social responsibility, expand and maintain its relations with social organizations and neighboring villagers.

Appendix - 1

Information of Golden Apex International Trading Co., Ltd

Golden Apex International Trading Co., Ltd သည် ၂၀၁၆ ခုနှစ်တွင် စတင်တည်ထောင်ခဲ့ပြီး ပြည်တွင်းရင်းနှီးမြုပ်နှံမှု (၁၀၀%) ဖြင့် မြန်မာနိုင်ငံသားပိုင် ကုမ္ပဏီတစ်ခုဖြစ်ပါသည်။



ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်

Certificate of Incorporation

GOLDEN APEX INTERNATIONAL TRADING COMPANY LIMITED

Company Registration No. 107906754

ဤအချက်အလက်များအား ဥပဒေ ၁၉၁၄ ခုနှစ် အရ

အား ၂၀၁၆ ခုနှစ် စက်တင်ဘာလ ၂ ရက်နေ့တွင်

အစုရှယ်ယာအားဖြင့် တာဝန်ကန့်သတ်ထား သည့် အများနှင့်မသက်ဆိုင်သောကုမ္ပဏီ

အဖြစ် မွေးဖွားမှတ်ပုံတင်ခွင့် ပြုလိုက်သည်။

This is to certify that

GOLDEN APEX INTERNATIONAL TRADING COMPANY LIMITED

was incorporated under the Myanmar Companies Act 1914 on 2 September 2016 as a Private Company Limited by Shares.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ

Registrar of Companies

Directorate of Investment and Company Administration

Former Registration No. 1009/2016-2017(NPW)

Company Registration No. 107906754

Certificate of Registration

This is to certify that the Quality Management System of

Golden Apex International Trading Co., Ltd.

No.(100), Livestock Zone (5), Shwe Yin Aye Kyaung Street,
Hlaing Tharyar Township, Yangon Region, Myanmar.

is in accordance with the requirements of the following standard

ISO 9001:2015

(Quality Management System)

SCOPE

Production, Trading, Sales and Distribution of Animal Feeds and Feed Additives

(IAF Code: 03,12,29)

Certificate Number : 221123019509

To verify certificate, visit at :

www.arscert.com
https://uafaccreditation.org
https://www.iafcertsearch.org/

Initial Registration Date : 22-Nov-2023
1st Surveillance Date : 22-Oct-2024
2nd Surveillance Date : 22-Oct-2025
Certificate Expiry Date : 21-Nov-2026

Issued by ARS Assessment Private Limited

Managing Director

UAF Address : 400, North Center Dr, STE 202, Norfolk, VA 23502, United States of America :

The certificate remains the property of ARS and must be returned to ARS on Cancellation or Suspension of the certificate Validity of the certificate is subject to successful completion of surveillance audits. Further clarification regarding the scope of this certificate and the applicability of standard may be obtained by consulting the Organisation on info@arscert.com

Certificate No. 221123019509

မြန်မာနိုင်ငံမွေးမြူရေးလုပ်ငန်းအဖွဲ့ချုပ်

အဖွဲ့ဝင်လက်မှတ်

မြန်မာနိုင်ငံမွေးမြူရေးလုပ်ငန်းအဖွဲ့ချုပ်

Myanmar Livestock Federation

ထုရင့်နောဝ်လဓ်းနှဝ့် စထ်ရူဆေးဝါးလဓ်းဓထာဝ့်၊ အနောထ်ထြိုဟ့ထုန်း၊ အဝ်းစိန်ပြိုန်ထ ရန်ထုန်ပြိုန်

အဖွဲ့ဝင်လက်မှတ်

Certificate of Membership

Membership No.& Date
15864 (12 - 9 - 2016)

အောက်ဖော်ပြပါ မြန်မာကုမ္ပဏီသည် ဤမြန်မာနိုင်ငံမွေးမြူရေးလုပ်ငန်း အဖွဲ့ချုပ်တွင် ၂၀၁၆ ခုနှစ်၊ စက်တင်ဘာလ (၁၂) ရက် နေ့မှစ၍ အဖွဲ့ဝင်တစ်ဦးဖြစ်ပါကြောင်း။

The Under-mentioned **Myanmar Company** is a member of the Myanmar Livestock Federation with effect from **15864 (12 - 9 - 2016)**

အဖွဲ့ဝင်အမည်နှင့်လိပ်စာ	ဂိုးဒင်းအေးပက်(စ်)အင်တာနေရှင်နယ်ထရေးဒင်းကုမ္ပဏီလီမိတက် အမှတ်(၁၀၀)၊ ရွှေရင်အေးကျောင်းလမ်း၊ မွေးမြူရေးနှင့် စက်မှုဇုန်(၅) လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
Member's Name & Address	**GOLDEN APEX INTERNATIONAL TRADING CO., LTD.** No. (100), Shwe Yin Aye Kyaung Street, Livestock Zone (5), Hlaing Thar Yar Township, Yangon Region.
လုပ်ငန်းမှတ်ပုံတင်အမှတ်နှင့် ရက်စွဲ	၁၀၇၉၀၆၇၅၄ (၂ - ၉ - ၂၀၁၆)
Business Registration No.and Date	**107906754 (2 - 9 - 2016)**

Tel ..... Fax ..... Email .....

Secretary General **President**

Signature of Member (or) Representative .....

Name & NRC No. **U Win Myint (6/ La La Na (N) 031822)**

Designation **Managing Director**

Eetended Period	Extended Registration No.	Authorized Signature
(1) From (ရာသက်ပန်) to	(135)	Secretary General
(2) From ..... to		

ရာသက်ပန်အသင်းဝင်

မြန်မာနိုင်ငံငါးလုပ်ငန်းအဖွဲ့ချုပ်

အသင်းဝင်လက်မှတ်



မြန်မာနိုင်ငံငါးလုပ်ငန်းအဖွဲ့ချုပ်
Myanmar Fisheries Federation
ဘုရင့်နောင်လမ်းမကြီးနှင့် ဆေးဝါးစက်ရုံလမ်းထောင့်၊ အနောက်ကြို့ကုန်း အင်းစိန်မြို့နယ်၊ ရန်ကုန်မြို့
BAYINTNAUNG ROAD, WEST GYOGONE, INSEIN TOWNSHIP, YANGON, MYANMAR
Established in 1998

အသင်းဝင်လက်မှတ်
Certificate of Membership

Membership No & Date MFF-33998 (28.3.2025)

အောက်ဖော်ပြပါ ကုမ္ပဏီ/အဖွဲ့အစည်း/အသင်း/လုပ်ငန်းသည် မြန်မာနိုင်ငံ ငါးလုပ်ငန်းအဖွဲ့ချုပ်တွင် အသင်းဝင်အမှတ် (MFF-33998) ဖြင့် ၂၀ ၂၅ ခုနှစ်၊ ..... ဧပြီ ..... လ (၂၈)ရက်နေ့မှစ၍ (၃) အဆင့် အသင်းဝင်တစ်ဦးဖြစ်ပါကြောင်း။

The Under-mentioned Company/Organization/Association/Enterprise is a member of the Myanmar Fisheries Federation with effect from 28.3.2025

အသင်းဝင်အမည်နှင့် လိပ်စာ Golden Apex ငါးအစာစက်ရုံ
၁၀၀၊ ရွှေရင်အေးထျောင်းလမ်း၊ ထမံးသွယ်(၂)၊
နွားမြွေးရေးဇုန်(၅)၊ လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး

Member's Name & Address Golden Apex ငါးအစာစက်ရုံ
100, Shwe Yin Aye Kyaung Street, Livestock & Industrial Zone (5), Hlaing Thar Yar Township, Yangon.

လုပ်ငန်းမှတ်ပုံတင်အမှတ်နှင့်ရက်စွဲ ၀၀၆ (၃၀.၈.၂၀၂၄)
Business Registration No and Date 006 (30.8.2024)

Tel 09 5098028 Email kaythweaungspz@gmail.com

Secretary General

President

Signature of Member (or) Representative
Name & NRC No Daw Khin Nyo , 6/ LaLaNa (N) 031823
Designation Director

(က)အဆင့်အသင်းဝင်

မွေးမြူရေးနှင့်ကုသရေးဦးစီးဌာန

“တိရစ္ဆာန်အစာ ထုတ်လုပ်ဖြန့်ဖြူးရောင်းချခြင်းလုပ်ငန်း ခွင့်ပြုလက်မှတ်”



တိရစ္ဆာန်အစာထုတ်လုပ်ဖြန့်ဖြူးရောင်းချခြင်းလုပ်ငန်း ခွင့်ပြုလက်မှတ်

Animal Feed Production & Distribution Permit

၁။		လုပ်ငန်းအမည်	Golden Apex International Trading Co.,ltd
၂။	(က)	ခွင့်ပြုလက်မှတ် အမှတ်	၁၀ / ၂၀၂၅
	(ခ)	ထုတ်ပေးသည့်ရက်စွဲ	၁၉ - ၅ - ၂၀၂၅
၃။	(က)	ပိုင်ရှင်အမည်	ဦးဝင်းမြင့်
	(ခ)	အဘအမည်	ဦးစော
	(ဂ)	နိုင်ငံသား/ နိုင်ငံခြားသားမှတ်ပုံတင်အမှတ်	ဓ/လလန(နိုင်) ၀၃၁၈၂၂
	(ဃ)	အခြားအလုပ်အကိုင်၊	မရှိပါ
	(င)	နေရပ်လိပ်စာ၊	မြေကွက်အမှတ် (၉၈၊ ၉၉၊ ၁၀၀၊ ၁၀၁)၊
			မြေတိုင်းရပ်ကွက်၊ အမှတ်(၁၉/မွေးဇုန်)၊
			လှိုင်သာယာမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး
	(စ)	စတင်ရောင်းချသည့် ရက်စွဲ	၂၉-၁၂-၂၀၁၂
၄။	(က)	ရောင်းချသည့်တိရစ္ဆာန်အစာ အမျိုးအစားပေါင်း၊	(၉) မျိုး
	(ခ)	ဝယ်ယူတင်သွင်းသည့်နိုင်ငံ	Bolivia, USA, Italy, Singapore, Thailand, China, India, France
၅။		ပြည်တွင်း၌ ပြန်လည်ထုတ်လုပ်ခြင်း	ထုတ်လုပ်မှုရှိပါသည်။ (၆၀၀၀)တန်/လ
၆။		လုပ်ငန်းတည်နေရာ	
	(က)	ရပ်ကွက်၊	မြေကွက်အမှတ် (၉၈၊ ၉၉၊ ၁၀၀၊ ၁၀၁)၊
			မြေတိုင်းရပ်ကွက်၊ အမှတ်(၁၉/မွေးဇုန်)
	(ခ)	မြို့နယ်၊	လှိုင်သာယာမြို့နယ်
	(ဂ)	ပြည်နယ်/ တိုင်း၊	ရန်ကုန်တိုင်းဒေသကြီး
၇။		ဖြန့်ဖြူးရောင်းချသည့် နေရာဒေသ	မြန်မာပြည်အနှံ့
၈။		သက်တမ်းကာလ	(၁) နှစ်
၉။		သက်တမ်းကုန်ဆုံးရက်၊	၁၈ - ၅ - ၂၀၂၆

အတည်ပြုထုတ်ပေးသူ

လက်မှတ်၊

အမည်၊ ဒေါက်တာတိုးမင်းထွန်း

ရာထူး၊ ခွဲတိရစ္ဆာန်ကြားရေးမှူးချုပ်

မွေးမြူရေးနှင့်ကုသရေးဦးစီးဌာန

စိုက်ပျိုးရေး၊ မွေးမြူရေးနှင့် ဆည်မြောင်းဝန်ကြီးဌာန

"ငါး/ပုစွန် အစာထုတ်လုပ်မှု စက်ရုံမှတ်ပုံတင်လက်မှတ်"

စိုက်ပျိုးရေး၊ မွေးမြူရေး နှင့် ဆည်မြောင်းဝန်ကြီးဌာန

ငါးလုပ်ငန်းဦးစီးဌာန

ရန်ကုန်တိုင်းဒေသကြီး



ထိုင်စင်အမှတ် ၀၀၄
၀၀၁

ငါး/ပုစွန်အစာထုတ်လုပ်မှုစက်ရုံမှတ်ပုံတင်လက်မှတ်

လုပ်ငန်းအမည် Golden Apex International Trading Co., Ltd

တည်နေရာလိပ်စာ No.100, Shwe Yin Nyo School Road, Hlaing Thar Yar Livestock & Industrial Zone (5), Yangon, Myanmar

အောက်ပါလုပ်ငန်းသည်ငါးလုပ်ငန်းဦးစီးဌာန၏ညွှန်ကြားချက်အမှတ် ၂/၂၀၁၅အရမှတ်ပုံတင်ပြီးဖြစ်ပါသည်-

၁။ လုပ်ငန်းရှင်အမည် ဦးဝင်းမင်း

၂။ ကိုင်ဆောင်သည့်မှတ်ပုံတင်အမှတ် ၉/လလခန(နိုင်)၀၃၁၈၅၂

၃။ အမြဲတမ်းနေရပ်လိပ်စာ အမှတ်. ၁၀၀၊ ရွှေငြိမ်းရောင်လမ်း (၅)၊ လှိုင်သာယာစက်မှုဇုန်၊ ရန်ကုန်မြို့။

၄။ ပိုင်ဆိုင်မှုအမျိုးအစား တစ်ဦးပိုင်

၅။ ရင်းနှီးမြှုပ်နှံမှုတန်ဖိုး(ကျပ်) သောင်း၁၀၀

၆။ အသုံးပြုသည့်စက်အမျိုးအစား ရေကူစေမှုမော်တာ၊ ဆေးရေမောင်းရေ၊ ပန့်ခ HP

၇။ တစ်နှစ်ထုတ်လုပ်နိုင်မှုစွမ်းအား(တန်)

၈။ ထုတ်လုပ်သည့် အမျိုးအစား(အမှုန့်/အတောင့်) အမှုန့်၊ အရောင်းအဝယ်

၉။ အလုပ်သမားဦးရေ ၁၀ဦး

၁၀။ အစာထုတ်လုပ်ရန် ပါဝင်ပစ္စည်းများ

၁၁။ မှတ်ပုံတင်သက်တမ်းကုန်ဆုံးသည့်နေ့ရက် ၃၁.၃.၂၀၂၁

၀၅/၀၃/၂၀၂၀

မြင့်ဝင်း၊ တိုင်းဒေသကြီးဦးစီးဌာနမှူး
ရန်ကုန်တိုင်းဒေသကြီးငါးလုပ်(စိုက်ပျိုးရေး)

ထုတ်ပေးသည့်ရက်စွဲ ၃၀.၃.၂၀၂၀

Appendix - 2

Meeting Minutes, Photos, Power Point Presentation of EIA Stage and Socio-Economic Survey Form and Survey Activities Photo

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့်
မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင်
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ
ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက် ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့်
ဒုတိယအကြိမ်မြောက်

လူထုတွေ့ဆုံဆွေးနွေးပွဲကျင်းပခြင်း

အစည်းအဝေးမှတ်တမ်း

အချိန်	၁၀:၀၀ - ၁၂:၀၀
ရက်စွဲ	၂၀၂၆ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်
နေရာ	ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန၊ အစည်းအဝေးခန်းမဆောင်
အခမ်းအနားအစီအစဉ်	၁။ အခမ်းအနား ဖွင့်လှစ်ကြောင်းကြေငြာခြင်း။ ၂။ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ် အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန၊ မြို့နယ်စီမံခန့်ခွဲမှု နှင့် အုပ်ချုပ်ရေးကော်မတီ ဥက္ကဋ္ဌမှ အဖွင့်အမှာစကား ပြောကြားခြင်း။ ၃။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ လက်ထောက် ညွှန်ကြားရေးမှူးမှ အဖွင့်အမှာစကား ပြောကြားခြင်း။ ၄။ Golden Apex International Trading Co., Ltd မှ တာဝန်ရှိသူမှ စီမံကိန်းအကြောင်း ရှင်းလင်းတင်ပြခြင်း။ ၅။ Environmental Compliance Consultancy Co., Ltd. (ECC) မှ လူမှုစီးပွားရေး အကြံပေး ပုဂ္ဂိုလ်မှ သဘာဝပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း နှင့် ပတ်သက်၍ ရှင်းလင်းတင်ပြခြင်း။ ၆။ လူထုတွေ့ဆုံ ဆွေးနွေးပွဲ အခမ်းအနားသို့တက်ရောက်လာသူများမှ မေးခွန်းများ မေးမြန်းဆွေးနွေးခြင်း။ ၇။ အခမ်းအနားပြီးဆုံးကြောင်း ကြေငြာခြင်း။
အစီအစဉ် (၁)	**အခမ်းအနား ဖွင့်လှစ်ကြောင်းကြေငြာခြင်း။**

အစီအစဉ် (၂)	**လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ် အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန၊ မြို့နယ်စီမံခန့်ခွဲမှု နှင့် အုပ်ချုပ်ရေးကော်မတီ ဥက္ကဋ္ဌမှ အဖွင့်အမှာစကား ပြောကြားခြင်း။**

ဒီကနေ့ ကျင်းပပြုလုပ်တဲ့ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်တဲ့ အခမ်းအနားမှာ တက်ရောက်လာကြတဲ့ ကျွန်တော်တို့ ဌာနဆိုင်ရာမှ အကြီးအကဲများ၊ ကုမ္ပဏီမှ တာဝန်ရှိတဲ့ ပုဂ္ဂိုလ်များနှင့် ကျွန်တော်တို့ တာဝန်ရှိတဲ့ ပုဂ္ဂိုလ်များ အားလုံး မင်္ဂလာအပေါင်းနဲ့ ပြည့်စုံပါစေလို့ နှုတ်ခွန်းဆက်သပါတယ်။

ကျွန်တော်တို့အနေနဲ့တော့ ဒီနေ့ ကျင်းပပြုလုပ်တဲ့ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်တဲ့ EIA ကတော့ အားလုံးလည်း ကျွန်တော်တို့ သိပြီးသား ဖြစ်မှာပါ။ ကျွန်တော်တို့ ဒီမှာ စက်ရုံတစ်ခု လုပ်မယ်၊ ဟုတ်လား ကျွန်တော်တို့ လုပ်ငန်းတစ်ခု စတင်မယ်ဆိုရင် လုပ်ငန်းနဲ့ ပတ်သက်ပြီးတော့ ကျွန်တော်တို့ ဒီပတ်ဝန်းကျင်ကို ထိခိုက်မှု ရှိ၊ မရှိ ကျွန်တော်တို့တွေက လေ့လာဆန်းစစ်တဲ့ လုပ်ငန်းကို လုပ်ကြတာ ဖြစ်ပါတယ်။

ဒီလုပ်ငန်း လုပ်လိုက်လို့ ပတ်ဝန်းကျင်မှာရှိတဲ့ ပတ်ဝန်းကျင် ကျေးငှက်သာရကာတွေ၊ ပတ်ဝန်းကျင် သယံဇာတတွေ၊ ပြီးတော့ ရေတွေ၊ လေထုတွေ၊ သစ်ပင်ပန်းမန် စသည် အားလုံးပါ မူလသဘာဝ အတိုင်းကနေ ပျက်ယွင်းသွားပြီးတော့မှ ဘာတွေ ထိခိုက်နိုင်လဲ၊ ထိခိုက်မှု ရှိရင်တော့ ဒီလုပ်ငန်းကို ကျွန်တော်တို့ မလုပ်ဘူး၊ ထိခိုက်မှု မရှိမှ ကျွန်တော်တို့ ဒီလုပ်ငန်းကို ဆက်လုပ်ဖို့ကို ဒါကြောင့်မို့လို့ ဒီပတ်ဝန်းကျင် ထိခိုက်လေ့လာမှုကို ကျွန်တော်တို့ ဆန်းစစ်ကြတာ ဖြစ်ပါတယ်။

ဒီမှာလည်း ကျွန်တော်တို့က ကုမ္ပဏီတွေ ရှိတယ်၊ ကုမ္ပဏီကနေ ဆန်းစစ်လေ့လာပြီးတော့မှ ကျွန်တော်တို့ အစီရင်ခံစာ ပြုစုတယ်၊ အစီရင်ခံစာ ပြုစုပြီးတော့မှ ကျွန်တော်တို့ အစိုးရအဖွဲ့၊ သက်ဆိုင်ရာ အစိုးရအဖွဲ့အစည်းကို တင်ပြပြီးတော့မှ ကျွန်တော်တို့က ခွင့်ပြုချက်ရပြီးမှ ဆောင်ရွက်ရတဲ့ လုပ်ငန်းတွေ ဖြစ်ပါတယ်။ အဲ့တော့ ကျွန်တော်တို့က ဒီလုပ်ငန်းကို မဖြစ်မနေ ကျွန်တော်တို့က လုပ်သင့်လုပ်ထိုက်တဲ့ လုပ်ငန်းတစ်ခု ဖြစ်ပါတယ်။ ဘာကြောင့်လဲဆိုတော့ ဒီစက်ရုံရဲ့ ပတ်ဝန်းကျင်မှာရှိတဲ့ ကျွန်တော်တို့ လုပ်သားပြည်သူတွေ၊ ဒီလုပ်သားပေါ့နော် သဘာဝပတ်ဝန်းကျင်၊ ကျွန်တော်တို့ရှိတဲ့ လူမှုပတ်ဝန်းကျင်မှာ ကျွန်တော်တို့က ထိခိုက်မှု ရှိ၊ မရှိကို ကျွန်တော်တို့က ဆက်ပြီး လေ့လာကြတာ ရှိပါတယ်။

အဲ့တော့ ကျွန်တော်တို့ ဒီနေ့ပြုလုပ်တဲ့ ဆွေးနွေးပွဲမှာ သက်ဆိုင်တဲ့ ကျွန်တော်တို့ ကုမ္ပဏီကလည်း သူတို့ ပတ်ဝန်းကျင် သူတို့ လေ့လာဆန်းစစ်ထားတဲ့ဟာ အပေါ်မှာ ကျွန်တော်တို့ တင်ပြဆွေးနွေးသွားမှာ ပါဝင်ပါမယ်။ တင်ပြဆွေးနွေးတဲ့ အပေါ်မှာ ကျွန်တော်တို့ မြေပြင်နဲ့ ကိုက်ညီမှု ရှိ၊ မရှိကို ကျွန်တော်တို့ ဒီမှာ တက်ရောက်လာကြတဲ့ မွေးမြူရေးဇုန် ပတ်ဝန်းကျင်မှာ နေထိုင်ကြတဲ့ လုပ်သားပြည်သူတွေကနေ မိမိသိလိုတဲ့ဟာတွေ၊ ကျွန်တော်တို့ ဖြစ်ပေါ်လာနိုင်တဲ့ အခြေအနေတွေကို ကျွန်တော်တို့က ဒီအပေါ်မှာ ထည့်သွင်း ဆွေးနွေးပေးကြဖို့ ဖြစ်ပါတယ်။

နိဂုံးချုပ်အနေနဲ့ ပြောရရင်တော့ ဘာပဲပြောပြော ကျွန်တော်တို့တွေ ဒီမှာ လုပ်ငန်းတစ်ခု လုပ်တာဖြစ်တဲ့အတွက် ဒီပတ်ဝန်းကျင်မှာရှိတဲ့ ကျွန်တော်တို့ လုပ်သားပြည်သူတွေအတွက်လည်း

ကျွန်တော်တို့က အလုပ်အကိုင် အခွင့်အလမ်းတွေ ရရှိနိုင်မှာ ဖြစ်သလို၊ ဒီလုပ်ငန်းကနေ ထွက်ပေါ်လာတဲ့ ဆိုးကျိုးတွေကြောင့်လည်း ကျွန်တော်တို့တွေ ပတ်ဝန်းကျင် ထိခိုက်မှု အနည်းဆုံးဖြစ်အောင် ဆန်းစစ်လေ့လာ ဆောင်ရွက်နေတာ ဖြစ်တဲ့အတွက် ကျွန်တော်တို့ ဒီမှာ တက်ရောက်လာတဲ့ ကျွန်တော်တို့ ပတ်ဝန်းကျင်မှာရှိတဲ့ ပြည်သူများအနေနဲ့လည်း မိမိတို့ လက်ရှိ မြေပြင်မှာ တည်ရှိနေတဲ့ အခြေအနေလေးကိုလည်း ကျွန်တော်တို့ ဒီမှာ ထည့်သွင်း ဆွေးနွေးပေးကြပါလို့ ကျွန်တော်အနေနဲ့ မေတ္တာရပ်ခံ ပြောကြားရင်း နိဂုံးချုပ်ပါတယ်။ ကျေးဇူးတင်ပါတယ်။

အစီအစဉ် (၃)	**ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ လက်ထောက် ညွှန်ကြားရေးမှူးမှ အဖွင့်အမှာစကား ပြောကြားခြင်း။**

အားလုံးပဲ မင်္ဂလာပါ။ ကျွန်တော်ကတော့ ဒီပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန၊ မြောက်ပိုင်းခရိုင်ပေါ့နော်၊ ကျွန်တော်တို့ လက်ရှိတော့ အင်းစိန်ခရိုင် လက်ထောက်ညွှန်ကြားရေးမှူး ဦးမြင့်ဇော်ဦး ဖြစ်ပါတယ်။ ကျွန်တော် ဒီနေ့ တွေ့ရှိချက်တွေ နည်းနည်းလေး အမှာစကားဆိုတာထက် ဖြစ်သင့်တာလေးပေါ့နော်၊ တင်ပြချင်ပါတယ်။

ဘာလို့လဲဆိုတော့ ကျွန်တော်တို့ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနက ကျွန်တော်တို့ ရန်ကုန်တိုင်းမှာ ၂၀၁၈ မှ ကျွန်တော်တို့က စဖွင့်တာ။ ကျွန်တော်တို့ စဖွင့်ပြီးတော့မှ ဒီပတ်ဝန်းကျင် စက်မှုဇုန်တွေ၊ စက်ရုံတွေမှာ ပတ်ဝန်းကျင်နဲ့ ပတ်သက်ပြီး ဒီဆန်းစစ်ချက်တွေ ဆောင်ရွက်တာ ကျွန်တော်တို့ အားလုံးကို သိစေချင်တာ။ စက်ရုံတွေ၊ ကျွန်တော်တို့ ၂၀၁၅ လွတ်တော်မှာ ပြဋ္ဌာန်းထားတဲ့ ဥပဒေအရဆိုရင် ကျွန်တော်တို့ လုပ်ငန်းအားလုံး စက်ရုံတွေလည်း ပါတယ်၊ ကျွန်တော်တို့ အဆောက်အအုံ ဆောက်တဲ့ လုပ်ငန်းတွေလည်း ပါတယ်၊ ဒါတွေက ကျွန်တော်တို့ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးရဲ့ ECC ရယူပြီးမှ လုပ်ငန်းဆောင်ရွက်ရမယ်၊ တခြား လိုင်စင်တွေ ယူရမယ်လို့ သူက ဒီလွှတ်တော် ဥပဒေတွေမှာ ပြဋ္ဌာန်းထားတာ ဖြစ်ပါတယ်။

ဒါပေမဲ့လည်း အကြောင်းအမျိုးမျိုးကြောင့် ကျွန်တော်တို့ ဌာနက လုပ်ထုံးလုပ်နည်းတွေ အဆင်သင့် မဖြစ်တာရယ်၊ ပြီးတော့ ကျွန်တော်တို့ ဌာနက Umbrella Law ကျွန်တော်တို့က ဘယ်လိုလဲဆိုတော့ ဌာနအားလုံးနဲ့ ဆက်စပ်ရတာ။ ဥပမာ- ကျွန်တော်တို့က သတ္တုတွင်းဌာန၊ ရွှေတူးလုပ်ငန်းတွေနဲ့လည်း ကျွန်တော်တို့ ဆက်စပ်တယ်။ တစ်ခါ ဒီဆောက်လုပ်ရေး လုပ်ငန်းတွေပေါ့နော်၊ ဆောက်လုပ်ရေး လုပ်ငန်းဖြစ်တဲ့ အခု INNO City တွေလို Project အကြီးတွေ၊ ဒီလိုဟာတွေလည်း ကျွန်တော်တို့က ဆက်စပ်တယ်။ ဒီစက်မှုဇုန်တွေမှာ စက်ရုံတွေ လုပ်တဲ့အခါ ဒါတွေဟာလည်း ကျွန်တော်တို့က ဆက်စပ်တယ်၊ အဓိက ဆက်စပ်နေတယ်။

အဲ့တော့ ဘာတွေဖြစ်လဲဆိုတော့ ကျွန်တော်တို့ ဌာနက လုပ်ထုံးလုပ်နည်း အားနည်းတာတွေ၊ အတွေ့အကြုံ အားနည်းတာ၊ ဌာနမှာ Human Resources လို့ခေါ်တဲ့ ကျွန်တော်တို့ ဝန်ထမ်းတွေရဲ့ Capacity အရလည်း နည်းသလို၊ ဌာနအနေနဲ့လည်း လုပ်ထုံးလုပ်နည်းတွေ အဆင်သင့် မဖြစ်သေးဘူး ပေါ့နော်။ အဓိကတော့ ဒီစကားကို ကျွန်တော် ဘာလို့ စကားပလွင့်ခံရလဲဆိုတော့ ကျွန်တော်တို့ရဲ့ စက်ရုံတွေကို ကျွန်တော်တို့ရဲ့

EMP၊ IEE၊ EIA ရေးစေတဲ့အခါမှာ ကျွန်တော်တို့ရဲ့ ဒီရည်မှန်းချက်၊ ရည်ရွယ်ချက်ပေါ့။ ရည်ရွယ်ချက်ကတော့ စက်ရုံတွေက စွန့်ပစ်ပစ္စည်း ရေဆိုးတွေ ထွက်မယ်၊ စက်ရုံတွေက အန္တရာယ်ရှိတဲ့ စွန့်ပစ်ပစ္စည်း ထွက်မယ်ဆိုရင် ကျွန်တော်တို့က စက်ရုံထဲမှာ သန့်စင်ပြီးတော့မှ ကျန်းမာရေး ရှုထောင့်အရ ဒီအန္တရာယ် မရှိတဲ့အချိန်မှာ ပြင်ပကို စွန့်ထုတ်ဖို့ဆိုတဲ့ ရည်ရွယ်ချက်နဲ့ ကျွန်တော်တို့က ဒီအစီရင်ခံစာတွေကို ရေးဆွဲခိုင်းတာ။ တကယ်လို့ ဒီစက်ရုံက အန္တရာယ်ရှိတဲ့ ပစ္စည်းတွေ မထွက်ဘူးဆိုရင် ဒီစက်ရုံက ရေးဆွဲစရာ မလိုဘူး။

အဲ့တော့ ဘာဖြစ်လဲဆိုတော့ ကျွန်တော်တို့တွေ ဒီတိရိစ္ဆာန်အစာ ဒီစက်ရုံကို ဟိုတစ်နေ့က ရောက်တယ်။ မြေပြင်ရောက်တော့ ဘယ်လိုပဲဖြစ်ဖြစ် ဟိုပြောရရင်လည်း မတန်ဘူးပေါ့နော်၊ ပြောရရင် ကျွန်တော်တို့ ဌာနလည်း စကားပလ္လင်ခံတဲ့အထဲမှာ ပါပါတယ်။ ဌာနက လုပ်ထုံးလုပ်နည်းတွေ မပြည့်စုံတာရယ်၊ ဌာနအားလုံး ဆက်စပ်တာရယ် ပေါ့နော်၊ အဲ့လို အခြေအနေဖြစ်တော့ ကျွန်တော်တို့က တစ်ခါတလေ ကျွန်တော်တို့ ရေးဆွဲစေတဲ့ ကျွန်တော်တို့ Project Proposal တင်ခိုင်းတယ်။ တင်ခိုင်းတဲ့အပေါ်မှာ လုပ်ငန်းရှင်တွေကလည်း တချို့က ပြည့်စုံစွာ မရေးလိုက်တော့ ဒီအခြေအနေတွေကြောင့် ဒါအခု ကျွန်တော်တို့ Golden Apex International Trading ဟာဆိုရင် ကျွန်တော်တို့ရဲ့ EIA ဖြစ်နေတယ်။

အမှန်တော့ ကျွန်တော်တို့ ရောက်တဲ့အချိန်မှာ တကယ် ပြည်တွင်း လုပ်ငန်းရှင်တစ်ယောက် အနေနဲ့ ဒီကိုယ့်ရဲ့ ပြည်တွင်းထုတ်ကုန်တွေကို ထုတ်နေတဲ့ လုပ်ငန်းတစ်ခု ပေါ့နော်။ တကယ် အန္တရာယ်ရှိတဲ့၊ ပတ်ဝန်းကျင်ကို အန္တရာယ်ရှိစေတဲ့ Impact ဆိုတာလည်း စနစ်တကျ စွန့်ပစ်မယ်ဆိုရင် ရတဲ့ အခြေအနေ ပေါ့နော်။ ဥပမာ- ကျွန်တော်တို့ အရက်ချက်စက်ရုံ၊ ဥပမာ ဆိုပါစို့ Chemical စက်ရုံတို့၊ ဒီလိုမျိုး အန္တရာယ်ရှိတဲ့ အရည်တွေကို နေ့စဉ် ထုတ်လုပ်မှု လုပ်ငန်းစဉ်တွေကနေ ထွက်နေတဲ့ လုပ်ငန်းတော့ မဟုတ်ဘူး။

အဲ့ဒီတော့ ကျွန်တော်တို့က ဒီနေရာမှာ တတိယ အဖွဲ့အစည်းတွေကိုလည်း ကျွန်တော်တို့က မေတ္တာရပ်ခံတာ ပေါ့နော်၊ အကြံပြုတာ။ ဆရာမကြီးတို့က ကျွန်တော်တို့ထက်လည်း ဘာပဲပြောပြော အတွေ့အကြုံတွေ ရှိတယ်ပေါ့နော်၊ ရှိတဲ့အချိန်မှာ ဒီလိုမျိုး ကွင်းဆင်းလို့ တွေ့ရင် တွေ့တဲ့ဟာလေးကို ပြန်တင်ပြမှ၊ တင်ပြမယ် မဖြစ်သင့်ရင် မလုပ်ထိုက်ဘူး၊ မလုပ်ထိုက်တဲ့ဟာလေးကို တင်ပြမှသာလျှင် ဥပမာ - ကျွန်တော်တို့ လုပ်ငန်းရှင်တွေ ဝန်ထုပ်ဝန်ပိုး ဖြစ်မှာပေါ့နော်။ နို့မို့ဆိုရင် ကျွန်တော်တို့က လုပ်ငန်းရှင်တွေလည်း ဝန်ထုတ်ဝန်ပိုး ဖြစ်သွားတာ ပေါ့နော်။ ဘာလို့ ဝန်ထုတ်ဝန်ပိုး ဖြစ်နေလဲဆိုတော့ ကျွန်တော်တို့က ခုနကပြောသလို သူ့အိုးနဲ့သူ့ဆန် မတန်တော့ဘူး၊ မတန်တော့ဘူး ဆိုတော့ ဘာလို့ ဒီကောင်က EIA ဖြစ်တော့ နောက်ဆက်တွဲတွေ ဘာတွေ လာလဲဆိုတော့ EIA ဖြစ်သွားရင် ကျွန်တော်တို့တွေက Scoping Report တွေ လုပ်ရတယ်၊ Scoping Report နဲ့ မပြီးသွားဘူး၊ ပြီးတော့ EIA Report တွေ ရေးရတယ်။ အဲ့ဒီ EIA Report မှာကျတော့လည်း နိုင်ငံတကာ Standard တွေကျတော့ EIA Report မှာဆိုရင် Secondary Data မရဘူး၊ Primary Data မှ ရတယ်၊ ဒီလိုတွေ ဖြစ်ကုန်တာ ပေါ့နော်။ ဒီလိုတွေ ဖြစ်ကုန်တော့ ဘာပဲပြောပြော လုပ်ငန်းရှင်ကို Burden သွားဖြစ်တယ်။ ဘာလဲဆိုတော့ ဒီလိုတွေ Report ရေးရတာ ဖြစ်တဲ့အတွက် တတိယ အဖွဲ့အစည်း အနေနဲ့လည်း ကုန်ကျစရိတ်တွေ အများကြီး ရှိတယ်။

အခဲ့တော့ ဒီလိုမျိုး လုပ်ဖို့ လိုလားဆိုတော့ ကျွန်တော်တို့က စဉ်းစားရမှာ ပေါ့နော်။ အခဲ့တော့ ဟိုတစ်ခေါက်ကလို ကျွန်တော် လုပ်ငန်းရှင်တွေကို အကြံပြုခဲ့တယ်။ ကျွန်တော်တို့ ဟို... ဒီဟာနဲ့ ပတ်သက်ပြီးတော့ ဌာနကိုလည်း ဖြေလျှော့ခွင့် သို့မဟုတ် တင်သွင်းသင့်တယ်၊ ကျွန်တော် အကြံပြုခဲ့တယ်။ အခဲ့လို တင်တဲ့အချိန်မှာ အခဲ့လို နောက်ပိုင်း ကျွန်တော်တို့ ဌာနလည်း အခဲ့လို တင်လာရင် ကျွန်တော်တို့က စဉ်းစားပေးနေတယ် ဒါတွေကို ညီမတို့ သိအောင်လို့လေ။ အဓိက ရည်ရွယ်ချက်က ဘာလဲဆိုရင် လုပ်ငန်းရှင်တွေ Burden ဝန်ထုတ်ဝန်ပိုး မဖြစ်စေချင်တာ။ ဘာလို့လဲဆိုတော့ ကျွန်တော်တို့က ဒီ Monitoring လုပ်တယ်ဆိုရင် Monitoring လုပ်ဖို့ လိုမှ Monitoring လုပ်ရမှာ ဖြစ်ပါတယ်။ Monitoring လုပ်ဖို့ လိုတယ်ဆိုရင် ဘာရှိရမလဲဆိုတာ သူ့မှာ အမြဲတမ်း စဉ်ဆက်မပြတ် ထွက်နေတဲ့ Impact ရှိရမယ်။ ဥပမာ - စွန့်ပစ်အရည်တွေ ဒီစက်ရုံက ထုတ်လုပ်မှု Process ကနေ နေ့စဉ် ထွက်နေမယ်၊ အန္တရာယ်ရှိတဲ့ အမှိုက်တွေ၊ အန္တရာယ်ရှိတဲ့ Chemical တွေ သူ့စက်ရုံဆီက ထွက်နေတယ်၊ တောက်လျှောက် ထွက်နေတယ် ဆိုရင်တော့ ဒါ Monitoring လိုတယ်။

Monitoring သဘောကလည်း စောနပြောသလိုပဲ ဒီက ထွက်လာတဲ့ စွန့်ပစ်ပစ္စည်း အရည်တွေက ကျွန်တော်တို့ ဌာနက သတ်မှတ်ထားတဲ့ Guideline ပေါ့၊ ဥပမာ BOD သတ်မှတ်ချက် ဘယ်လောက်တောင် မကျော်အောင် စွန့်ပစ်ရမယ်ဆိုတဲ့ Guideline ဝင်ရောက်အောင် စက်ရုံကိုယ်တိုင်က စောင့်ကြည့်ရသလို၊ ဒီကျွန်တော်တို့ ဌာနကလည်း အခါအားလျော်စွာ ကြည့်မယ်ပေါ့။ အခဲ့တော့ ကျွန်တော်တို့က ဒီစက်ရုံ သွားကြည့်တဲ့အချိန်မှာ အဓိကကတော့ ကျွန်တော်တို့ လုပ်ငန်း ဆောင်ရွက်တဲ့အချိန်မှာ ငါးခြောက်တွေ ဒီဟာတွေ နယ်တဲ့အချိန် နံတာ ဒီလောက်လေးပဲ ကျွန်တော်တို့မှာ ရှိတယ်။ တကယ် အန္တရာယ်ရှိတဲ့ စွန့်ပစ်အရည်တွေ၊ အန္တရာယ်ရှိတဲ့ အခိုးအငွေ့တွေလည်း မထွက်တော့ဘူး။ အခဲ့တော့ စက်ရုံအနေနဲ့ ကြည့်မယ်ဆိုရင် ဒါ သူ့အတွက်က ကျွန်တော်တို့ Burden ဖြစ်သွားတာ။

ဒါက ကျွန်တော်တို့ တွေ့ရှိချက်တွေ ပေါ့။ Burden ဖြစ်သွားရင် ဘာဖြစ်မလဲဆိုတော့ အခုဆိုရင် EIA အတည်ပြုသွားရင်တောင် စက်ရုံက မပြီးဘူး၊ (၆) လ တစ်ကြိမ် Monitoring တွေ တောက်လျှောက် တင်ရမယ်။ ကျွန်တော်တို့က အဲ့ဒါနဲ့ ပတ်သက်ပြီးတော့လည်း မေတ္တာရပ်ခံတာ ပေါ့နော်။

တတိယ အဖွဲ့အစည်းကို ကျွန်တော်တို့က တစ်ခါတလေ ဒီလိုမျိုး ပြောရတာက မပြောချင်ပါဘူး၊ တတိယ အဖွဲ့အစည်းအတွက် ဘာလို့လဲဆိုတော့ ကျွန်တော်တို့ ဒီလိုပြောလိုက်ရင် ဟို... ဒါ ပွင့်ပွင့်လင်းလင်း တင်ပြတာ၊ တတိယ အဖွဲ့အစည်းတွေအတွက်ကျ သိပ်နစ်နာတာ ပေါ့နော်။ တတိယ အဖွဲ့အစည်းက ဘာလို့ နစ်နာလဲဆိုတော့ စာချုပ်ချုပ်ထားတဲ့ဟာ သူလုပ်ထားတဲ့ဟာ တစ်ခုခု ပျက်သွားတယ်ဆိုရင် ဘယ်လိုပဲဖြစ်ဖြစ် တတိယ အဖွဲ့အစည်း အနေနဲ့ ငွေရေးကြေးရေး အရ သော်လည်းကောင်း၊ သူတို့ ရင်းနှီးမြှုပ်နှံရ သော်လည်းကောင်း ဒါ နစ်နာတာပေါ့။

သို့သော်လည်းပဲ ကျွန်တော်တို့က နိုင်ငံရဲ့ ရည်မှန်းချက်က ဘာလဲဆိုတော့ စောနက ပြောသလိုပဲ ဒီစက်ရုံ၊ အလုပ်ရုံ လုပ်ငန်းရှင် ဝန်ထုတ်ဝန်ပိုး မဖြစ်ဖို့ လိုတယ်။ ပြီးရင် လုပ်သင့်လုပ်ထိုက်တဲ့ စက်ရုံတွေကလည်း လုပ်ဖို့ လိုတယ်။ ဒါတွေ ကျွန်တော်တို့တွေက အဲ့ဒီ ရည်ရွယ်ချက်ကို ကျွန်တော်တို့တွေ သွားနေတာ ပေါ့နော်။ သွားနေတော့ ကျွန်တော်တို့ရဲ့ အတွေ့အကြုံအရ ဆိုရင် စောနက ကျွန်တော် ပြောသလိုပဲ ကျွန်တော်တို့မှာ

Human Resources တွေ၊ Capacity တွေ ကျွန်တော်တို့တွေ မရှိခင်တုန်းက ကျွန်တော်တို့ရဲ့ ပွင့်ပွင့်လင်းလင်း ပြောရရင် လူပိန်းအတွေးပေါ့။ ကျွန်တော်တို့တွေက အထည်စက်ရုံတွေက လူ ၃၀၀၀ လောက် ရှိတယ်။ စက်ရုံတွေက အကြီးတွေ၊ အဲ့လိုဆိုရင် Impact များလိမ့်မယ်လို့ ကျွန်တော်တို့ တွေးခဲ့တယ်။

တွေးခဲ့တော့ ဟိုအရင်တုန်းကဆိုရင် ကျွန်တော်တို့က အဲ့လိုစက်ရုံတွေဆိုရင် IEE ရေးခဲ့တယ်၊ ကျွန်တော်တို့ EMP တွေ ရေးခိုင်းခဲ့တယ်။ ဒါ ကျွန်တော်တို့ ဌာနရဲ့ အတွေ့အကြုံပေါ့။ နောက်ပိုင်းကျတော့ ကျွန်တော်တို့လည်း ကွင်းဆင်းရင်း ဒီဟာတွေ လေ့လာရင်း ဘာတွေ့လာတယ်ဆိုတော့ အထည်ချုပ် စက်ရုံတွေကတော့ Environmental Impact မရှိဘူး၊ မရှိသလောက်ပါပဲ။ သူက အထည်တွေကို ဖြတ်တယ်၊ ညှပ်တယ်၊ ပို့လိုက်တယ်။ ဒါပေမဲ့ အဓိက သူတို့မှာ Social Impact ပဲ ရှိတယ်။ Social ဆိုတာ လူမှုရေး ပြဿနာကျတော့လည်း ကျွန်တော်တို့နဲ့ တိုက်ရိုက် မဆိုင်ဘူး။ ကျွန်တော်တို့ နိုင်ငံမှာဆိုရင် အလုပ်ရုံနှင့် အလုပ်သမား ညွှန်ကြားရေးဦးစီးဌာနတွေ ရှိတယ်၊ ဒီဌာနတွေက ဖြေရှင်းပေးတာ။ အဲ့တော့ ကျွန်တော်တို့တွေက နောက်ပိုင်း အထည်ချုပ်စက်ရုံတွေကိုတော့ မရေးခိုင်းတော့ဘူး၊ သူ့ကို စည်းကမ်းချက်နဲ့ပဲ သွားခိုင်းတော့တာ။ ဥပမာ - ကျွန်တော်တို့တွေ ဒီမှာ ဖြတ်စ၊ ညှပ်စတွေ စွန့်ပစ်တဲ့ ဟာဆိုရင် ဒီစက်မှုဇုန်တွေမှာ မည်စည်မိုးအောင်၊ ဟိုဟာမဖြစ်အောင် ကျွန်တော်တို့က ဘယ်လို ပစ်ရမလဲဆိုတဲ့ စည်းကမ်းချက်တွေနဲ့ပဲ ခွင့်ပြုပေးလိုက်တာ။

အဲ့တော့ ကျွန်တော်အနေနဲ့တော့ ဒါ နောက်ဆုံး ဘယ်လိုပဲဖြစ်ဖြစ် ကျွန်တော်တို့ကတော့ ကျွန်တော်တို့ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဦးစီးဌာန၊ ဒီနိုင်ငံတကာမှာတော့ ၁၉၆၀ လောက်ကတည်းက ဖွံ့ဖြိုးပြီးတဲ့ နိုင်ငံတွေမှာ မဖြစ်မနေ ကျင့်သုံးနေတယ်။ Eventually ကျွန်တော်တို့ အနီးနားမှာ ထိုင်းနိုင်ငံမှာ ဆိုရင်တောင် ဆယ်ဆမက သာနေတာကတော့ ပတ်ဝန်းကျင်တွေရဲ့ အတွေ့အကြုံ။ ဒီ Waste တွေကို ဒီမြို့နယ်ကို ကျော်မပစ်ရဘူး ဆိုတာ လုံးဝ ပစ်လို့မရပါဘူး။ အဲ့လောက်... ဒါ ကျွန်တော်တို့ဆီမှာ အရာရာ နောက်ကျတယ်။ Resources တွေလည်း နည်းတယ်၊ အရာရာ နောက်ကျတယ်။ ပွင့်ပွင့်လင်းလင်း ပြောရရင် ဒီဘက်က ကျွန်တော်တို့တွေ Human Resources တွေ ဌာနမှာလည်း ဆုံးရှုံးသွားတာ အများကြီးပဲ။ Human Resources တွေ ကျွန်တော်တို့ ဌာနတွေ နိုင်ငံတကာမှာ ဘွဲ့တွေ ယူထားတယ်။ ဒီလူတွေဟာလည်း အကြောင်းအမျိုးမျိုးကြောင့် ထွက်သွားတယ်။ ဒီလိုမျိုး ပေါ့နော်၊ ကျွန်တော်တို့ ဌာနမှာလည်း ဒီလူအခြေအနေကတော့ ကျွန်တော်တို့ ဌာနမှာဆိုရင်တော့ Struggle ဖြစ်တယ် ပေါ့နော်။

အဲ့တော့ ဘာပဲပြောပြော ကျွန်တော်တို့က အကြံပြုစေချင်တာကတော့ နောက်ဆုံးပြောရရင် Effectiveness ဆိုတာ အားလုံးကို Effectiveness နဲ့ဆိုရင် ကျွန်တော်တို့ EIA စနစ်မှာဆိုရင်တော့ Sector (၃) ခု ပါပါတယ်။ ကျွန်တော် ခဏခဏ ပြောတယ်၊ လုပ်ငန်းရှင်ရယ်၊ ကျွန်တော်တို့ရယ်၊ တတိယ အဖွဲ့အစည်းတွေရယ်။ ဒါပေမဲ့ အားလုံးက ပြုပြင်မှသာလျှင် ကျွန်တော်တို့က စောနကပြောသလိုပဲ Effectiveness ကို ရမှာ။

နို့မို့ဆိုရင် Sector တစ်ခုဘက်ကနေ လိုအပ်ချက်တွေ ရှိနေရင် ကျွန်တော်တို့က ထိရောက်တဲ့ဟာ ဖြစ်မှာ မဟုတ်ဘူး။ စောနလိုပဲ ကျွန်တော်တို့ ECD ရဲ့ အတွေ့အကြုံအရ ဆိုရင် မလိုအပ်ဘဲ ခိုင်းလိုက်ရင် လုပ်ငန်းရှင်အတွက် Burden ဖြစ်သွားတာ။ အဲ့လိုပဲပေါ့၊ လုပ်သင့်တဲ့ဟာကို မလုပ်ခိုင်းလိုက်ရင်လည်း ဒါ

စောနပြောသလို အမျိုးမျိုး ပေါ့နော်၊ လုပ်သင့်တဲ့ စက်ရုံ မလုပ်ခိုင်းရင်လည်း ပတ်ဝန်းကျင် ညစ်ညမ်းတယ်။ အဲ့တော့ ကျွန်တော်တို့က ထောင့် (၃) ထောင့် ရှိရင် ထောင့် (၃) ထောင့်က မျှခြေဖြစ်မှသာလျှင် ကျွန်တော်တို့က ထိရောက်တဲ့ စနစ်တစ်ခု ဖြစ်မှာပါ။

ဘာပဲပြောပြော ကျွန်တော်တို့ ဌာနကတော့ Initial Stage ဖြစ်နေတယ်။ စောနကပြောသလို ဖြစ်နေတဲ့အတွက် အားနည်းချက်တွေ ရှိနေပါတယ်။ သို့သော်လည်းပဲ ပူးပေါင်းဆောင်ရွက်သွားမယ် ဆိုရင်တော့ ဒါ ထိရောက်တဲ့ဟာ ဖြစ်မှာပါ။ အဲ့တော့ ညီမတို့ကို အကြံပြုချင်တာ အခုချိန်ထိလည်း ကျွန်တော် ရုံးချုပ်ကို ဖုန်းတော့ ဆက်ပေးနေတယ်။ ညီမတို့ လုပ်ငန်းရှင်အနေနဲ့ ဆန္ဒရှိမယ်ဆိုရင် ပေါ့နော်၊ ညီမတို့ လုပ်ငန်းရှင်အနေနဲ့ ဘာတွေးရမလဲဆိုတော့ EIA ကို ဆက်သွားမယ်ဆိုရင် ညီမတို့ Monitoring ဆက်သွားရမယ်၊ Monitoring တွေ ဆက်တင်ရမယ်။ စောနလိုပေါ့၊ ရေအရည်အသွေးတွေ တိုင်းရမယ်။ အဲ့ဒါဆိုရင်တော့ ဆရာမကြီးတို့ တတိယ အဖွဲ့အစည်းတွေက လိုရဲ့လား ပေါ့၊ ဒီဟာနဲ့ ပတ်သက်ပြီးတော့ လိုရဲ့လား။ ဒီစက်ရုံတွေမှာ အဓိက Impact က ဘာလဲ။

ဘာလို့လဲဆိုတော့ ဆရာမကြီးတို့ကတော့ အခကြေးငွေနဲ့ Consultant Fees နဲ့ တကယ် မြေပြင်ဆန်းစစ်တာ ဆိုတော့။ ဒါပေမဲ့ ကျွန်တော်တို့ကတော့ အမြင်အရ ပေါ့နော်၊ လက်တွေ့အမြင်အရ ပြောပြတာ ဖြစ်တဲ့အတွက် ဒါလေးကိုတော့ Emphasize စေချင်ပါတယ်။ ဆရာမကြီး... နို့မို့ဆိုရင် နောက်တစ်ခုက ကျွန်တော်တို့ ဌာန Burden ဖြစ်တယ်။ ကျွန်တော်တို့ ဌာန ဘာ Burden ဖြစ်လဲဆိုတော့ အခုဆိုရင် အရင်တုန်းက စက်ရုံအသေးလေး ကျွန်တော်တို့ သွင်းကုန်တွေလည်း EMP ရေးဆွဲခိုင်းဖူးတယ်။ အဲ့တော့ ဘာဖြစ်လဲဆိုရင် အဲ့ဒီ Report တွေက ကျွန်တော်တို့ဆီ ပြန်တက်လာတာ၊ အဲ့ဒါတွေလည်း ကျွန်တော်တို့ ပြန်စစ်ရတာ။

နောက်တစ်ခုက စောနလို Monitoring Report တွေကလည်း မလိုအပ်ဘဲနဲ့ ကျွန်တော်တို့ဆီ ပြန်တက်လာတယ်။ အဲ့ဒီ Report တွေ ကျွန်တော်တို့ပဲ ပြန်စစ်ရတာ။ ကျွန်တော်တို့လည်း Burden ဖြစ်တယ်။ ကျွန်တော်တို့ ဌာနလည်း Burden ဖြစ်တယ်။ မလိုအပ်ဘဲနဲ့ ဒါလေးတွေလည်း နားလည်ပေးပါ၊ ဆရာမကြီးတို့လည်း နားလည်ပေးပါ။

လုပ်ငန်းရှင်ရဲ့ ဆန္ဒကို ညီမတို့ကတော့ ကုန်ကျစရိတ်တွေ တတ်နိုင်တယ်၊ ပိုကောင်းအောင်လည်း လုပ်ချင်တယ်၊ ဟိုဟာဖြစ်အောင် လုပ်ချင်တယ်၊ ဆက်သွားမယ် ဆိုရင်လည်း ညီမတို့ သဘော။ ဆက်မသွားချင်ဘူး၊ ရမလား မရဘူးလား ဆိုတာတွေလည်း ပြီးခဲ့တဲ့ ကာလတွေ သေချာပေါက် ရမှာ။ အခုကတော့ ကာလက နည်းနည်းလေး ကြာသွားတော့... ဒါပေမဲ့ တစ်ချက်တော့ ပြန်တိုင်ပင် ဆွေးနွေးကြည့်ရမှာ ပေါ့နော်၊ ဆရာမကြီးတို့နဲ့ ထိရောက်အောင် ပေါ့နော်။

ကျွန်တော်တို့က အကြံပြုတာပါ။ ကျွန်တော်က မြေပြင်ရောက်တာ မကြာသေးဘူး၊ တစ်လတောင် မရှိသေးဘူး ထင်တယ်။ ၁၄ - ၁၅ ရက်၊ ရက် ၂၀ လောက်ပဲ ရှိဦးမလား မသိဘူး။ မြေပြင်ရောက်တဲ့ အချိန်ကျတော့ ပြည်တွင်း လုပ်ငန်းရှင် တစ်ယောက်၊ တကယ် ပြည်တွင်း ထုတ်လုပ် ဖြန့်ဖြူးတဲ့

လုပ်ငန်းတစ်ခု ဖြစ်တာပါနော်။ တကယ် အန္တရာယ် ရှိနေတဲ့ စွန့်ပစ်အရည်တွေ၊ အန္တရာယ် ရှိနေတဲ့ဟာ ထွက်တဲ့ဟာတော့ ကျွန်တော် မတွေ့ဘူး။ ဟုတ်ပြီ... ကျေးဇူးတင်ပါတယ်။ ကျွန်တော် နိဂုံးက ဒီလောက်ပါပဲ။	
အစီအစဉ် (၄)	**Golden Apex International Trading Co., Ltd မှ တာဝန်ရှိသူမှ စီမံကိန်းအကြောင်း ရှင်းလင်းတင်ပြခြင်း။**
အစီအစဉ် (၅)	**Environmental Compliance Consultancy Co., Ltd. (ECC) မှ လူမှုစီးပွားရေး အကြံပေး ပုဂ္ဂိုလ်မှ သဘာဝပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း နှင့် ပတ်သက်၍ ရှင်းလင်းတင်ပြခြင်း။**
အစီအစဉ် (၆)	**လူထုတွေ့ဆုံ ဆွေးနွေးပွဲ အခမ်းအနားသို့တက်ရောက်လာသူများမှ မေးခွန်းများ မေးမြန်းဆွေးနွေးခြင်း။**
ဦးကျော်စိုးပိုင် ဥက္ကဋ္ဌ ကုလားကြီးစုကျေးရွာအုပ်စု	ဟုက့်။ မရှိပါဘူးခင်ဗျ။
ဦးမြင့်ဇော်ဦး လ/ထည္ဆန်ကြားရေးမှူး ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန	Public Consultation လုပ်စေတဲ့ ရည်ရွယ်ချက်လေးပါ ဆရာတို့ ပွင့်ပွင့်လင်းလင်း ပြောဖို့လိုတယ်။ နဂိုတုန်းကကျတော့ ကျွန်တော်တို့ နိုင်ငံက နဂိုတုန်းက ဒီ License ပေးနေတဲ့အချိန်မှာ ဟို... ကျွန်တော်တို့ ဆက်စပ်သူလို့ခေါ်တဲ့ ဒီကျေးရွာကလူ၊ ကိုယ့်ပတ်ဝန်းကျင်မှာ စက်ရုံလာတည်မယ်ဆိုရင် ဒီလိုလူတွေရဲ့ ဆန္ဒတွေကို ကျွန်တော်တို့ရဲ့ အရင် License ပေးတဲ့ Project တွေမှာ မမေးထားရဘူး။ သူတို့ရဲ့ ဆန္ဒဘာရှိလဲ၊ သူတို့ နစ်နာတာတွေရှိရင် ဘာလုပ်ပေးရမလဲ ဆိုတဲ့ဟာတွေ ကျွန်တော်တို့က အဲ့လို အလေ့အကျင့် မရှိခဲ့ဘူး။ အခု ကျွန်တော်တို့ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဥပဒေတွေ ပေါ်လာမှ ကျွန်တော် ဒီနိုင်ငံတကာမှာ ကျင့်သုံးတဲ့အတိုင်း ပေါ့နော်။ ဥပမာ- ဆိုပါစို့ ကျွန်တော် ဒီစက်ရုံက ဆရာတို့ ရွာနားမှာ လာတည်တယ်ဆိုရင် ဒီစက်ရုံရဲ့ ကောင်းကျိုးဆိုးကျိုးက ကျွန်တော်တို့ ခံရမှာ မဟုတ်ဘူး၊ ရွာကခံရမှာ။ ဥပမာ- ဆိုပါစို့ ဒီစက်ရုံက တအားနံတယ်၊ ရေဆိုးတွေ တအားထွက်လို့ ညစ်ညမ်းတယ်ဆိုရင်လည်း ရွာက ခံရမှာ။ ဥပမာ ပတ်ဝန်းကျင်... အဲ့တော့ ကျွန်တော်တို့က ဒီလိုပွဲမှာ အဓိကအားဖြင့် ဆက်စပ်သူတွေကို ကျွန်တော်တို့က ဖိတ်စေတယ်။ ဖိတ်မှ ကျွန်တော်တို့က ဒီကဆရာတွေ ဆွေးနွေးမှပဲ ထိရောက်မှာ ပေါ့နော်။

	ဒါ ဥပမာအနေနဲ့ ပေးတာပေါ့နော်။ ကျွန်တော်က မြောက်ပိုင်းခရိုင်က ဆိုတော့ မှော်ဘီလည်း ကျွန်တော်တို့အပိုင်းထဲ ပါပါတယ်။ အဲ့တော့ နာမည်ကြီး ဖျော်ရည်ကုမ္ပဏီပဲ၊ ဒါပေမဲ့ သူက အကြောင်းအမျိုးမျိုးကြောင့် ကျွန်တော်တို့က License ပဲ ရပ်ကွက်ထဲမှာပဲပေးထားတယ်။ သူကလည်း မြေအောက်ရေကို အများကြီးသုံးတယ်။ အဲ့တော့ နဂိုတုန်းက ကျွန်တော်တို့ နိုင်ငံကနေပြီးတော့မှ ဒီစက်ရုံတွေကို License တွေ ပေးတယ်။ အခုကျတော့ ခုနလို နိုင်ငံတကာ Standard GuideLine ဆိုရင် ကျွန်တော်တို့က ဥပမာ- ဆိုပါစို့ သာမန်ကြည့်ရင် ဒီစက်ရုံက နိုင်ငံတော်ကို အခွန်ဆောင်နေတာပဲ၊ ဟုတ်တယ်မဟုတ်လား။ သူ့ဟာသူ ပုံမှန် လုပ်နေတာပဲလို့ တွေးလိမ့်မယ်။ ဒါပေမဲ့ တကယ်တမ်းကျတော့ အဲ့လို မဟုတ်တော့ဘူး။ ဒီပတ်ဝန်းကျင်က ဘာပြောလာလဲဆိုတော့ အစောတုန်းက ကျွန်တော်တို့ ပြောတဲ့ စက်ရုံကြီးက ဒီပတ်ဝန်းကျင် နေတဲ့သူက သူဒီနေရာမှာ နေလာတာ သူ့တစ်သက်ရှိပြီ။ ဟိုအရင်က သူတို့ရေကို မှော်ဘီဆိုတော့ ရေကဖြူတယ်၊ ဒီတိုင်း သောက်လို့ရတယ်။ အခု မရတော့ဘူး၊ မြေအောက်ရေက မရတော့ဘူး။ ဒီစက်ရုံကြီး ရှိလာတော့ အဲ့တော့ ကျွန်တော်တို့က အံ့သြသွားတာပေါ့။ ဒီစက်ရုံက မြေအောက်ရေကို သုံးတာလား၊ ရေညစ်ရဲ့လား၊ ဘာလို့ ညစ်တာလဲ။ အဲ့တော့မှ စက်ရုံကို သေချာမေးကြည့်လိုက်တဲ့ အချိန်မှာ စက်ရုံက အချို့ရည်ထုတ်တော့ သူ့ရဲ့ Gas Line ကနေ စိမ့်ပြီးတော့မှ မြေအောက်ထဲကို ရောက်နေတာဆိုတော့ တခြား Chemical တွေ သုံးတယ်။ အဲ့ဒါ Impact တစ်ခု၊ အဲ့လိုကြီးပဲ ဖြစ်လာရင် ခုနက ကျွန်တော်ပြောသလို ဘယ်သူပဲ ခံရမလဲဆိုတော့ အနားမှာရှိတဲ့ ဆက်စပ်သူပဲ ခံရတာ ပေါ့နော်။ အဲ့တော့ ကျွန်တော်တို့က ဒီဟာကြီးကို ကျွန်တော်တို့ နိုင်ငံက အခွန်ပေးထားလို့ လုပ်မပေးထားဘူး ဆိုတော့ မရဘူး၊ နိုင်ငံတကာ မှာလည်း မရဘူး။ အခွန်ပေးပေး မပေးပေး ဒီလိုပြဿနာတွေ ဖြစ်လာရင် စက်ရုံက တာဝန်တွေကို ယူကိုယူရမယ်။ နိုင်ငံတကာမှာဆိုရင် ခွင့်တောင် ခွင့်မပြုထားဘူး။ ဒါ ကျွန်တော်တို့ ဖွံ့ဖြိုးဆဲ နိုင်ငံအနေနဲ့ စီးပွားရေးကို ဦးစားပေးနေတဲ့ အချိန်မို့လို့သာ ပြေလည်အောင် ဖြေရှင်းပေးနေတဲ့ သဘောပဲ။ တကယ့် တကယ်ဆိုရင် စက်ရုံကို နိုင်ငံတကာ စံညွှန်းအရဆိုရင် ရပ်ပစ်ရမှာ၊ သူ့ရဲ့ Impact ဒီကို သွားထိနေတာ၊ ပတ်ဝန်းကျင်ကို သွားထိနေတာ။ အဲ့ဒါ မရပ်ဘူးဆိုရင် ဒီနေရာမှာ ပေးမလုပ်တော့ဘူး။ ဥပမာ- ဆိုပါစို့ စက်မှုဇုန်ထဲ

	ပြောင်းရင် ပြောင်းပေး၊ ဒါ နိုင်ငံတကာရဲ့ စံပေါ့။ အဲ့တော့ အစောက ကျွန်တော်တို့ ပြောသလိုပဲ ကျွန်တော်တို့ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနက ဒီလိုပွဲတွေ လုပ်ခိုင်းတဲ့ ရည်ရွယ်ချက်က ဒီလို ပြဿနာတွေ ဖြစ်ရင် ဆွေးနွေးပါ၊ ဒီလို ဆွေးနွေးမှသာ ကျွန်တော်တို့က Force ပေးလို့ရမှာ။ အခုဆိုရင် အဲ့လို ပြဿနာတွေ ဖြစ်တယ်ဆိုရင် စက်ရုံက ဘာလုပ်ပေးမှာလဲ။ နောက်တစ်ခုက ဘာပြောလဲဆိုတော့ စက်ရုံက ရပ်ကွက်မှာ ရှိနေတယ်ဆိုရင် အစောတုန်းကလိုပဲ ကျွန်တော်တို့ရဲ့ နိုင်ငံရဲ့ အနေအထားအရ ဘာလို့လဲဆိုတော့ မီးစက်နှိုးတယ်၊ မီးစက်တွေက လုပ်ငန်းသဘာဝ စက်ရုံမှာသုံးတဲ့ မီးစက်အကြီးကြီးတွေ။ အဲ့တော့ စက်ရုံတွေကလည်း မီးစက်က သူလုပ်ငန်း Nature အရ စက်ရုံထဲမှာ မထားဘူး၊ သူ့ရဲ့ ခြံစည်းရိုး ကပ်လျက်မှာပဲ ထားတာ၊ ဘာလို့လဲဆိုတော့ နေရာအခက်အခဲကြောင့် ထားတာ။ အဲ့တော့ ဘာဖြစ်လဲဆိုတော့ ခြံစည်းရိုးရဲ့ ဘေးကအိမ် ရပ်ကွက်ဆိုတော့ အိမ်ဖြစ်နေတယ်။ အိမ်က ဘာဖြစ်နေလဲဆိုတော့ သူတို့ပြောတဲ့ဟာက ဘာလဲဆိုတော့ အစောက ကျွန်တော်ပြောသလိုပဲ ဘုရားတောင် ရှိခိုးလို့မရဘူး၊ ကြာလာတော့ ဆူညံမှုတွေက ကျွန်တော်တို့ စောနကပြောသလိုပဲ ရက်တွေစေ့ နေ့တွေစေ့ ဥပမာ- ရက်တိုင်း ဖြစ်လာတာ ဆိုတော့။ စောနကပြောသလိုပဲ စက်ရုံဘက်က ကြည့်ရင် ဒါငါတို့ လုပ်ငန်းလုပ်တာ လုပ်လို့ရမလား၊ မရဘူးလား။ အခု ကျွန်တော်တို့ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး Procedure မှာ ပြဋ္ဌာန်းထားတာ National Emission Guideline ဆိုတာ ကျွန်တော်တို့ ပြဋ္ဌာန်းထားတာ။ ဒါကလည်း ဘယ်တုန်းက ပြဋ္ဌာန်းထားလဲဆိုတော့ အစောကပြောသလိုပဲ လွှတ်တော်မပေါ်တဲ့ခေတ်၊ ၂၀၁၅ တကယ့်ဟိုဟာ ဖြစ်တဲ့ခေတ်က ပြဋ္ဌာန်းထားတာ။ အဲ့ဒီမှာက ဆူညံသံဆိုရင် Level က ဘယ်လောက်ထိ မကျော်ရဘူး၊ ကျွန်တော်တို့က ပြဋ္ဌာန်းပြီးသား နိုင်ငံတော်အဆင့် ဥပမာ- လွှတ်တော်နဲ့ ပြဋ္ဌာန်းပြီးသား။ အဲ့တော့ ကျွန်တော်တို့က Action ယူရတယ်၊ အဲ့တော့ ဘာဖြစ်မလဲ၊ စက်ရုံက ဒီမီးစက်ကို အသံလုံအောင် လုပ်မလား၊ နေရာရွှေ့မလား၊ ဒါပဲရှိတယ်။ ပတ်ဝန်းကျင် Impact ဖြစ်တယ်ဆိုရင် ကျွန်တော်တို့က စောနကျွန်တော် အမှာစကား ပြောတဲ့ထဲမှာ ပါပါတယ်။ ကျွန်တော်တို့က ထောင့်သုံးထောင့် ဆိုတာ ဒီပတ်ဝန်းကျင်မှာ Social လူမှုရေး၊ စီးပွားရေး လုပ်ငန်းရှင်ရယ်၊ Third Party ကျွန်တော်တို့ လေ့လာတယ်။ အဲ့တော့ ဒီသုံးထောင့်က

	ညီနေမှသာ အဆင်ပြေမှာ။ ပတ်ဝန်းကျင်ကို စီးပွားရေးကိုပဲ အလေးပေးရင်လည်း ပတ်ဝန်းကျင် ပျက်စီးသွားရင် ကျွန်တော်တို့က လွယ်လွယ်နဲ့ မရတော့ဘူး။ ဥပမာ- ဆိုပါစို့ ကျွန်တော်တို့က စောနက ကျွန်တော် ပြောသလိုပဲ မြေအောက်ရေ လျော့သွားရင် အခု ကျွန်တော်တို့ ရန်ကုန်မြို့ဆိုရင် မြေအောက်ရေ တချို့ ပညာရှင်တွေ သုံးသပ်ကြတယ်။ ဒီနှုန်းတွေ ဒီတိုင်းသာ သွားမယ်ဆိုရင် မြေအောက်ရေ မသိမသာလျော့၊ တစ်ခါတလေ စင်တီမီတာ၊ တစ်ခါတလေ လက်မတောင် မပြည့်ပါဘူး၊ စင်တီမီတာလောက်ပဲ လျော့တာ နှစ်အလိုက်။ ဒါပေမဲ့ အဲ့ဒါ အန္တရာယ် အရမ်းကြီးတယ်။ အခုဆိုရင် အားလုံးသိတဲ့အတိုင်း ဂျာကာတာ မြို့ကြီး တည်ထောင်နေတယ်၊ အင်ဒိုနီးရှားရဲ့ မြို့တော် ဂျာကာတာက ပြောင်းရမယ်၊ မြို့က မြေအောက်ရေ လျော့ပြီးတော့ လူ ၄-၅ သန်း လောက်က နေ့စဉ် မြေအောက်ရေကို ထုတ်သုံးနေတဲ့ အချိန်မှာ မြေအောက်ရေတွေ လျော့တာက စင်တီမီတာ နည်းနည်းစီပဲ လျော့တာ၊ ကြာလာရင် ပင်လယ်ရေမျက်နှာပြင် အထက်ကို မြင့်... အစောတုန်းက ကျွန်တော်ပြောသလို ကျွန်တော်တို့ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးက Long Term ထဲ ပါတယ်၊ Sustainable ဆိုတဲ့ အသုံးအနှုန်း။ အဲ့တော့ ကျွန်တော်တို့က အခု ဒီစက်ရုံတွေ လုပ်တဲ့အခါ ပတ်ဝန်းကျင်က ဆွေးနွေးပေးပါဆိုတဲ့ ကျွန်တော်တို့က အဲ့ဒါ ဥပမာ- မှော်ဘီမှာဆိုလည်း အဲ့လိုပဲ၊ အထည်ချုပ်စက်ရုံတွေက ဝန်ထမ်း ထောင်ချီ သုံးတဲ့ အထည်ချုပ်စက် ရပ်ကွက်ထဲမှာ ဆိုရင် နံတယ်။ အဲ့ Impact က ဘယ်သူတွေ ခံစားရလဲဆိုတော့ ရပ်ကွက်ပဲ ခံစားရမှာ။ အဲ့ဒါကြောင့် ကျွန်တော်တို့က Public Consultation အလုပ်တွေဆိုရင် သက်ဆိုင်ရာ အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန၊ သူကတော့ မြို့နယ်မှာ အကြီးဆုံး သူဘယ်လို စီမံမလဲ။ နောက်တစ်ခုက သက်ဆိုင်ရာ ရပ်/ကျေးအုပ်ချုပ်ရေးမှူးတွေကလည်း ကျွန်တော်တို့ ဆွေးနွေးပေးစေချင်ပါတယ်။ ကျွန်တော်တို့ သိတယ်၊ တချို့ဆိုရင် ကုမ္ပဏီကားတွေ လမ်းပိတ်တယ်၊ ဒါကလည်း ကျွန်တော်တို့ စနစ်ထဲမှာ ပါပါတယ်။ အစောက ကျွန်တော်ပြောသလိုပဲ ဖွံ့ဖြိုးဆဲ နိုင်ငံတွေ လိုက်ပြီး ယှဉ်နိုင်ဖို့ပဲ ကျွန်တော်တို့က အသေးစိတ် လိုက်မပြောတာ။ အဓိက အရေးကြီးတဲ့ဟာကို အစောကလိုပဲ ကျွန်တော်တို့က ပြဿနာ တက်လာတဲ့ အချိန်ဆို မရတော့ဘူး၊ ကျွန်တော်တို့ ချက်ချင်း ဆောင်ရွက်ပေးရမယ်။ အဲ့ဒါကြောင့် ဒီနေ့ အစည်းအဝေး တက်လာတဲ့ ဆက်စပ်တဲ့သူက ဖိတ်ထားတာ ပါတယ်ဆိုရင် ရှိတယ်ဆိုရင်

	ပွင့်ပွင့်လင်းလင်း ဆွေးနွေးပေးကြပါ။ ဒါလေးကို အကြံပေးလိုပါတယ်။ ကျေးဇူးတင်ပါတယ်။
ဦးထွန်းထွန်းလင်း ဥက္ကဋ္ဌ မြို့နယ်စီမံခန့်ခွဲမှုနှင့် အုပ်ချုပ်ရေးကော်မတီ	ခင်ဗျားတို့ ပတ်ဝန်းကျင်မှာ အနံ့ဆိုးတွေ ထွက်နေတာ ရှိလား၊ အနံ့အသက်တွေ မကောင်းဖြစ်နေတာလား၊ ဒါက ခင်ဗျားတို့ ဆွေးနွေးရမှာပါ။ မရှိဘူးဆိုရင်တော့ ကောင်းတာပေါ့။ အဓိကတော့ အနံ့ဆိုးနဲ့ ရေညစ်တာတွေ မဖြစ်ဖို့ပဲ အရေးကြီးတာပေါ့နော်။ အဲ့ဒါတွေ ထိန်းသိမ်းနိုင်တယ် ဆိုရင်တော့ ပြောစရာမရှိပါဘူး။
ဦးကျော်စိုးပိုင် ဥက္ကဋ္ဌ ကုလားကြီးစုကျေးရွာအုပ်စု	ကျွန်တော်တို့ အထူးပြောစရာမရှိပါဘူး။ အနံ့အသက်တွေ၊ ဆူညံသံတွေကို ထိန်းသိမ်းလုပ်ဆောင်သွားမယ် ဆိုရင်ပြောစရာမရှိပါဘူး။
ဦးသက်ပိုင်စိုး ဒုဦးစီးမှူး မြို့နယ်မီးသတ်	မီးဘေး ကိစ္စတွေနဲ့ရော ဘယ်လိုလေးတွေ ဆောင်ရွက်နေလဲဆိုတာ ကျွန်တော် သိချင်ပါတယ်။
ဒေါ်ကေသွယ်အောင် Director Golden Apex International Trading Co., Ltd	စက်ရုံတွေမှာ မီးသတ်ဦးစီးဌာနကနေပြီးတော့ သတ်မှတ်ထားတဲ့ မီးသတ်ဆေးဘူးတွေရော ထားရှိပါတယ်ရှင့်။ ပြီးတော့ကျတော့ ဒီမီး Alarm ခေါင်းလောင်းတွေ ဘာတွေလည်း ထားပေးတယ်ရှင့်။ ပြီးတော့ မီးသတ်ဦးစီးဌာနနဲ့ ညှိနှိုင်းတိုင်ပင်ပြီးတော့ ကူညီပေးဖို့လည်း စီစဉ်ထားပါတယ်ရှင့်။
ဦးသက်ပိုင်စိုး ဒုဦးစီးမှူး မြို့နယ်မီးသတ်	အဓိကတော့ အစ်မပြောသွားတဲ့ဟာကို ပြောချင်တာက၊ ကိုယ့်ဟာကို စီစဉ်ထားတာလား။ အစ်မပြောတဲ့ဟာတော့ ကျွန်တော်တို့တော့ သတ်မှတ်ချက်ပေါ့။ ကျွန်တော်တို့ Fire Safety ၂၀၂၀ မှာ ပြဋ္ဌာန်းထားတဲ့ဟာ၊ သတ်မှတ်ချက်တွေ ကျွန်တော်တို့ မီးသတ်ဦးစီးဌာနက ထုတ်ပေးထားတဲ့ဟာ FSC (Fire Safety Certificate)။ အဲ့ဒါတွေက အစ်မတို့ဘက်က ယူထားတာလား။ တကယ်လို့ မယူရသေးဘူးဆိုရင် ကျွန်တော်အနေနဲ့ အကြံပေးချင်တာ ဒါလေး တစ်ချက်အရင် ပေးချင်တယ်၊ ယူပေးဖို့ရယ်။ နောက်တစ်ခုက အစ်မတို့ လက်ရှိစက်ရုံက ဝန်ထမ်းတွေ မီးလောင်မှု ဖြစ်လာခဲ့ရင် ဘယ်လို ငြိမ်းသတ်ရမလဲ ဆိုတာတွေ ကြိုတင်ပြီးတော့ လေ့ကျင့်ထားဖို့ Training အနေနဲ့၊ အဲ့ဒီ ဝန်ထမ်းမှာမှ လေ့ကျင့်ပေးတဲ့

	အခါမှာလည်း ကျွန်တော်တို့ ထိရောက်အောင်။ တချို့ကျတော့ ရှိတယ်၊ ဒီပြည့်စုံမှုမရှိဘဲ အပေါ်ယံလောက်ပဲ လေ့ကျင့်တာတွေ ရှိတယ်။ အရေးအကြောင်းလည်း ဖြစ်ရော ကိုယ့်ဆီမှာရှိတဲ့ မီးငြိမ်းသတ်ပစ္စည်းတွေ ဘယ်လိုတွေ လက်တွေ့ လက်တွေ့အကောင်အထည်ဖော် အသုံးပြုရမလဲ ဆိုတာ ကျွန်တော်အနေနဲ့ မသိတာရှိရင် ဒါလေးတွေကိုလည်း ကျွန်တော်တို့ အနေနဲ့ ဘယ်လို ဆောင်ရွက်ပေးဖို့၊ ပြီးရင် နောက်တစ်ခု ကျွန်တော် ဖြစ်လာရင် မီးသတ်ဦးစီးဌာန အရေးပေါ် ဖုန်းနံပါတ်တွေ ဆောင်ရွက်ထားရှိပေးဖို့။ ဒါတွေကိုလည်း စက်ရုံတော်တော်များများမှာ ကျွန်တော်တို့ မတွေ့ပါဘူး။ ကျွန်တော်တို့က လေ့ကျင့်ယူရတယ်၊ သရုပ်ပြပုံ ယူရတယ်။ ကျွန်တော်တို့ မီးသတ်ရဲ့ ဖုန်းနံပါတ်ကို မေးလို့ရှိရင် မသိတဲ့လူ တော်တော်များပါတယ်။ ၁၀၀ မှာ ၉၀ လောက် မသိတဲ့လူ များတယ်။ ဒါလေးတွေနဲ့ ပတ်သက်လို့လည်း ဒါလေးတွေ ဝန်ထမ်းပြောပြထားဖို့နဲ့ ကပ်ထားဖို့ ကျွန်တော်တို့ မီးသတိပေး ဆိုင်းဘုတ်လေးတွေ၊ ကြက်စာဝက်စာတွေ ဒီအစာထောင့်ကနေလည်း ကျွန်တော်တို့တွေ မီးလောင်တာ ဖြစ်နိုင်တယ်။ ဒါတွေနဲ့ ပတ်သက်လို့ ကျွန်တော်က မဖြစ်အောင် ကြိုတင်ပြီးတော့ မဖြစ်ခင်ကတည်းက ဝန်ထမ်းတွေကို အစီအစဉ်လေးတွေ ဘာဖြစ်လာရင် ဘယ်လိုလေးတွေ လုပ်ကြမလဲဆိုတာ သူတို့ကလည်း အောက်ခြေကအစ ရှင်းပြပေးစေချင်တယ်။ ဒီလောက်ပါပဲ။
ဒေါ်ကေသွယ်အောင် Director Golden Apex International Trading Co., Ltd	ဟုတ်ကဲ့ ဆက်လက် ဆောင်ရွက်သွားပါမယ်၊ ကျေးဇူးအများကြီး တင်ပါတယ်ရှင့်။
အစီအစဉ် (၇)	**အခမ်းအနားပြီးဆုံးကြောင်း ကြေငြာခြင်း။**

ဓါတ်ပုံမှတ်တမ်းများ



လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ် အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန၊ မြို့နယ်စီမံခန့်ခွဲမှု နှင့် အုပ်ချုပ်ရေးကော်မတီ ဥက္ကဋ္ဌမှ အဖွင့်အမှာစကား ပြောကြားခြင်း



ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာနမှ လက်ထောက် ညွှန်ကြားရေးမှူး ဦးမြင့်ဇော်ဦးမှ အဖွင့်အမှာစကားပြောကြားခြင်း



စီမံကိန်း တာဝန်ရှိသူမှ စီမံကိန်းအကြောင်း ရှင်းလင်း တင်ပြခြင်း



ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအတွက် ဒေါက်တာ စန္ဒာလှိုင်မှ ရှင်းလင်းတင်ပြခြင်း



အမေး/အဖြေ ဆွေးနွေးခြင်း



အမေး/အဖြေ ဆွေးနွေးခြင်း



အမေး/အဖြေ ဆွေးနွေးခြင်း



အမေး/အဖြေ ဆွေးနွေးခြင်း



တက်ရောက်သည့်လက်မှတ်ရေးထိုးခြင်း



တက်ရောက်သည့်လက်မှတ်ရေးထိုးခြင်း



တက်ရောက်သည့်လက်မှတ်ရေးထိုးခြင်း



တက်ရောက်သည့်လက်မှတ်ရေးထိုးခြင်း

အခမ်းအနားသို့ တက်ရောက်သူများစာရင်း

အခမ်းအနားသို့ တက်ရောက်သူ စုစုပေါင်း (၂၄) ဦး ရှိပါသည်။ အစိုးရအဖွဲ့ဝင်နှင့် ဌာနဆိုင်ရာမှ တာဝန်ရှိသူများမှ (၁၀) ဦး၊ ကုမ္ပဏီများမှ (၉) ဦး နှင့် ရပ်မိရပ်ဖနှင့်ဒေသနေပြည်သူများမှ (၅) ဦးတို့ဖြစ်ပါသည်။

စဉ်	အမည်	ရာထူး	အဖွဲ့အစည်း/ ဌာနအမည်	ဆက်သွယ်ရန်ဖုန်း
၁	ဦးထွန်းထွန်းလင်း	ဥက္ကဋ္ဌ	မြို့နယ်စီမံခန့်ခွဲမှု နှင့် အုပ်ချုပ်ရေး ကော်မတီ	၀၉ ၄၂၁၀၂၄၇၆၇
၂	ဦးယုမင်းထိန်	ဒုတိယဦးစီးမှူး	အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန	၀၉ ၄၄၀၂၈၂၇၈၅
၃	ရဲမှူးမောင်မောင်ကျော်	မြို့နယ် ရဲတပ်ဖွဲ့မှူး	လှိုင်သာယာ(အနောက်ပိုင်း)မြို့နယ်	၀၉ ၅၃၂၃၀၀၉
၄	ဦးသက်ပိုင်စိုး	ဒု-မီးသတ်ဦးစီးမှူး	မြို့နယ် မီးသတ်ဦးစီးဌာန	၀၉ ၈၉၆၀၈၈၆၉၆
၅	ဦးမြင့်ဇော်ဦး	လ/ထ ညွှန်ကြားရေးမှူး	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန	၀၉ ၄၅၀၀၅၉၃၇၅
၆	ဒေါ်ရွှေရည်အောင်	ဦးစီးအရာရှိ	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန	၀၉ ၉၆၂၆၃၇၀၅၅
၇	ဒေါ်မြတ်သူသူမိုး	ဒုတိယဦးစီးမှူး	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန	၀၉ ၄၄၄၀၃၇၇၃၁
၈	ဒေါက်တာခင်ခင်ကြီး	မြို့နယ်တာဝန်ခံ	မွေးမြူရေးနှင့် ကုသရေးဦးစီးဌာန	၀၉ ၆၅၀၀၆၅၂၂၂
၉	ဒေါ်အိအိလှိုင်	သူနာပြုဆရာမကြီး	ကျန်းမာရေး	၀၉ ၄၂၃၁၆၇၀၀၄
၁၀	ဦးစန်းမြင့်	ဒုတိယဦးစီးမှူး	မြို့နယ်စည်ပင်	၀၉ ၅၁၇၄၅၂၈
၁၁	ဦးကျော်စိုးပိုင်	ဥက္ကဋ္ဌ	ကုလားကြီးစုကျေးရွာ	၀၉ ၄၂၅၃၀၂၆၀၈
၁၂	ဦးအောင်သောင်း	ဥက္ကဋ္ဌ	ကံလှကျေးရွာ	၀၉ ၄၀၉၀၈၀၈၉၈
၁၃	ဦးမောင်ညိမ့်	ရာအိမ်မှူး	ကံလှကျေးရွာ	၀၉ ၆၉၆၈၀၃၆၅၀
၁၄	ဦးအောင်နိုင်စိုး	ရာအိမ်မှူး	ကံလှကျေးရွာ	၀၉ ၆၆၁၁၄၃၁၆၁
၁၅	ဦးဇော်မင်းနိုင်	ရာအိမ်မှူး	ကျုံစုကျေးရွာ	၀၉ ၆၉၅၄၉၂၃၇၆
၁၆	ဒေါက်တာစန္ဒာလှိုင်	လူမှုစီးပွားအကြံပေး	ECC	၀၉ ၇၇၇၀၆၄၁၄

၁၇	ဦးအောကာဖြိုး	Senior Consultant	ECC	၀၉ ၇၇၇၀၀၆၄၁၀
၁၈	ဒေါ်ကေသွယ်အောင်	Director	Golden Apex International Trading Co., Ltd	၀၉ ၅၀၉၈၀၂၈
၁၉	ဦးအောင်မျိုးသိန်း	စက်ရုံမှူး	Golden Apex International Trading Co., Ltd	၀၉ ၇၈၀၁၀၃၇၀၈
၂၀	ဦးမြင့်လွင်ဦး	D.B.M	Golden Apex International Trading Co., Ltd	၀၉ ၄၂၈၆၁၅၇၁၈
၂၁	မြတ်မြတ်ကျော်သူ	Business Development	Golden Apex International Trading Co., Ltd	၀၉ ၇၄၀၈၀၀၄၅၉
၂၂	ဒေါ်စိုးယုမော်	Golden Apex Admin	Golden Apex International Trading Co., Ltd	၀၉ ၇၅၅၄၇၂၄၄၃
၂၃	ဒေါ်မြတ်စုမွန်	Golden Apex Finance	Golden Apex International Trading Co., Ltd	၀၉ ၉၅၁၉၆၄၉၂၉
၂၄	ဒေါ်မျိုးသီရိခိုင်	Golden Apex Logistics	Golden Apex International Trading Co., Ltd	၀၉ ၆၆၇၇၅၆၉၆၆

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင်
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက် (1)

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် ဒုတိယအကြိမ်မြောက်လူထုတွေ့ဆုံဆွေးနွေးခြင်း

အချိန် - နံနက် ၁၀ နာရီ မှ ၁၂ နာရီ
၂၀၂၆ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်
နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊
ရန်ကုန်တိုင်းဒေသကြီး။

စဉ်	အမည်	ရာထူး	အဖွဲ့အစည်း/ ဌာနအမည်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁					
၂				०९ ४४०२४२७५५	
၃				०९.५३२३०००१	
၄				०९.४९८०४४४९७६	
၅					
၆					
၇					
၈					
၉					
၁၀					

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင်
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက် (2)

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် ဒုတိယအကြိမ်မြောက်လူထုတွေ့ဆုံဆွေးနွေးခြင်း

အချိန် - နံနက် ၁၀ နာရီ မှ ၁၂ နာရီ
၂၀၂၆ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်
နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊
ရန်ကုန်တိုင်းဒေသကြီး။

စဉ်	အမည်	ရာထူး	အဖွဲ့အစည်း/ ဌာနအမည်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁				०९४२३१६७००४	
၂				०९ ६५००६५२२२	
၃				०९ ५००३७८५	
၄				०९ ९६२६३७०६५	
၅				०९.४४४०३७३३	
၆				०९५१७४५२८	
၇					
၈					
၉					
၁၀					

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင် (3)
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက်

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် ဒုတိယအကြိမ်မြောက်လူထုတွေ့ဆုံဆွေးနွေးခြင်း

အချိန် - နံနက် ၁၀ နာရီ မှ ၁၂ နာရီ
၂၀၂၆ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်
နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
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ရန်ကုန်တိုင်းဒေသကြီး။

စဉ်	အမည်	ရာထူး	အဖွဲ့အစည်း/ ဌာနအမည်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁	[illegible]	[illegible]	[illegible]	09425302608	
၂	[illegible]	[illegible]	[illegible]	09.40408048978	
၃	[illegible]	[illegible]	[illegible]	09.696803690	
၄	[illegible]	[illegible]	[illegible]	09.664124161	
၅	[illegible]	[illegible]	[illegible]	09695492376	
၆					
၇					
၈					
၉					
၁၀					

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင် (4)
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက်

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် ဒုတိယအကြိမ်မြောက်လူထုတွေ့ဆုံဆွေးနွေးခြင်း

အချိန် - နံနက် ၁၀ နာရီ မှ ၁၂ နာရီ
၂၀၂၆ ခုနှစ်၊ မတ်လ၊ ၃၁ ရက်
နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊
ရန်ကုန်တိုင်းဒေသကြီး။

စဉ်	အမည်	ရာထူး	အဖွဲ့အစည်း/ ဌာနအမည်	ဆက်သွယ်ရန်ဖုန်း	လက်မှတ်
၁	[illegible]	[illegible]	ECC	09777006414	31.3.2026
၂	[illegible]	Senior Consultant	ECC.	09777006410.	
၃	[illegible]	Director	Golden Apex	09509980 28	
၄	[illegible]	[illegible]	"	09-780 103708	
၅	[illegible]	Business Development	Golden Apex	09740800459	
၆	Soe Ye Min	Golden Apex Admin	Golden Apex	09-7777477413	
၇	Myat Su Mon	Golden Apex Finance	"	09-951954429	
၈	Myo Thar Khaing	Golden Apex logistics	"	09-667756966	
၉	U Myint Lwin Oo	D. G. M	"	09428675718	
၁၀					

PowerPoint Presentation at EIA Stage

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင်

Golden Apex International Trading Co., Ltd၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်းအတွက်

"ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့်

ဒုတိယအကြိမ်မြောက်

လူထုတွေ့ဆုံဆွေးနွေးပွဲကျင်းပခြင်း"

နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

ရက်စွဲ။ ။ ၃၁ .၃.၂၀၂၆

ဆွေးနွေးတင်ပြမည့် အကြောင်းအရာများ

- စီမံကိန်းဆိုင်ရာ သတင်းအချက်အလက်များ
- ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆောင်ရွက်မည့် တတိယ အဖွဲ့အစည်းများ
- ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း
- ဆက်လက်ဆောင်ရွက်မည့် အစီအစဉ်များနှင့် ဆက်သွယ်ရန် လိပ်စာများ

စီမံကိန်းအကြောင်းအရာနှင့် စီမံကိန်းဆိုင်ရာ သဘာဝအချက်အလက်များ

Golden Apex International Trading Co., Ltd

Golden Apex International Trading Co., Ltd သည် ၂၀၁၆ ခုနှစ်တွင် စတင်တည်ထောင်ခဲ့ပြီး ပြည်တွင်းရင်းနှီးမြှုပ်နှံမှု (၁၀၀%) ဖြင့် မြန်မာနိုင်ငံသားပိုင် ကုမ္ပဏီတစ်ခုဖြစ်ပါသည်။



Company Registration No. 107906754



Certificate No. 221123019509

Golden Apex International Trading Co., Ltd

မြန်မာနိုင်ငံမွေးမြူရေးလုပ်ငန်းအဖွဲ့ချုပ် အသင်းဝင်လက်မှတ်



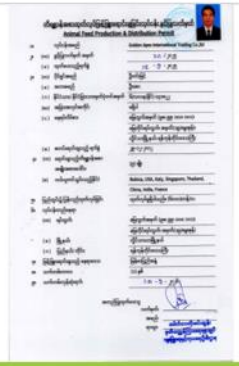
ရာသက်ပန်အသင်းဝင်

မြန်မာနိုင်ငံငါးလုပ်ငန်းအဖွဲ့ချုပ် အသင်းဝင်လက်မှတ်



(က)အဆင့်အသင်းဝင်

Golden Apex International Trading Co., Ltd





Golden Apex International Trading Co., Ltd စီမံကိန်း ရည်ရွယ်ချက်

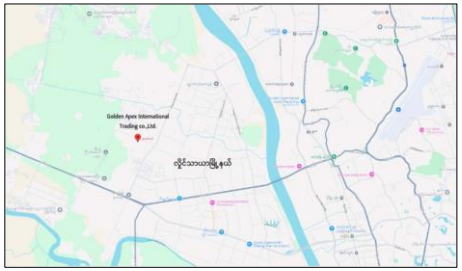
Golden Apex International Trading Co., Ltd သည်

- ✓ မြန်မာနိုင်ငံတွင် မွေးမြူရေးကဏ္ဍသည် လွန်စွာအရေးပါသည့်အတွက် ၎င်းကဏ္ဍ၏ အဓိကသွင်းအားစုဖြစ်သည့် မွေးမြူရေး အစာလိုအပ်ချက်ကို တတ်စွမ်းသရွေ့ ဖြည့်တင်းပေးသွားရန်၊
- ✓ ထိုသို့ ဖြည့်တင်းပေးရာတွင် မွေးမြူရေးထုတ်လုပ်မှုစွမ်းအား မြင့်မားစေရေးအတွက် အရည်အသွေးပြည့်မီ၍ အာဟာရပြည့်ဝပြီး လတ်ဆတ်သန့်ရှင်းသော တိရစ္ဆာန်အစာတောင့်များကို ထုတ်လုပ်ပေးရန်၊
- ✓ မွေးမြူရေးလုပ်ငန်းလုပ်ကိုင်သော အသေးစားလုပ်ငန်းရှင်များအပါအဝင် မွေးမြူရေးလုပ်ငန်းရှင်များအားလုံးအတွက် စျေးနှုန်းသင့်တင့်သည့် တိရစ္ဆာန်အစာနှင့်ဖြည့်စွက်အစာများကို ထုတ်လုပ်ပေးသွားရန် စသည်တို့ကို ရည်ရွယ်၍ လုပ်ငန်းဆောင်ရွက်ရခြင်း ဖြစ်ပါသည်။

စီမံကိန်းအကြောင်းအရာ ရှင်းလင်းတင်ပြခြင်း

စီမံကိန်း တည်နေရာ

မြေကွက်အမှတ် (၁၀၀ +၁၀၁)၊ မွေးမြူရေးနှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။



စီမံကိန်းအကြောင်းအရာ ရှင်းလင်းတင်ပြခြင်း

တည်နေရာ

မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း စီမံကိန်း တည်နေရာသည် "မြေကွက်အမှတ် (၁၀၀ +၁၀၁)၊ မွေးမြူရေးနှင့်မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး"တွင် တည်ရှိပါသည်။

စီမံကိန်းအကျယ်အဝန်း

Golden Apex International Trading Co., Ltd မှ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်းစီမံကိန်းဆောင်ရွက်ရန် "မြေရိယာစုစုပေါင်း = ၀.၆၈၈ ဧက" ကျယ်ဝန်းပါသည်။

ထုတ်လုပ်မှုပမာဏနှင့် ရင်းနှီးမြှုပ်နှံငွေပမာဏ

မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများအားတစ်ရက်လျှင်

ဝက်အစာ (၂၆၉.၆၅) မက်ထရစ်တန်၊ ငါးအစာ (၆၇.၁၂) မက်ထရစ်တန်၊ ဥစားကြက်အစာ (၁၅၁.၇၇) မက်ထရစ်တန် နှင့် အသားတိုးကြက်အစာ (၂၃၇.၆) မက်ထရစ်တန်၊ စုစုပေါင်း တစ်ရက်လျှင် (၇၂၆.၁၄) မက်ထရစ်တန် ထုတ်လုပ်ရန် နှင့် တစ်နှစ်လျှင် (၂၁၇၈၄၂) မက်ထရစ်တန် ထုတ်လုပ်ရန် မျှော်မှန်းထားပါသည်။

စီမံကိန်း အကောင်အထည်ဖော်ဆောင်ရွက်ရန်ရင်းနှီးမြှုပ်နှံငွေ စုစုပေါင်း မြန်မာကျပ် (၄၉၃၃၉၉၀၀၀) ဒေါ်လာ (၂၅၀၀၀၀၀) ခန့်မှန်းထားပါသည်။

စီမံကိန်းအကြောင်းအရာ ရှင်းလင်းတင်ပြခြင်း

Golden Apex International Trading Co., Ltd ထုတ်လုပ်သည့်အမျိုးအစားများ

ကြက်အစာ

- ✓ ဥစားကြက်ငယ်စာ (၁၆ ပတ် မှ ၁၉ ပတ်အထိ)
- ✓ ဥစားကြက်လတ်စာ (၁၉ ပတ် မှ ၄၅ ပတ်အထိ)
- ✓ ဥစားကြက်ကြီးစာ (၄၅ ပတ် နှင့် အထက်)
- ✓ အသားတိုးကြက်ငယ်စာ (0 days – 21 days)
- ✓ အသားတိုးကြက်လတ်စာ (21 days – 40 days)
- ✓ အသားတိုးကြက်ကြီးစာ (40 days – MKT)

ဝက်အစာ

- ✓ ဝက်ငယ်စာ (၅ ကီလို မှ ၃၀ ကီလို)
- ✓ ဝက်လတ်စာ (၃၀ ကီလို မှ ၇၀ ကီလို)
- ✓ ဝက်ကြီးစာ (၇၀ ကီလို အထက်)

ငါးအစာ

- ✓ ငါးစာ (အသားဓာတ် ၂၅%)

မွေးမြူရေးအစာ ထုတ်လုပ်သည့်အမျိုး အစားများ

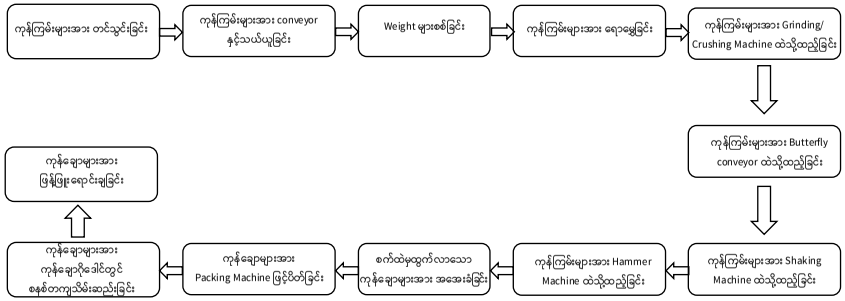
ကြက်အစာ ဝက်အစာ ငါးအစာ



စီမံကိန်းအကြောင်းအရာ ရှင်းလင်းတင်ပြခြင်း

1. မွေးမြူရေးနှင့် ဖြည့်စွက်အစာများ ပြုလုပ်ရာတွင် လိုအပ်သော ကုန်ကြမ်း (ပြောင်း၊ အရိုးအသားမှုန့်၊ ပဲပုပ်၊ မုန်ညင်းဖတ် နှင့် အစာစပ်ဆေး Feed additive) များကို ပြည်တွင်း၊ ပြည်ပများမှ ဝယ်ယူပြီး ရရှိသော ကုန်ကြမ်းများကို "သိုလှောင်ရုံ ထဲတွင် စနစ်တကျ ထားရှိမည်" ဖြစ်ပါသည်။
2. ကုန်ချောအဖြစ် ထုတ်လုပ်ရာတွင် "လိုအပ်သော ပမာဏများအတိုင်း Weight များသတ်မှတ်၍ ရောမွေခြင်း"၊
3. "Grinding/ Mixing Machine များ" ထဲသို့ထည့်ခြင်း၊
4. စက်ထဲမှ ပြန်ထွက်လာသော "ကုန်ချောများအား အအေးခံခြင်း"၊
5. အအေးခံပြီးသည်နှင့် တပြိုင်နက် "သတ်မှတ်ထားသော အိတ်များထဲသို့ထည့်ခြင်း"၊
6. "Weight စစ်ခြင်းနှင့် ဂိုထောင်များထဲတွင် ကုန်ချောများကို သိုလှောင်ခြင်း" စသည် တို့ကို ဆောင်ရွက်ပါသည်။
7. သိုလှောင်ထားသော ကုန်ချောပစ္စည်းများကို "မွေးမြူရေး လုပ်ငန်းရှင်များဆီသို့ ဖြန့်ဖြူးရောင်းချပါသည်။"

မွေးမြူရေးအစာ ထုတ်လုပ်မှု လုပ်ငန်းစဉ်အဆင့်ဆင့်



Golden Apex International Trading Co., Ltd

လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်ရေး ဆော်ရွက်မှု

နိုင်ငံတော်စီမံအုပ်ချုပ်ရေးကောင်စီ
ဂုဏ်ပြုမှတ်တမ်းလွှာ



ဝေယျာဝေးသင့်ပြည်သူများအတွက် သိန်း ၁၀၀၀ အလှူ

ဖိုက်ပျိုးရေး၊ မွေးမြူရေးနှင့် ဆည်မြောင်းစနစ်ကြီးဌာန
ဂုဏ်ပြုမှတ်တမ်းလွှာ



ဝေယျာဝေးသင့်ပြည်သူများအတွက် သိန်း ၁၅၀ အလှူ

မီးပွားရေးနှင့် ကုသနိုးရောင်းဝယ်ရေးနှိုင်းကြီးဌာန
ဂုဏ်ပြုမှတ်တမ်းလွှာ



ဝေယျာဝေးသင့်ပြည်သူများအတွက် သိန်း ၄၀၀ အလှူ

Golden Apex International Trading Co., Ltd



အသေးစား အငယ်စားနှင့် အလတ်စား စီးပွားရေး လုပ်ငန်းများ
ဖွံ့ဖြိုးတိုးတက်ရေး အောင်စီ MSME ထုတ်ကုန်ပြိုင်ပွဲ OROP ထုတ်ကုန်
(ဒုတိယဆု)

လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်ရေး ဆောင်ရွက်မှု



ဝေယျာဝေးသင့်ပြည်သူများအတွက်
အလှူငွေပေးအပ်လှူဒါန်းပွဲ

ကျေးဇူးတင်ပါသည်။

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့်
မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင် Golden
Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစောနှင့် ဖြည့်စွက်အစာများ
ထုတ်လုပ်ရောင်းချခြင်းလုပ်ငန်း
ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့်
ခုတိယအကြိမ်မြောက်
လူထုတွေ့ဆုံဆွေးနွေးပွဲကျင်းပခြင်း

နေရာ - အထွေထွေအုပ်ချုပ်ရေး ဦးစီးဌာန
လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။

ရက်စွဲ ။ ၃၁.၃.၂၀၂၄

ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆောင်ရွက်မည့် တတိ ယ အဖွဲ့အစည်း

Environmental Compliance Consultancy Co., Ltd.

ECC ကုမ္ပဏီလိမိတက်သည် ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ပေးသည့် အကြံပေး အဖွဲ့ဖြစ်ပါသည်။ ၂၀၂၀ ခုနှစ်တွင် အတိုင်ပင်ခံကုမ္ပဏီ အဖြစ် မြန်မာနိုင်ငံအစိုးရထံတွင် မှတ်ပုံတင်ခဲ့ပါသည်။ သယံဇာတနှင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနမှ အသိအမှတ်ပြုအဖွဲ့အစည်းလုပ်ငန်းလိုင်စင် (က) လိုင်စင်နံပါတ် EIA-CO(A)005/2024 ကို ကိုင်ဆောင်ထားသည့် အဖွဲ့အစည်း ဖြစ်ပါသည်။

ECC သည် ပတ်ဝန်းကျင်စီမံခန့်ခွဲသည့်အစီအစဉ် ရေးဆွဲသူများ၊ ပတ်ဝန်းကျင်ဆိုင်ရာ အကဲဖြတ်သူများ၊ ဘူမိဗေဒ ပညာရှင်များနှင့် GIS ပညာရှင်များ၊ ဇီဝန်းကျင်ဆိုင်ရာ ပညာရှင်များ၊ လူမှုဝန်းကျင်ဆိုင်ရာပညာရှင်များ အပါအဝင် အမျိုးမျိုးသော အရည်အချင်း ပြည့်ဝသည့် အတိုင်ပင်ခံ ပုဂ္ဂိုလ်များဖြင့် ဖွဲ့စည်းထားသည့် အဖွဲ့အစည်းဖြစ်ပါသည်။

အဆိုပါ စီမံကိန်း အတွက် Environmental Compliance Consultancy Co., Ltd. (ECC) သည် အပြည်ပြည်ဆိုင်ရာ စံချိန်စံညွှန်းများနှင့်အညီ ပတ်ဝန်းကျင်နှင့် လူမှုရေးသက်ရောက်မှု ဆန်းစစ်ခြင်းကို ဦးစီးဆောင်ရွက်မည့် အဖွဲ့ ဖြစ်သည်။

ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆောင်ရွက်မည့် တတိ ယ အဖွဲ့အစည်း

Environmental Compliance Consultancy Co., Ltd.


The Government of the Republic of the Union of Myanmar
Ministry of Natural Resources and Environmental Conservation
Environmental Conservation Department
Environmental Impact Assessment License (Organization)
Environmental Compliance Consultancy Co., Ltd
Registration No. 120/MIMU
EIA-CO(A)005/2024



ပတ်ဝန်းကျင် နှင့် လူမှုဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း

(က) ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ငန်းစဉ်

(ခ) ပြည်သူလူထုနှင့် တွေ့ဆုံဆွေးနွေးခြင်း လုပ်ငန်းစဉ်

(ဂ) အခြေခံ အချက်အလက်များ အခြေအနေ

(ဃ) စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ငန်းစဉ်

စဉ်	လုပ်ငန်းစဉ်	ပြီးစီးမှုအခြေအနေ
၁	ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆောင်ရွက်သည့် တတိယကြား ခံ အဖွဲ့အစည်းအတည်ပြုခြင်း	အတည်ပြုချက်ရရှိပြီး
၂	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ ပြုစုရေးသားခြင်း	ဆောင်ရွက်ပြီး
၃	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်ခြင်း အဆင့် လူထုတွေ့ဆုံဆွေး နွေးခြင်း	ဆောင်ရွက်ပြီး (ဩဂုတ်လ ၂၀၂၅ ခုနှစ်)
၄	စီမံကိန်းအကြောင်းအရာ ထုတ်ဖော်ကြေညာခြင်း	ဆောင်ရွက်ပြီး
၅	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ တင်သွင်းခြင်း	တင်သွင်းပြီး (စက်တင်ဘာလ၊ ၂၀၂၅ ခုနှစ်)
၆	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ အတည်ပြုခြင်း	အတည်ပြုပြီး (နိုဝင်ဘာလ၊ ၂၀၂၅ ခုနှစ်)
၇	အခြေခံအချက်အလက်ကောက်ယူခြင်းနှင့် ပတ်ဝန်းကျင် ထိခိုက် မှု ဆန်းစစ်ခြင်း	ဆောင်ရွက်ပြီး
၈	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် လူထုတွေ့ဆုံ ဆွေး နွေးခြင်း	ယခုအဆင့်
၉	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာ ရေးသားခြင်း	ဆောင်ရွက်ဆဲ
၁၀	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာ တင်သွင်းခြင်း	ဆက်လက်ဆောင်ရွက်မည်

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ငန်းစဉ်

စဉ်	လုပ်ငန်းစဉ်	ပြီးစီးမှုအခြေအနေ
၁	ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆောင်ရွက်သည့် တတိယကြား ခံ အဖွဲ့အစည်းအတည်ပြုခြင်း	အတည်ပြုချက်ရရှိပြီး
၂	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ ပြုစုရေးသားခြင်း	ဆောင်ရွက်ပြီး
၃	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်ခြင်း အဆင့် လူထုတွေ့ဆုံဆွေး နွေးခြင်း	ဆောင်ရွက်ပြီး (ဩဂုတ်လ ၂၀၂၅ ခုနှစ်)
၄	စီမံကိန်းအကြောင်းအရာ ထုတ်ဖော်ကြေညာခြင်း	ဆောင်ရွက်ပြီး
၅	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ တင်သွင်းခြင်း	တင်သွင်းပြီး (စက်တင်ဘာလ၊ ၂၀၂၅ ခုနှစ်)
၆	နယ်ပယ်အတိုင်းအတာ သတ်မှတ်မှု အစီရင်ခံစာ အတည်ပြုခြင်း	အတည်ပြုပြီး (နိုဝင်ဘာလ၊ ၂၀၂၅ ခုနှစ်)
၇	အခြေခံအချက်အလက်ကောက်ယူခြင်းနှင့် ပတ်ဝန်းကျင် ထိခိုက် မှု ဆန်းစစ်ခြင်း	ဆောင်ရွက်ပြီး
၈	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းအဆင့် လူထုတွေ့ဆုံ ဆွေး နွေးခြင်း	ယခုအဆင့်
၉	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာ ရေးသားခြင်း	ဆောင်ရွက်ဆဲ
၁၀	ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာ တင်သွင်းခြင်း	ဆက်လက်ဆောင်ရွက်မည်

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ငန်းစဉ်



(၁) ပြည်သူလူထုနှင့် တွေ့ဆုံဆွေးနွေးခြင်းလုပ်ငန်းစဉ်

ရည်ရွယ်ချက်

စီမံကိန်းမှ သက်ရောက်မှုများအား သင့်တော်သည့် သက်ရောက်မှု လျော့ချရေး နည်းလမ်းများ သတ်မှတ်ရန် အတွက် ဒေသနေပြည်သူများ၏ အကြံပြုချက်၊ ဆွေးနွေးချက်နှင့် စိုးရိမ်မှုပန်မှုများ ရယူရန်

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ထုံးလုပ်နည်း အပိုဒ် ၅၀ နှင့် ၆၁ အရ စီမံကိန်းနှင့်ဆက်စပ်နေသည့် သက်ဆိုင်သူများနှင့် တွေ့ဆုံခြင်းအား အောက်ပါအတိုင်း ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

ပထမအကြိမ် တွေ့ဆုံဆွေးနွေးခြင်း : အဆိုပြုစီမံကိန်း၏ လေ့လာမည့် နယ်ပယ်အတိုင်းအတာနှင့် စီမံကိန်း လုပ်ငန်းများအကြောင်း အသိပေး အကြောင်းကြားရန် ၂၀၂၅ ခုနှစ် ဩဂုတ်လတွင် ကျင်းပခဲ့ပြီးဖြစ်ပါသည်။

ဒုတိယအကြိမ်တွေ့ဆုံဆွေးနွေးခြင်း (ယခုအကြိမ်ဆွေးနွေးခြင်း) : စီမံကိန်းအကြောင်းအရာများ၊ အခြေခံအချက်အလက် ကောက်ယူခြင်း လုပ်ငန်းစဉ်များ၊ ဆန်းစစ်ချက်ရလာဒ်များ၊ ဖြစ်နိုင်ချေရှိသော သက်ရောက်မှုများနှင့် သက်ရောက်မှု လျော့ချရေးနည်းလမ်းများအား အသိပေး တင်ပြရန် ကျင်းပသည့် ယခု အစည်းအဝေး ဖြစ်ပါသည်။

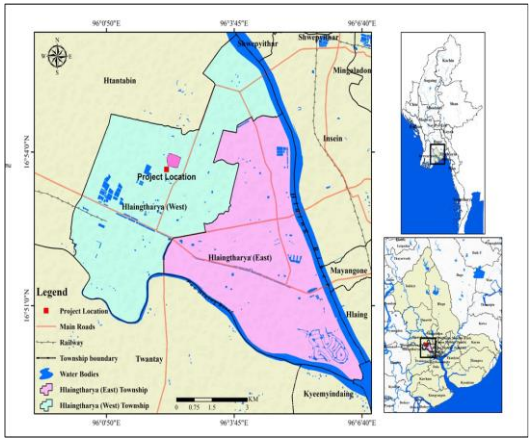
ပြည်သူလူထုနှင့် တွေ့ဆုံဆွေးနွေးခြင်းလုပ်ငန်းစဉ်

ပထမအကြိမ်တွေ့ဆုံဆွေးနွေးခြင်း

(မြို့နယ်အဆင့်)



(၇) အခြေခံ အချက်အလက်များ အခြေအနေ



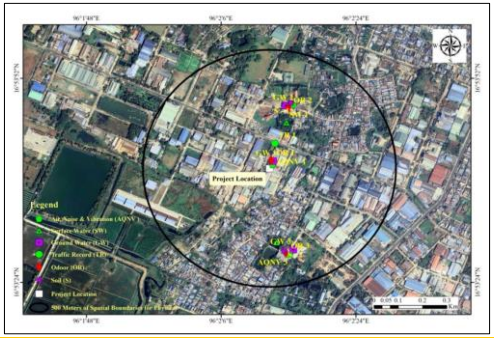
Golden Apex International Trading Co., Ltd၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်းသည် ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင် တည်ရှိပါသည်။

ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

ရှုပဝန်းကျင်

နမူနာကောက်ယူရာတွင် တိုက်ရိုက်ထိတွေ့ တိုင်း တာခြင်းနှင့် မါတ်ခွဲ ခန်းစစ်ခြင်း နှစ်မျိုးလုံးပါဝင်ပါသည်။ ရှုပဝန်းကျင် လေ့လာ ခန်းစစ်မှုအား ကောက်ယူရာတွင်

- လေထုအရည်အသွေး -၃ နေရာ၊
- ဆူညံသံနှင့် တုန်ခါမှု -၃ နေရာ၊
- အနံ့ -၃ နေရာ၊
- မြေသား နမူနာ - ၂ နေရာ၊
- မြေပေါ်ရေ နမူနာ -၂ နေရာ၊
- မြေအောက်ရေ နမူနာ - ၂ နေရာ တိုင်းတာခဲ့ပါသည်။



ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

လေအရည်အသွေး- ၃ နေရာ၊ဆူညံသံနှင့် တုန်ခါမှု - ၃ နေရာနှင့် အနံ့ - ၃ နေရာ

တိုင်းတာရေးနေရာ ၃ နေရာတွင် PM2.5, PM10 နှင့် SO2 သည် တိုင်းတာမှုများအရ အမျိုးသားပတ်ဝန်းကျင် ဆိုင်ရာ အရည်အသွေး ထုတ်လွှတ် မှု စံချိန်စံညွှန်း အောက်ထွင်သာ တည်ရှိပါသည်။

ဆူညံသံ တိုင်းတာရာ ၃ နေရာ ထွင်လည်း အမျိုးသားပတ်ဝန်း ကျင် ဆိုင်ရာ အရည်အသွေး ထုတ်လွှတ်မှု စံချိန်စံညွှန်း အောက်တွင် သာ တည်ရှိသည်ကို လေ့လာတွေ့ရှိရပါသည်။





Ambient Air Quality Results

Sampling No	Ozone µg/m³	NO2 µg/m³	SO2 µg/m³	PM10 µg/m³	PM2.5 µg/m³
AQ 1	52.45	25.63	16.54	11.17	6.74
AQ 2	55.92	18.83	12.86	7.67	14.94
AQ 3	54.71	9.06	14.68	9.27	5.63
National Environmental Quality (Emission) Guideline	100	200	20	50	25

ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

လေအရည်အသွေး- ၃ နေရာ၊ ဆူညံသံနှင့် တုန်ခါမှု- ၃ နေရာနှင့် အနှံ- ၃ နေရာ

A-weighted loudness Equivalent (LAeq) Level						
	N 1		N 2		N 3	
Result	Day	Night	Day	Night	Day	Night
	58.07	53.5	47.58	43.99	46.45	43.37
NEQG	70	70	70	70	70	70

Result	V 1		V 2		V 3	
	Day	Night	Day	Night	Day	Night
	35	18	21	13	24	15
Environmental Standard	65	60	65	60	65	60

Odor			
Sampling Number	O 1	O 2	O 3
Results (ppm)	0.04	0.01	0.02
NEQG	5 – 10 ppm		





ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

မြေအရည်အသွေး - ၂ နေရာ

မြေသား နမူနာ ကောက်ယူရာတွင် မြေသား နမူနာ ၂ နေရာ ကောက်ယူခဲ့ပါသည်။ မြန်မာနိုင်ငံတွင် မြေသားနမူနာအတွက် စံသက်မှတ်ချက်များမရှိသေးသဖြင့် အခြေခံ အချက်အလက်အဖြစ် မှတ်တမ်းတင်ထားပြီး နောက်ပိုင်းတွင် ဓောင့်ကြပ်လေ့လာရန်အတွက် အသုံးပြုနိုင်ပါသည်။





မြေပေါ်ရေအရည်အသွေး-၂ နေရာ နှင့် မြေအောက်ရေအရည်အသွေး -၃ နေရာ

မြေပေါ်ရေ အရည်အသွေး -၂ နေရာ နှင့် မြေအောက်ရေ အရည်အသွေး -၃ နေရာ ကောက်ယူခဲ့ပါသည်။ In-situ နှင့် ဓါတ်ခွဲခန်း ရလာဒ်များအရ မြေပေါ်ရေ နှင့် မြေအောက်ရေ၏ အရည်အသွေးမှာ လမ်းညွှန်ချက်များ အတွင်းသာ တည်ရှိပါသည်။









ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

ဇီဝဝန်းကျင်

ဇီဝမျိုးစုံမျိုးကွဲ လေ့လာမှုများအတွ င်း စီမံကိန်း ဧရိယာမှ ၅၀၀ မီတာ အတွင်း လေ့လာခဲ့ပါသည်။ ဇီဝမျိုး စုံမျိုးကွဲ လေ့လာမှုများအတွင်း တွေ့ရှိခဲ့သော မျိုးစိတ်အဆင့်များကို အောက်ပါအတိုင်း ဖော်ပြထားပါသည်။

အပင်မျိုးစိတ် ၃၆ မျိုး လေ့လာတွေ့ရှိရ ပါသည်။

ငှက်မျိုးစိတ် ၂၂ မျိုး

တွားသွားသတ္တဝါမျိုးစိတ် ၁၇ မျိုး

မွှေးတိုက်သတ္တဝါ မျိုးစိတ် ၃ မျိုး နှင့်

လိပ်ပြာမျိုးစိတ် ၈ မျိုးတို့ကို လေ့လာ တွေ့ရှိရပါသည်။













ပတ်ဝန်းကျင်ဆိုင်ရာ အခြေခံ အချက်အလက်များ ကောက်ယူသည့် ကွင်းဆင်း လေ့လာမှုများ

လူမှုဝန်းကျင်

စီမံကိန်း ဧရိယာသည် ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့် မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေး စက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင် တည်ရှိပါသည်။ လူမှုဝန်းကျင်ဆိုင်ရာ အခြေခံအချက်အလက်များကို ကွင်းဆင်း လေ့လာရာတွင် အောက်ပါ ကဏ္ဍများကို စီမံကိန်း လုပ်ဆောင်ချက်များမှ သက်ရောက်နိုင်ခြေရှိသော ဖော်ပြပါ ကျေးရွာများ၌ ဆန်းစစ် လေ့လာသွားမည်။

- အသက်မွေးဝမ်းကြောင်းဆိုင်ရာ အခြေပြု အချက်အလက်များ
- ယဉ်ကျေးမှု အမွေအနှစ် နှင့် မြင်ကွင်းဆိုင်ရာ အချက်အလက်များ
- အလုပ်သမားနှင့် အလုပ်လုပ်ကိုင်မှုဆိုင်ရာ အခြေအနေများ လုပ်ငန်းရွှင်ဆိုင်ရာ
- အများပြည်သူများ၏ ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်းရှင်းရေး
- ဒေသနေပြည်သူများနှင့်ဆွေးနွေးတိုင်ပင်ခြင်း အချက်အလက်များ

ကျေးရွာအမည်

၁။ ကန်လှကျေးရွာ

၂။ ကျုံစုကျေးရွာ

(ဃ) စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်း လုပ်ငန်းစဉ်တွင် စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသောအတိတ်ဝန်းကျင်ဆိုင်ရာ ထိခိုက်မှုများမှာ

- ❑ လေထုအရည်အသွေး
- ❑ မြေအရည်အသွေး
- ❑ ရေအရည်အသွေး
- ❑ ဆူညံသံနှင့် တုန်ခါမှု
- ❑ ဇီဝမျိုးစုံမျိုးကွဲများနှင့်ဂေဟစနစ်
- ❑ လူမှုဝန်းကျင်

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

တည်ဆောက်ရေးအဆင့်

စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
စီမံကိန်း ဧရိယာအား ရှင်းလင်းခြင်း	❑ မြေပြင် တူးဖော်ခြင်း လုပ်ငန်းများမှ ထွက်ရှိလာသော ဖုန်/အမှုန်များ၊ ❑ ရွှေ့လျားသွားလာသော ယာဉ်များ (မော်တော်ယာဉ်များ နှင့် စက်ယန္တရားများ) မှ ထွက်ရှိလာသော မီးခိုးငွေ့များ ❑ စီမံကိန်း ဧရိယာအား ရှင်းလင်းခြင်း လုပ်ငန်းကြောင့် အပင်၊ သတ္တဝါနှင့် နေရင်းဒေသများ အပေါ် ထိခိုက်မှုများ	❑ ယာဉ်များ၊ စက်ယန္တရားများအား အသုံးပြုမှုနှင့် ထိန်းသိမ်းမှုကို ပုံမှန် စစ်ဆေးခြင်း ❑ ဖုန်မှုန့်များ ညစ်ညမ်းစေမည့် အလုပ်များကို လုပ်ငန်း မလုပ်ဆောင်မီ ရေဖြန်းခြင်း။ ❑ စီမံကိန်း ဧရိယာ၏ သတ်မှတ် ပိုင်းခြားထားသော နယ်နိမိတ်တွင် အပင်များ ရှင်းလင်းခြင်းနှင့် ဒေသ မျိုးရင်းများ အပေါ် နှောက်ယှက်မှုများကို လျော့ချပေးခြင်း
အဆောက်အဦး၊ ရုံးခန်းနှင့် သိုလှောင်ရုံ တည်ဆောက်ခြင်း	❑ တည်ဆောက်ရေးလုပ်ငန်းများ လုပ်ဆောင်နေစဉ် ဘေးပတ်ဝန်းကျင်အပေါ် ဖုန်/အမှုန် ထွက်ရှိမှု များကြောင့် ဖြစ်နိုင်ခြေ ရှိသော ထိခိုက်မှုများ ❑ ဆောက်လုပ်ရေး လုပ်ငန်းမှ စွန့်ပစ်သော စွန့်ပစ်ပစ္စည်းများ နှင့် ဝန်ထမ်း အိမ်ရာများမှ စွန့်ပစ်သော စွန့်ပစ်ပစ္စည်းများ	❑ တည်ဆောက်ရေး အတွက် အသုံးပြုလျက်ရှိသော မော်တော်ယာဉ်များ အား ပုံမှန် ပြုပြင် ထိန်းသိမ်းခြင်း နှင့် စစ်ဆေးခြင်း ❑ အသံဆူညံသော နေရာများတွင် အလုပ်သမားများ အား နားကြပ်နှင့် အခြားသော လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကာကွယ်ရေး ပစ္စည်း(PPE)များကိုထောက်ပံ့ပေးခြင်းနှင့် မဖြစ်မနေ အသုံးပြု စေခြင်း ❑ ပစ္စည်းများကို တင်ဆောင်နေစဉ် ယာဉ်များကို ရပ်တန့်ထားခြင်း။ ❑ စက်ယန္တရားများအား ပုံမှန်ပြုပြင်ရေးများ ဆောင်ရွက်ခြင်း။ ❑ ဝန်ထမ်းအိမ်ယာများမှ ထွက်ရှိလာသော မီးဖိုချောင်သုံးပစ္စည်းများ စွန့်ပစ်ခြင်း အတွက် ရန်ကုန်ဖြို့တော် စည်ပင်သာယာရေး ကော်မတီနှင့် ညှိနှိုင်း ဆောင်ရွက်ခြင်း

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့်(ရှုပဝန်းကျင်)

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
လေထုအရည်အသွေး	မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း ကုန်ကြမ်းနှင့် feed additive များ သိုလှောင်ခြင်း	❑ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း (ကုန်ကြမ်းများအား သိုလှောင်ခြင်း၊ သယ်ယူခြင်း၊ ကြိတ်ခွဲခြင်း၊ ချိန်တွယ်ခြင်း နှင့် ရောနှောခြင်း) လုပ်ဆောင်နေစဉ် ဘေးပတ်ဝန်းကျင်အပေါ် ဖုန်/အမှုန် ထွက်ရှိမှု များကြောင့် ဖြစ်နိုင်ခြေ ရှိသော ထိခိုက်မှုများ ❑ ရွှေ့လျားသွားလာသော ယာဉ်များ (ကား၊ forklift နှင့် မီးစက်များ) မှ ထွက်ပေါ်လာသော မီးခိုးငွေ့များ ❑ ကုန်ကြမ်းနှင့် feed additive မှ ထွက်ရှိလာသော အနံများ	❑ ရောစပ်ခြင်းနှင့် ကြိတ်ခွဲခြင်းလုပ်ငန်းခွင် များတွင် ဖုန်/အမှုန်ထွက်ရှိမှုများ လျော့နည်းစေရန် အတွက် လုပ်ငန်းခွင်အား သန့်ရှင်းစွာ စီစဉ်ဆောင်ရွက်ထားရန်။ ❑ မွေးမြူရေးအစာ ကြိတ်ခွဲခြင်း လုပ်ငန်းတွင် ဖုန်/အမှုန် ထွက်ရှိမှုအား လျော့ချစေရန် လေစုပ်စနစ်များ တပ်ဆင် ထားရှိရန်။ ❑ ကုန်ကြမ်းနှင့် feed additive များအား စနစ်တကျ သိုလှောင် ထားရှိရန်။ ❑ ကုန်ကြမ်းများ၊ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ သယ်ယူပို့ဆောင်ရာတွင် ဖုန်/အမှုန်ထွက်ရှိမှုကိုလျော့ချရန်အတွက် Butterfly Conveyor များအသုံးပြုစေခြင်း။ ❑ အရေးပေါ် မီးစက်များ၊ ရွှေ့လျား သွားလာသော ယာဉ်များကို ပုံမှန်စစ်ဆေး ထိန်းသိမ်းခြင်း။ ❑ စက်ရုံအတွင်း အလုပ်သမားများအား လုပ်ငန်း ဆောင်ရွက်စဉ်တွင် သင့်လျော်သော တစ်ကိုယ်ရည် ကာကွယ်ရေး ပစ္စည်းများ ပေးဆောင်ခြင်းနှင့် ဝတ်ဆင်စေခြင်း။

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့်(ရှုပဝန်းကျင်)

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
ဆူညံသံနှင့်တုန်ခါမှု	✓ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း	❑ ဆူညံမှုနှင့် တုန်ခါမှုမှ ဖြစ်ပေါ်နိုင်သော ထိခိုက်မှုများ ❑ ကုန်ကြမ်းများနှင့် ကုန်ချောများ အား စက်ပစ္စည်းများ အသုံးပြု၍ သယ်ယူခြင်းကြောင့် ဆူညံမှု ဖြစ်ပေါ်လာနိုင်သော သက်ရောက်မှုများ	❑ စက်ယန္တရားများအားပုံမှန် ပြုပြင် ထိန်းသိမ်းပေးခြင်း။ ❑ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းအား နေ့အချိန်တွင်သာ ပြုလုပ်စေခြင်း၊ ❑ အသံဆူညံသော နေရာများတွင် အလုပ်သမားများ အား နားကြပ်နှင့် အခြားသော လုပ်ငန်းခွင် ဘေးအန္တရာယ် ကာကွယ်ရေး ပစ္စည်း(PPE)များကို ထောက်ပံ့ပေးခြင်းနှင့် မဖြစ်မနေ အသုံးပြု စေခြင်း။ ❑ စက်ရုံအနီးဝန်းကျင် ဧရိယာအတွင်း ကားဟွန်း အသုံးပြုမှုကို လျော့ချ စေခြင်း။

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့် (ရုပဝတ္ထုဆိုင်ရာ)

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
ရေအရည်အသွေး	• ဝန်ထမ်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ရေများ • ချောဆီ/စက်ဆီများ သိုလှောင်ခြင်း နှင့် ကိုင်တွယ်ခြင်း။	❑ ရုံးခန်းများ နှင့် စားသောက်ခန်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ရေများမှ ရေအရည်အသွေးအပေါ် သက်ရောက်မှုများ ❑ ချောဆီ/ စက်ဆီများ ယိုဖိတ်မှုများကြောင့် ရေအရည်အသွေးအပေါ် သက်ရောက်မှုများ	❑ ရုံးများ၊ ထမင်းစားဆောင်များမှ ထွက်ရှိလာမည့် ရေဆိုးများအား မိလ္လာကန်စနစ်ဖြင့် သန့်စင်ခြင်း။ ❑ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်သည့်စက်ရုံတွင် သန့်ရှင်းရေး ပြုလုပ်ရာ၌ ရေမလိုဘဲ သန့်ရှင်းသည့် နည်းလမ်း အသုံးပြုခြင်းမှသာ ရေဖြင့်ဆေးကြောစေခြင်း၊ ❑ ချောဆီနှင့် စက်ဆီများ သိုလှောင်ထားရှိမည့် နေရာအား ကြမ်းခင်းများဆင်း၍ စနစ်တကျ သေချာ သိုလှောင် ထားရှိခြင်း။ ❑ ချောဆီ/ စက်ဆီများအထွက် သီးခြား သိုလှောင်နေရာများ ထားရှိခြင်း။

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့် (ရုပဝတ္ထုဆိုင်ရာ)

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
အမှိုက် /စွန့်ပစ်ပစ္စည်း	• မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း • ဝန်ထမ်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ပစ္စည်းများ	❑ ကုန်ကြမ်းပစ္စည်းများမှ အပိုင်းအစများ၊ ထုတ်ပိုး အိတ်များ၊ ထုတ်ပိုး ပစ္စည်းများနှင့် ဝန်ထမ်းများမှ ထွက်ပေါ်လာသော စွန့်ပစ်ပစ္စည်းများ ကြောင့် ဖြစ်ပေါ်လာသော သက်ရောက်မှုများ။	❑ ထွက်ရှိလာသော အမှိုက်များကို ခွဲခြားပြီး စနစ်တကျ စွန့်ပစ်ခြင်း။ ❑ ပြန်လည်အသုံးပြုနိုင်သော အမှိုက်များကို စုဆောင်းခြင်း၊ ❑ စက်မှု ဝန်ထမ်းများအားလုံးသည် အမှိုက် လျော့ချခြင်း၊ ပြန်လည်အသုံးပြုခြင်း၊ နှင့် ပြန်လည်စုဆုပြခြင်း နိယာမကို လိုက်နာ ကျင့်သုံးခြင်း၊ ❑ စီမံကိန်း အဆိုပြုသူသည် အမှိုက်များကို မနှန်းမခံ ယာယီ စွန့်ပစ်ရာ နေရာတစ်ခု ပြုလုပ် ထားရှိစေခြင်း။ ❑ ရန်ကုန်ပြို့တော် စည်ပင်သာယာရေး ကော်မတီနှင့် ညှိနှိုင်းကာ ဆောင်ရွက်စေခြင်း၊

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့် (ဇီဝမျိုးစုံမျိုးကွဲ)

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
ဇီဝမျိုးစုံမျိုးကွဲ	✓ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း	❑ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်းကြောင့်အပင်၊ သတ္တဝါနှင့် နေရင်းဒေသများ အပေါ် ထိခိုက်မှုများ	❑ စီမံကိန်းဧရိယာ ပြင်ပရှိနေရာများမှ သစ်ပင်များ နှင့် တိရစ္ဆာန်များအား အနှောင့်အယှက် ဖြစ်စေခြင်းအား တားဖြစ်ထားခြင်း။ ❑ စီမံကိန်းအထွင်း သစ်ပင်များ စိုက်ပျိုးထားစေခြင်း။ ❑ တိရစ္ဆာန်များ ကာကွယ်ရန်နှင့် မလိုလားအပ်သော အနောက်အယှက်မဖြစ်စေရန် ဝန်ထမ်းများအား အသိပညာပေးခြင်းအား ဆောင်ရွက်စေခြင်း၊

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့် (လူမှုစီးပွားရေး)

စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
• မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း	❑ စီးပွားရေး ပွဲဖြိုးတိုးတက်မှု ❑ ဒေသပွဲဖြိုးရေး အစီအစဉ် ❑ အလုပ်အကိုင် အခွင့်အလမ်း ❑ ဒေသနေ တစ်ဦးချင်း ဝင်ငွေ တိုးပွားလာခြင်း ❑ အခြေခံအဆောက်အဦများ တိုးတက်လာခြင်း	❑ ဒေသနေပြည်သူများ အလုပ်အကိုင် အခွင့်အလမ်း ရရှိလာခြင်း၊ ❑ အလုပ်အကိုင် ခိုင်မာလာခြင်းနှင့် ဝင်ငွေ တိုးပွားလာခြင်း။ ❑ ဒေသပွဲဖြိုးရေး အစီအစဉ်များ (ပညာရေး၊ ကျန်းမာရေးနှင့် အခြေခံ အဆောက်အဦများ)။

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

လုပ်ငန်းလည်ပတ်ဆောင်ရွက်ခြင်းအဆင့်ရှိကျန်းမာရေးနှင့်ဘေးအန္တရာယ်ကင်းရှင်းရေး

ပတ်ဝန်းကျင်ဆိုင်ရာ အစိတ်အပိုင်းများ	စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
ကျန်းမာရေးနှင့် ဘေးအန္တရာယ် ကင်ရှင်းရေး	▪ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ ထုတ်လုပ်ခြင်း လုပ်ငန်း	❑ စက်ရဲ့ အလုပ်သမားများအပေါ် ဆူညံသံ သက်ရောက်မှုများ ❑ စက်ရဲ့ အလုပ်သမားများ အပေါ် ဖုန်/အမှုန် များမှ သက်ရောက်မှုများ ❑ ကုန်ကြမ်းနှင့် feed additive မှ ထွက်ရှိလာသော အန္တရာယ်များမှ သက်ရောက်မှုများ	❑ အသံဆူညံသော နေရာများ (စက်အနီးအနား) တွင်လုပ်ကိုင်သော အလုပ်သမားများ အား နားကြပ်နှင့် PPE များအသုံးပြုစေခြင်း။ ❑ မွေးမြူရေးအစာ ကြိတ်ခွဲခြင်း လုပ်ငန်းတွင်ဖုန် /အမှုန် ထွက်ရှိမှုအား လျော့ချစေရန် လေစုပ်စနစ်များတပ်ဆင်ထားရှိရန်။ ❑ လုပ်ငန်းခွင်ဘေးအန္တရာယ် ကာကွယ်ရေး ပစ္စည်း(PPE)များကို ထောက်ပံ့ပေးခြင်း နှင့် အသုံးပြုစေခြင်း။

စီမံကိန်းကြောင့် ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများနှင့် လျော့ချရေးနည်းလမ်းများ

စီမံကိန်းပိတ်သိမ်းခြင်းအဆင့်

စီမံကိန်းဆောင်ရွက်မှု	ဖြစ်နိုင်ခြေရှိသော သက်ရောက်မှုများ	လျော့ပါးစေရေးနည်းလမ်းများ
✓ အခြေခံ အဆောက်အဦ များ ဖယ်ရှားခြင်း ✓ ကုန်ကရစ်များကို ဖယ်ရှား ရှင်းလင်းခြင်း ✓ ဖြိုဖျက်ပြီး အဆောက်အဦ အပိုင်းအစများကိုသယ်ဆောင်ခြင်း	❑ လုပ်ငန်းပိတ်သိမ်းခြင်း အဆင့် လုပ်ဆောင်နေစဉ် ဘေးပတ်ဝန်းကျင်အပေါ် ဖုန်/အမှုန် ထွက်ရှိမှု များကြောင့် ဖြစ်နိုင်ခြေ ရှိသော ထိခိုက်မှုများ ❑ ဖြိုဖျက်ပြီး အဆောက်အဦ အပိုင်းအစများသယ်ယူသည့် ယာဉ်ယန္တရားနှင့် စက်ပစ္စည်းများ မှ ထွက်ရှိလာသော ဖုန်မှုန့်များ ❑ ဆူညံမှုနှင့် တုန်ခါမှုဖြစ်ပေါ်နိုင်သော ထိခိုက်မှုများ ❑ ချောဆီ/ စက်ဆီများ ယိုဖိတ်မှုများကြောင့် ရေအရည်အသွေးအပေါ် သက်ရောက်မှုများ	❑ စီမံကိန်းတွင် အသုံးပြုသော ယာဉ်ယန္တရားများ နှင့် ဆက်စပ်ပစ္စည်းများအား စနစ်တကျ ထားရှိခြင်း ❑ ချောဆီ/ စက်ဆီများအား သီးခြား စနစ်တကျထားရှိခြင်း။ ❑ ဆူညံသံ ဖြစ်ပေါ်စေသော စက်များ နှင့် ယာဉ်များကို ပုံမှန်စစ်ဆေး ထိန်းသိမ်းခြင်း။ ❑ ပိတ်သိမ်းကာလတွင် ဖြိုဖျက်ပြီး စွန့်ပစ်ပစ္စည်းများအား ရန်ကုန်ဖြို့တော် စည်ပင်သာယာရေး ကော်မတီနှင့် ညှိနှိုင်း၍ ဆောင်ရွက်စေခြင်း၊

ဆက်လက်ဆောင်ရွက်မည့် အစီအစဉ်

- ယခု လုပ်ငန်းစဉ်မှ ရရှိလာသော အကြံပြုတုံ့ပြန်ချက်များကို ပတ်ဝန်းကျင် ထိခိုက်မှု ဆန်းစစ်ခြင်းတွင် ထပ်မံပါဝင်မည့် သက်ရောက်မှု လျော့ချရေး အတွက် ထည့်သွင်းစဉ်းစား မည်ဖြစ်ပါသည်။
- ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းတွင် သက်ရောက်မှုများအား အသေးစိတ် ထပ်မံဆန်းစစ် သွားမည်ဖြစ်ပါသည်။
- သက်ရောက်မှု လျော့ချရေးနည်းလမ်းများနှင့် စောင့်ကြပ်ကြည့်ရှုရေးနည်းလမ်းများ နှင့်အတူ ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ် (EMP) အား ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းတွင် ဖော်ပြသွားမည်ဖြစ်ပါသည်။
- ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းအား ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ တင်ပြသွား မည် ဖြစ်ပါသည်။
- သက်ဆိုင်ရာ အထွေထွေအုပ်ချုပ်ရေးမှူး ရုံးများတွင် မြန်မာဘာသာဖြင့် ရေးသားထားသည့် စီမံကိန်းအကျဉ်းချုပ်ကို ဖတ်ရှုနိုင်ရန် စီစဉ် ပေးသွားပါမည်။

ဆက်သွယ်ရန်လိပ်စာ

ကုမ္ပဏီအမည်	Golden Apex International Trading Co., Ltd
ဆက်သွယ်ရန်ပုဂ္ဂိုလ်	ဒေါ်ကေသွယ်အောင်
ဆက်သွယ်ရန်လိပ်စာ	အမှတ်(90 A/B) ရိုးကြီး ရိုးလေး အိုင်းအနီး၊ အနောက်ပိုင်းတက္ကသိုလ်လမ်းနံဘေး၊ ထန်းတပင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
ဆက်သွယ်ရန်ဖုန်းနံပါတ်	၀၉ ၅၀၉၈၀ ၂၈
	goldenapexmyanmar@gmail.com
အကြံပေးဆောင်ရွက်သူ	**Environmental Compliance Consultancy Co., Ltd.**
ဆက်သွယ်ရန်ပုဂ္ဂိုလ်	ဦးချစ်မိုးလွင်
ဆက်သွယ်ရန်လိပ်စာ	ရုံး (၁) - အမှတ် (၂၀) နိုင်ငံဒေလမ်းသွယ်၊ လမ်းသစ်လမ်း နဲသာကုန်းရပ်ကွက်၊ အင်းစိန်မြို့နယ်၊ ရန်ကုန်။
ဆက်သွယ်ရန်ဖုန်းနံပါတ်	+959777006449
အီးမေးလ်	chitmyolwin2010@gmail.com

ကျေးဇူးတင်ပါသည်။





အမေးအဖြေကဏ္ဍ

Socio-Economy Survey Form and Survey Activities Photo








Socio-Economic Survey Activities Photo

ရန်ကုန်တိုင်းဒေသကြီး၊ လှိုင်သာယာ (အနောက်ပိုင်း) မြို့နယ်၊ မွေးမြူရေး နှင့်
မွေးမြူရေးထွက်ကုန်ပစ္စည်း ထုတ်လုပ်ရေးစက်မှုဇုန်၊ မြေကွက်အမှတ် (၁၀၀ + ၁၀၁) တွင်
Golden Apex International Trading Co., Ltd ၏ မွေးမြူရေးအစာနှင့် ဖြည့်စွက်အစာများ
ထုတ်လုပ်ရောင်းချခြင်း လုပ်ငန်း စီမံကိန်း

A. အိမ်ထောင်စုအမျိုးအစားသတ်မှတ်ခြင်း

A1	ကျေးရွာ	ကံလှ_____ ၁ ကျုံစု _____ ၂
A2	ဖြေဆိုသူအမည်	_____

B. အိမ်ထောင်စုအချက်အလက်

1	အသက်		
B1	ကျား/မ	ကျား ----------၁ မ ----------၂	
B2	သင့်အိမ်ထောင်စုတွင် မိသားစုဝင် ဘယ်နှစ်ယောက်ရှိပါသလဲ	မိသားစုဝင်အရေအတွက် _____	
B3	ကိုးကွယ်သည့်ဘာသာ	ဗုဒ္ဓဘာသာ ----------၁ ခရစ်ယာန် ----------၂ အခြား ----------၉၉	
B4	အိမ်ထောင်ရေးအခြေအနေ	လူပျို/အပျို ----------၁ အိမ်ထောင်သည် ------၂ မုဆိုးဖို/မ ----------၃ ကွာရှင်းထားသူ -------၄	
B5	ပညာရေးအခြေအနေ	ကျောင်းမနေ ----------၁ ဘုန်းကြီးကျောင်း -----၂ မူလတန်း ----------၃ အလယ်တန်း ---------၄ အထက်တန်း ---------၅ တက္ကသိုလ်တက်ဆဲ --၆	

		ဘွဲ့ရ ----------၇ အခြား ----------၈	
B6	အလုပ်အကိုင်	စိုက်ပျိုးရေး ----------၁ မွေးမြူရေး ----------၂ အသေးစားလုပ်ငန်း --၃ အစိုးရဝန်ထမ်း -------၄ ပုဂ္ဂလိကဝန်ထမ်း ----၅ ကျွမ်းကျင်လုပ်သား -၆ ကျပန်း ----------၇ အခြား ----------၈	

အိမ်ထောင်စုစီးပွားရေးအခြေအနေ

C. အိုးအိမ်အခြေအနေ

C1	သင်တို့ မိသားစုနေထိုင်သော အိမ်က ကိုယ်ပိုင်လား။	ကိုယ်ပိုင် _____၁ အိမ်ငှား _____၂ အခြား _____၃	**If 2 or other>D3**
C2	ဤရွာတွင်နေထိုင်သည်မှာ မည်မျှကြာပါပြီလဲ။	တစ်နှစ်အောက် _____၁ ၂နှစ်မှ ၅နှစ်အတွင်း _____၂ ၅နှစ်နှင့် အထက် _____၃ ၁၀နှစ်အထက်(မွေးမှစ၍) _____၄	

D. *Agricultural (စိုက်ပျိုးရေး)*

D1	စိုက်ပျိုးရေးလုပ်ငန်းလုပ်ကိုင်ပါသလား	လုပ်ပါသည်။----------၁ မလုပ်ကိုင်ပါ။----------၂	

D2	မည်သည့်စိုက်ပျိုးမြေအမျိုးအစားကို ပိုင်ဆိုင်ပါသလဲ။	မိုင်ပါ_____၀၇ လယ် _____ကေ ယာ _____ကေ ကိုင်း _____ကေ နှစ်ရှည် _____ကေ အခြား _____ကေ	**If 97> f1**
D3	စီးပွားဖြစ် မည်သည့်သီးနှံအမျိုးအစားများကို စိုက်ပျိုးသလဲ။	စပါး _____၁ အခြား _____၀၉	

E. Livestock (မွေးမြူရေး)

E1	သင်တို့အိမ်ထောင်စုတွင် တိရစ္ဆာန်များ မွေးမြူထားပါသလား။	ရှိ_____၁ မရှိ_____၂	**If 2>G1**
E2	သင်တို့အိမ်ထောင်စုတွင် မည်သည့်တိရစ္ဆာန်များ မွေးမြူထားပါသလဲ? (MA)	ကျွဲ _____၁ နွား _____၂ ဝက် _____၃ ကြက် _____၄ ဘဲ _____၅ လား/မြည်း _____၆ အခြား _____၀၉	

F. Household's Income and Expenditure (အိမ်ထောင်စု ဝင်ငွေနှင့်အသုံးစရိတ်) ကျပ်

F1	တစ်လ ပျမ်းမျှအသုံးစရိတ်	_____	
F2	တစ်လ ပျမ်းမျှဝင်ငွေ	_____	

G. Credit Facility (ချေးငွေပံ့ပိုးမှု)

G1	လွန်ခဲ့သည့်၁၂လအတွင်း ငွေချေးထားသည့် အကြွေးရှိပါသလား။	ရှိ_____၁ မရှိ_____၂	**If 2>K1**
G2	ရပ်/ရွာတွင်းရှိအကြွေးယူသည့်နေရာ	ဘဏ်_____၁ ငွေစုချေးငွေ_____၂ မိသားစု_____၃ မိတ်ဆွေ/အိမ်နီးချင်း___၄ အခြား_____၀၉	

G3	အတိုးနှုန်းမည်မျှနည်း။	တစ်လလျှင်_____နှုန်း *အတိုးမပေးရပါ*_____*၉၇*	

H. Energy Usage (စွမ်းအင် သုံးစွဲမှု)

H1	သင့်အိမ်ထောင်စုတွင် **အလင်းရောင်အတွက်** မည်သည့်စွမ်းအင်ကို အဓိက အသုံးပြုပါသလဲ?	အစိုးရလျှပ်စစ်မီး_____၁ ပုဂ္ဂလိက လျှပ်စစ်မီး_____၂ ကျေးရွာပိုင်မီးစက်_____၃ ကိုယ်ပိုင်မီးစက်_____၄ ဖယောင်းတိုင်_____၅ ရေနံဆီ_____၆ ဆိုလာ_____၇ ဘတ္တရီ_____၈ အခြား_____၉၉	
H2	သင့်အိမ်ထောင်စုတွင် **ချက်ပြုတ်ရန်အတွက်** မည်သည့် စွမ်းအင်ကို အဓိက အသုံးပြုပါသလဲ?	အစိုးရလျှပ်စစ်မီး_____၁ ပုဂ္ဂလိက လျှပ်စစ်မီး_____၂ ကျေးရွာပိုင်မီးစက်_____၃ ကိုယ်ပိုင်မီးစက်_____၄ ထင်း_____၅ မီးသွေး_____၆ လောင်စာတောင့်_____၇ အခြား_____၉၉	

I. Water (ရေအရင်းအမြစ်)

I1	အဓိက **သုံးရေ** ကို ဘယ်ကနေရရှိပါသလဲ (SA)	စည်ပင်ရေ ----------၁ ရေတွင်း_____၂ ရေလျှောင်ကန်_____၃ မိုးရေ_____၄ မြစ်/ချောင်းရေ_____၅ အခြား_____၉၉	
I2	အဓိက **သောက်ရေ** ကို ဘယ်ကနေရရှိပါသလဲ(SA)	ရေသန့်----------၁ ရေတွင်း_____၂ ရေလျှောင်ကန်_____၃	

		မိုးရေ_____၄ မြစ်/ချောင်းရေ_____၅ အခြား(ဖော်ပြပါ)_____၉၉	
I3	သင်တို့မိစားစု အဓိကအသုံးပြုသော အိမ်သာကဘယ်လိုအမျိုးအစားလဲ။	ယင်လုံအိမ်သာ_____၁ ယင်မလုံ(တွင်းဖွင့်)_____၂ ရေပေါ်အိမ်သာ_____၃ အခြား(ဖော်ပြပါ)_____၉၉	
I4	အမှိုက်များကို မည်သို့စွန့်ပစ်ပါသလဲ? **(MA)**	မီးရှို့ခြင်း_____၁ မြေမြုပ်ခြင်း_____၂ အိမ်နားရှိလမ်းပေါ်ကိုပစ်ခြင်း_____၃ မြစ်/ချောင်းထဲသို့ပစ်ခြင်း_____၄ ရပ်/ရွာထဲရှိစုပေါင်း အမှိုက်စွန့်ပစ်တဲ့နေရာ_____၅ အခြား(ဖော်ပြပါ)_____၉၉	

J. Health (ကျန်းမာရေးဆိုင်ရာအချက်အလက်များ)

J1	လွန်ခဲ့သော တစ်လအတွင်း သင့်မိသားစုတွင် နေမကောင်းခြင်း ဖြစ်ပွားခဲ့ပါသလား?	ဖြစ်သည်_____၁ မဖြစ်ပါ_____၂	**If 2> N8**
J2	ဖြစ်ပွားခဲ့ပါက မည်သည့်ရောဂါများဖြစ်ခဲ့ပါသနည်း။	ငှက်ဖျား_____၁ ဝမ်းရောဂါ_____၂ အသည်းရောင်အသားဝါ_____၃ တုပ်ကွေး_____၄ အရေပြားရောဂါ_____၅ သွေးတိုးရောဂါ_____၆ ကင်ဆာ_____၇ နှလုံးရောဂါ_____၈ အသက်ရှူလမ်းကြောင်းဆိုင်ရာရောဂါ_____၉၉	

J3	နေမကာင်းဖြစ်လျှင် အများအားဖြင့် ဘယ်ကိုသွားလဲ?	ဆေးရုံ_____၁ တိုက်နယ်ဆေးရုံ_____၂ ဆေးခန်း_____၃ ကျန်းမာရေးဌာန_____၄ ကျန်းမာရေးဌာနခွဲ_____၅ အခြား_____၉၉	

K. Opinions upon the project (စီမံကိန်းပေါ် သဘောထားအမြင်များ)

K1	ယခုစီမံကိန်းအကြောင်းကိုသိပါသလား။	သိပါသည်_____၁ မသိပါ_____၂	**If 2>03**
K2	ယခုစီမံကိန်းကို မည်ကဲ့သို့ သင်သိရှိပါသနည်း။	အစိုးရအဖွဲ့အစည်း_____၁ အစိုးရမဟုတ်သော အဖွဲ့အစည်းများ_____၂ ရပ်ရွာခေါင်းဆောင်_____၃ သတင်းစာ၊ရေဒီယို၊ရုပ်မြင်သံကြား_____၄ မိသားစုဝင်_____၅ မိတ်ဆွေ၊သူငယ်ချင်း_____၆ အခြား_____၉၉	
K3	စီမံကိန်းအပေါ်တွင်အကြံပြုချက် (OP)		
K4	ဒေသဖွံ့ဖြိုးမှုအတွက်လိုအပ်ချက် အားအကြံပေးရန်(OP)		

Thank you!

Appendix - 3

Lab Results

ALARM Ecological Laboratory

Water Testing Result Report

Report Number: EL-WR-25-05226 Date: September 29, 2025

Client Information

Client Name	:	Golden Apex Trading Co., Ltd.
Organization	:	Animal Feed Mill Factory
Client ID	:	-
Registration Date & Time	:	16.9.2025
Contact	:	09777006410
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	-

Sample Information

Sample ID	:	13581
Sample Name	:	SW-1
Sample Type / Source	:	Surface Water
Sampling Date & Time	:	14.9.2025
Sample Location	:	Hlaing Thar Yar (West) Township, Yangon
Latitude	:	-
Longitude	:	-

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.

This report shall not be reproduced except in full, without written approval of the laboratory

Sr.	Quality Parameters	Results	Units	Emission Standard	Remarks
1	pH[1]	7.34	S.U	6.0 – 9.0[d]	Normal
2	Turbidity[3]	14	FAU	-	-
3	TDS[4]	257	mg/L	-	-
4	TSS[3]	29	mg/L	≤50 [d]	Normal
5	Conductivity[5]	0.495	mS/cm	-	
6	Dissolved Oxygen[2]	4.61	mg/L	-	-
7	BOD_5 [6]	8.2	mg/L	≤ 50 [d]	Normal
8	COD[3]	24	mg/L	≤ 250 [d]	Normal
9	Oil & Grease [9]	5	mg/L	≤ 10 [d]	Normal
10	Total Nitrogen[3]	4.31	mg/L	-	-
11	Total Phosphorous[3]	1.18	mg/L	≤2 [d]	Normal

"ND" = Not Detected "LOD" = Lower limit of detection " - " = No Reference Standard

Tested by	Checked by	Approved by
Daw May Myat Khine Lab.Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab.Technician I Ecological Laboratory ALARM	Dr.Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Report Number: EL-WR-25-05227 | Date: September 29, 2025

Client Information

Client Name	:	Golden Apex Trading Co., Ltd.
Organization	:	Animal Feed Mill Factory
Client ID	:	-
Registration Date & Time	:	16.9.2025
Contact	:	09777006410
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	-

Sample Information

Sample ID	:	13582
Sample Name	:	SW-2
Sample Type / Source	:	Surface Water
Sampling Date & Time	:	14.9.2025
Sample Location	:	Hlaing Thar Yar (West) Township, Yangon
Latitude	:	-
Longitude	:	-

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.

This report shall not be reproduced except in full, without written approval of the laboratory

Sr.	Quality Parameters	Results	Units	Emission Standard	Remarks
1	pH[1]	6.68	S.U	6.0 – 9.0[d]	Normal
2	Turbidity[3]	10	FAU	-	-
3	TDS[4]	63	mg/L	-	-
4	TSS[3]	21	mg/L	≤50 [d]	Normal
5	Conductivity[5]	0.063	mS/cm	-	-
6	Dissolved Oxygen[2]	3.83	mg/L	-	-
7	BOD_5 [6]	6.4	mg/L	≤ 50 [d]	Normal
8	COD[3]	< 20	mg/L	≤ 250 [d]	Normal
9	Oil & Grease [9]	4	mg/L	≤ 10 [d]	Normal
10	Total Nitrogen[3]	3.62	mg/L	-	-
11	Total Phosphorous[3]	0.85	mg/L	≤2 [d]	Normal

"ND" = Not Detected | "LOD" = Lower limit of detection | " - " = No Reference Standard

Tested by	Checked by	Approved by
Daw May Myat Khine Lab.Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab.Technician I Ecological Laboratory ALARM	Dr.Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Report Number: EL-WR-25-05228 — Date: September 29, 2025

Client Information

Client Name	:	Golden Apex Trading Co., Ltd
Organization	:	Animal Feed Mill Factory
Client ID	:	-
Registration Date & Time	:	16.9.2025
Contact	:	09777006410
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	-

Sample Information

Sample ID	:	13583
Sample Name	:	GW-1
Sample Type / Source	:	Ground Water
Sampling Date & Time	:	14.9.2025
Sample Location	:	Hlaing Thar Yar (West) Township, Yangon
Latitude	:	-
Longitude	:	-

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.

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Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	pH[1]	7.6	S.U	6.5 – 8.5[c]	Normal
2	Colour[3]	< 10	HU	≤15 [c]	Normal
3	Turbidity[3]	< 5	FAU	≤5 [c]	Clear
4	TDS[4]	1662	mg/L	≤1000 [c]	Above the Limit
5	TSS[3]	< 10	mg/L	-	-
6	Total Solids[34]	1668	mg/L	-	-
7	Conductivity[5]	3.176	mS/cm	≤2.5 [b]	Above the Limit
8	Total Hardness[3]	138	mg/L	≤500 [c]	Normal
9	Calcium Hardness[3]	92	mg/L	≤200 [c]	Normal
10	Magnesium Hardness[3]	46	mg/L	≤150 [c]	Normal
11	Chloride[3]	665	mg/L	≤250 [c]	Above the Limit
12	Sodium Chloride[3]	1098	mg/L	-	-
13	Iron[7]	0.251	mg/L	≤1[c]	Normal
14	Manganese[3]	0.46	mg/L	≤0.4 [c]	Above the Limit
15	Total Alkalinity[3]	84.2	mg/L	-	-
16	P-Alkalinity[3]	13	mg/L	-	-
17	Carbonate	21	mg/L	-	-
18	Bi-Carbonate	68	mg/L	-	-
19	Sulfate[3]	142	mg/L	≤ 250 [c]	Normal
20	Salinity	970	mg/L	-	-
21	Arsenic[8]	0.005	mg/L	≤0.05[a]	Normal
22	Dissolved Oxygen[2]	4.5	mg/L	-	-

"ND" = Not Detected | "LOD" = Lower limit of detection | " - " = No Reference Standard

Tested by	Checked by	Approved by
Daw May Myat Khine Lab.Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab.Technician I Ecological Laboratory ALARM	Dr.Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Report Number: EL-WR-25-05229 | Date: September 29, 2025

Client Information

Client Name	:	Golden Apex Trading Co., Ltd
Organization	:	Animal Feed Mill Factory
Client ID	:	-
Registration Date & Time	:	16.9.2025
Contact	:	09777006410
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	-

Sample Information

Sample ID	:	13584
Sample Name	:	GW-2
Sample Type / Source	:	Ground Water
Sampling Date & Time	:	14.9.2025
Sample Location	:	Hlaing Thar Ya (West) Township, Yangon
Latitude	:	-
Longitude	:	-

Testing Results

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Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	pH[1]	7.2	S.U	6.5 – 8.5[c]	Normal
2	Colour[3]	< 10	HU	≤15 [c]	Normal
3	Turbidity[3]	< 5	FAU	≤5 [c]	Clear
4	TDS[4]	1982	mg/L	≤1000 [c]	Above the Limit
5	TSS[3]	12	mg/L	-	-
6	Total Solids[34]	1984	mg/L	-	-
7	Conductivity[5]	3.812	mS/cm	≤2.5 [b]	Above the Limit
8	Total Hardness[3]	128	mg/L	≤500 [c]	Normal
9	Calcium Hardness[3]	86	mg/L	≤200 [c]	Normal
10	Magnesium Hardness[3]	42	mg/L	≤150 [c]	Normal
11	Chloride[3]	778	mg/L	≤250 [c]	Above the Limit
12	Sodium Chloride[3]	1284	mg/L	-	-
13	Iron[7]	0.163	mg/L	≤1[c]	Normal
14	Manganese[3]	0.51	mg/L	≤0.4 [c]	Above the Limit
15	Total Alkalinity[3]	82.1	mg/L	-	-
16	P-Alkalinity[3]	6	mg/L	-	-
17	Carbonate	21	mg/L	-	-
18	Bi-Carbonate	62	mg/L	-	-
19	Sulfate[3]	128	mg/L	≤ 250 [c]	Normal
20	Salinity	910	mg/L	-	-
21	Arsenic[8]	0.005	mg/L	≤0.05[a]	Normal
22	Dissolved Oxygen[2]	4.34	mg/L	-	-

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Tested by	Checked by	Approved by
Daw May Myat Khine Lab.Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab.Technician I Ecological Laboratory ALARM	Dr.Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Report Number: EL-WR-25-05230 Date: September 29, 2025

Client Information

Client Name	:	Golden Apex Trading Co., Ltd
Organization	:	Animal Feed Mill Factory
Client ID	:	-
Registration Date & Time	:	16.9.2025
Contact	:	09777006410
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	-

Sample Information

Sample ID	:	13585
Sample Name	:	GW-3
Sample Type / Source	:	Ground Water
Sampling Date & Time	:	14.9.2025
Sample Location	:	Hlaing Thar Yar (West) Township, Yangon
Latitude	:	-
Longitude	:	-

Testing Results

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Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	pH[1]	7.35	S.U	6.5 – 8.5[c]	Normal
2	Colour[3]	< 10	HU	≤15 [c]	Normal
3	Turbidity[3]	< 5	FAU	≤5 [c]	Clear
4	TDS[4]	1197	mg/L	≤1000 [c]	Above the Limit
5	TSS[3]	< 10	mg/L	-	-
6	Total Solids[34]	1202	mg/L	-	-
7	Conductivity[5]	2.308	mS/cm	≤2.5 [b]	Normal
8	Total Hardness[3]	86	mg/L	≤500 [c]	Normal
9	Calcium Hardness[3]	58	mg/L	≤200 [c]	Normal
10	Magnesium Hardness[3]	28	mg/L	≤150 [c]	Normal
11	Chloride[3]	520	mg/L	≤250 [c]	Above the Limit
12	Sodium Chloride[3]	858	mg/L	-	-
13	Iron[7]	0.150	mg/L	≤1[c]	Normal
14	Manganese[3]	0.38	mg/L	≤0.4 [c]	Normal
15	Total Alkalinity[3]	385.4	mg/L	-	-
16	P-Alkalinity[3]	8	mg/L	-	-
17	Carbonate	94	mg/L	-	-
18	Bi-Carbonate	292	mg/L	-	-
19	Sulfate[3]	96	mg/L	≤ 250 [c]	Normal
20	Salinity	740	mg/L	-	-
21	Arsenic[8]	0.005	mg/L	≤0.05[a]	Normal
22	Dissolved Oxygen[2]	4.53	mg/L	-	-

"ND" = Not Detected "LOD" = Lower limit of detection " - " = No Reference Standard

Tested by	Checked by	Approved by
Daw May Myat Khine Lab.Technician II Ecological Laboratory ALARM	Daw Lin Myat Myat Aung Lab.Technician I Ecological Laboratory ALARM	Dr.Aye Aye Win Laboratory In-Charge Ecological Laboratory (ALARM)

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Reference Number: EL (M)-R / 1835 **Date: 29.9.2025**

Client Information

Client Name	:	**Golden Apex Trading Co., Ltd**
Organization	:	**Animal Feed Mill Factory**
Client ID	:	
Registration Date & Time	:	**16.9.2025**
Contact	:	**09-777006410**
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	**-**

Sample Information

Sample ID	:	**1835**
Sample Name	:	**SW-1**
Sample Type / Source	:	**Surface Water**
Sampling Date & Time	:	**14.9.2025**
Sample Location	:	**Hlaing Thar Yar (West) Township, Yangon**
Latitude	:	**-**
Longitude	:	**-**

Testing Results

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Sr.	Quality Parameters	Results	Method	Emission Guideline Value*	Remarks
1	Total plate count (CFU/mL)		Total plate count method	-	
2	Total coliform count (MPN/100 mL) (Presumption test)	**1100**	Most Probable Number method	**400**	
3	Total faecal coliform count (MPN/100ml) (Presumption test)		Most Probable Number method	-	
4	Total coliform count (CFU/mL) (Confirm test)		Eosin Methyl Blue agar plate test	-	
5	Complete test for coliform bacteria		Gram staining test	-	
6	Total coliform count (CFU/mL)		Plate count method	-	
7	Total *E.coli* count (CFU/mL)		Plate count method	-	

Tested by	Checked by	Approved by
Aye Nyein Thu Research Assistant ALARM	May Myat Nyein Research Assistant ALARM	Dr. Aye Aye Win Laboratory In- charge Ecological laboratory ALARM

No.237,Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township,Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Laboratory Testing Methods		
Index	**Instrument / Method**	**References / Descriptions**
1	pH Meter	Electrode method (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
2	DO Meter	Electrochemical probe method, Dissolved Oxygen Probe Measurement (Approved by EPA, ISO, ASTM) Horiba DO electrode certified with IP67 standards and measures
3	SpectroDirect Methods	Lovibond brand reagent testing methods, precision of the methods are identical to the precision specified in the standard literature of AWWA and ISO
4	TDS Meter	Electrode method (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
5	Conductivity Meter	Electrode method, conductivity cell (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
6	BOD Testing Method	Method 405.1, USEPA Method for Chemical Analysis of Water and Waste water
7	Atomic Adsorption Spectrophotometer	Shimadzu AA-6200, which is based on the Japan Water Standard Testing Method also approved by EPA and ASTM
8	Arsenic Test Kit	Lovibond brand Arsenic Test kit certified by DIN ISO 1997/ Follow Procedure: Meets WHO requirements:
9	Liquid-Liquid Partition Gravimetric Method	Test Method for Oil and Grease (Solvent Extractable Substances) in Water (EPA 1664)by using n-Hexane

Standards References		
Index	**Standard Names**	**References**
a	WHO Standard for Drinking Water (2011)	Guidelines for Drinking-water Quality 4rd edition, World Health Organization, 2011.
b	US EPA Drinking Water Standard 2018	2018 Edition of the Drinking Water Standards and Health Advisories, EPA 822-F-18-001, Office of Water, USEPA, Washington, DC, March 2018
c	Myanmar National Drinking Water Quality Standard	Myanmar National Standard Department, Department of Research and Innovation, Ministry of Education
d	Myanmar Emission Guideline (2015)	National Environmental Quality (Emission) Guidelines, Order No. (615/2015) MOECAF, 2015, December 29.
*	At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge.	

Quality Parameters Descriptions

pH: Although pH usually has no direct impact on consumers, it is one of the most important operational water quality parameters. Water generally becomes more corrosive with decreasing pH; however, excessively alkaline water also may be corrosive. **Temperature:** will have an impact on the acceptability of a number of other inorganic constituents and chemical contaminants that may affect taste. High water temperature enhances the growth of microorganisms and may increase problems related to taste, odor, color and corrosion. **Color:**Drinking-water should ideally have no visible color. Color in drinking-water is usually due to the presence of colored organic matter (primarily humic and fulvic acids) associated with the humus fraction of soil. Color is also strongly influenced by the presence of iron and other metals, either as natural impurities or as corrosion products. It may also result from the contamination of the water source with industrial effluents and may be the first indication of a hazardous situation.**Turbidity:** Turbidity in water is caused by suspended particles or colloidal matter that obstructs light transmission through the water. It may be caused by inorganic or organic matter or a combination of the two. Microorganisms (bacteria, viruses and protozoa) are typically attached to particulates, and removal of turbidity by filtration will significantly reduce microbial contamination in treated water. **Total Dissolved Solid (TDS):** The total of all dissolved mineral constituents, usually expressed in milligrams per liter. The concentration of dissolved solids may affect the taste of water. Water that contains more than 1,000 mg/L is unsuitable for many industrial uses. Some dissolved mineral matter is desirable, otherwise the water would have no taste. The dissolved solids concentration commonly is called the water's salinity and is classified as follows: fresh, 0-1,000 mg/L; slightly saline, 1,000-3,000 mg/L; moderately saline, 3,000-10,000 mg/L; very saline, 10,000-35,000 mg/L; and briny, more than 35,000 mg/L. **Total Suspended Solid (TSS):** Both organic and inorganic particles of all sizes can contribute to the suspended solids concentration. These solids include anything drifting or floating in the water, from sediment, silt and sand to plankton and algae. TSS are particles that are larger than 2 microns found in the water column. Anything smaller than 2 microns (average filter size) is considered a dissolved solid. **Total Solid:** Total solids are dissolved solids plus suspended solids in water. **Conductivity:** Conductivity is nothing but the measure of the capability of water to pass the flow of electric current. This ability of conductance is said to be directly proportional to the concentration of the ions present in the water. **Chloride:** Large concentrations increase the corrosiveness of water and, in combination with sodium, give water a salty taste. **Hardness:** Related to the soap-consuming characteristics of water; results in formation of scum when soap is added. May cause deposition of scale in boilers, water heaters, and pipes. Hardness contributed by calcium and magnesium, bicarbonate and carbonate mineral species in water is called carbonate hardness; hardness in excess of this concentration is called noncarbonate hardness. Water that has a hardness less than 61 mg/L is considered soft; 61-120 mg/L, moderately hard; 121-180 mg/L, hard; and more than 180 mg/L, very hard.**Dissolved Oxygen:** Required by higher forms of aquatic life for survival.Depletion of dissolved oxygen in water supplies can encourage the microbial reduction of nitrate to nitrite and sulfate to sulfide. It can also cause an increase in the concentration of ferrous iron in solution. **Biological/Chemical Oxygen Demand (BOD & COD):** BOD is similar in function to chemical oxygen demand (COD), in that both measure the amount of organic compounds in water. However, COD is less specific, since it measures everything that can be chemically oxidized, rather than just levels of biologically active organic matter. **Aluminium:** No known necessary role in human or animal diet. Nontoxic in the concentrations normally found in natural water supplies. Elevated dissolved aluminum concentrations in some low pH waters can be toxic to some types of fish. **Manganese:** Causes gray or black stains on porcelain, enamel, and fabrics. Can promote growth of certain kinds of bacteria that clog pipes and wells. **Sodium & Potassium**: Large concentrations may limit use of water for irrigation and industrial use and, in combination with chloride, give water a salty taste. Abnormally large concentrations may indicate natural brines, industrial brines, or sewage. **Zinc:** Essential and beneficial in metabolism; its deficiency in young children or animals will retard growth and may decrease general body resistance to disease. Seems to have no ill effects even in fairly large concentrations (20,000-40,000 mg/L), but can impart a metallic taste or milky appearance to water. Zinc in drinking water commonly is derived from galvanized coatings of piping. **Iron:** Forms rust-colored sediment; stains laundry, utensils, and fixtures reddish brown. Objectionable for food and beverage processing.Can promote growth of certain kinds of bacteria that clog pipes and well openings.**Arsenic:** is toxic. A cumulative poison that is slowly excreted. Can cause nasal ulcers; damage to the kidneys, liver, and intestinal walls; and death. Recently suspected to be a carcinogen.**Chlorine:** Chlorine is added to water supplies to kill bacteria. Short term exposure to chlorine comes primarily from bathing and other activities that use hot water rather than from drinking. Short term exposure irritates the eyes and lungs, and within 15 minutes of exposure victims experience coughing, shortness of breath and headaches. Regular exposure to chlorine in the home has been associated with asthma and other respiratory diseases. **Cyanide:** Cyanide is highly acutely toxic. It is detoxified in the liver by first-pass metabolism following oral exposure. As a consequence, exposure to a dose spread over a longer period, through a day, for example, will result in lower toxicity, or higher tolerance, than the same dose given in a single bolus dose. **Nitrite:** Commonly formed as an intermediate product in bacterially mediated nitrification and denitrification of ammonia and other organic nitrogen compounds. An acute health concern at certain levels of exposure. Nitrite typically occurs in water from fertilizers and is found in sewage and wastes from humans and farm animals. Concentrations greater than 1.0 mg/L, as nitrogen, may be injurious when used in feeding infants. **Nitrate & Nitrate-N:** Concentrations greater than local background levels may indicate pollution by feedlot runoff, sewage, or fertilizers. Concentrations greater than 10 mg/L, as nitrogen, may be injurious when used in feeding infants. **Phosphorus &ortho-phosphate:** Dense algal blooms or rapid plant growth can occur in waters rich in phosphorus. A limiting nutrient for eutrophication since it is typically in shortest supply. Sources are human and animal wastes and fertilizers. **Ammonia:** Plant nutrient that can cause unwanted algal blooms and excessive plant growth when present at elevated levels in water bodies. Sources include decomposition of animal and plant proteins, agricultural and urban runoff, and effluent from waste-water treatment plants. **Lead:** A cumulative poison, toxic in small concentrations. Can cause lethargy, loss of appetite, constipation, anemia, abdominal pain, gradual paralysis in the muscles, and death. **Copper:** Essential to metabolism; copper deficiency in infants and young animals results in nutritional anemia. Large concentrations of copper are toxic and may cause liver damage. Moderate levels of copper (near the action level) can cause gastro-intestinal distress. **Cadmium:** A cumulative poison; very toxic. Not known to be either biologically essential or beneficial. Believed to promote renal arterial hypertension. Elevated concentrations may cause liver and kidney damage, or even anemia, retarded growth, and death. **Nickel:** Very toxic to some plants and animals. Toxicity for humans is believed to be very minimal. **Sulfide:** The "rotten eggs" odor of hydrogen sulfide is particularly noticeable in some ground waters and in stagnant drinking-water in the distribution system, as a result of oxygen depletion and the subsequent reduction of sulfate by bacterial activity. Sulfide is oxidized rapidly to sulfate in well-aerated or chlorinated water, and hydrogen sulfide levels in oxygenated water supplies are normally very low. **Sulfate:** Sulfates of calcium and magnesium form hard scale. Large concentrations of sulfate have a laxative effect on some people and, in combination with other ions, give water a bitter taste. **Alkalinity:** A measure of the capacity of unfiltered water to neutralize acid. In almost all natural waters alkalinity is produced by the dissolved carbon dioxide species, bicarbonate and carbonate. **Phenol:** The presence of phenol in drinking water probably results from using contaminated surface water or groundwater as a source. Its presence in groundwater is probably the result of release to soil, often industrial releases or leachate from waste dumps, and the subsequent leaching of phenol through the soil to the groundwater. Chlorophenols are present in drinking-water as a result of the chlorination of phenols, as by-products of the reaction of hypochlorite with phenolic acids, as biocides or as degradation products of phenoxyherbicides.IARC has classified 2,4,6-trichlorophenol in Group 2B (possibly carcinogenic to humans).**Boron:** Essential to plant growth, but may be toxic to crops when present in excessive concentrations in irrigation water. Sensitive plants show damage when irrigation water contains more than 670 µg/L and even tolerant plants may be damaged when boron exceeds 2,000 µg/L. The recommended limit is 750µg/L for long-term irrigation on sensitive crops. **Fluoride:** To produce signs of acute fluoride intoxication, minimum oral doses of about 1 mg of fluoride per kilogram of body weight were required. Concentrations above this guideline value (1.5mg/L) carry an increasing risk of dental fluorosis and that progressively higher concentrations lead to increasing risks of skeletal fluorosis. **Oil & Grease:** Organic toxic waste (oil and grease (O&G)) causes ecology damages for aquatic organisms, plant, animal, and equally, mutagenic and carcinogenic for human being. They discharge from different sources to form a layer on water surface that decreases dissolved oxygen.

~ ~ ~ Thank you so much for using our testing services ~ ~ ~

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Tel: 09-407496078, Email: aelab.2022@gmail.com

ALARM Ecological Laboratory

Water Testing Result Report

Reference Number: EL (M)-R / 1836 **Date: 29.9.2025**

Client Information

Client Name	:	**Golden Apex Trading Co., Ltd**
Organization	:	**Animal Feed Mill Factory**
Client ID	:	
Registration Date & Time	:	**16.9.2025**
Contact	:	**09-777006410**
Email	:	arkarphyoe21@gmail.com
Testing Purpose	:	**-**

Sample Information

Sample ID	:	**1836**
Sample Name	:	**SW-2**
Sample Type / Source	:	**Surface Water**
Sampling Date & Time	:	**14.9.2025**
Sample Location	:	**Hlaing Thar Yar (West) Township, Yangon**
Latitude	:	**-**
Longitude	:	**-**

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
This report shall not be reproduced except in full, without written approval of the laboratory

Sr.	Quality Parameters	Results	Method	Emission Guideline Value*	Remarks
1	Total plate count (CFU/mL)		Total plate count method	-	
2	Total coliform count (MPN/100 mL) (Presumption test)	**980**	Most Probable Number method	**400**	
3	Total faecal coliform count (MPN/100ml) (Presumption test)		Most Probable Number method	-	
4	Total coliform count (CFU/mL) (Confirm test)		Eosin Methyl Blue agar plate test	-	
5	Complete test for coliform bacteria		Gram staining test	-	
6	Total coliform count (CFU/mL)		Plate count method	-	
7	Total *E.coli* count (CFU/mL)		Plate count method	-	

Tested by	Checked by	Approved by
Aye Nyein Thu Research Assistant ALARM	May Myat Nyein Research Assistant ALARM	Dr. Aye Aye Win Laboratory In- charge Ecological laboratory ALARM

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ALARM Ecological Laboratory

Water Testing Result Report

Laboratory Testing Methods		
Index	**Instrument / Method**	**References / Descriptions**
1	pH Meter	Electrode method (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
2	DO Meter	Electrochemical probe method, Dissolved Oxygen Probe Measurement (Approved by EPA, ISO, ASTM) Horiba DO electrode certified with IP67 standards and measures
3	SpectroDirect Methods	Lovibond brand reagent testing methods, precision of the methods are identical to the precision specified in the standard literature of AWWA and ISO
4	TDS Meter	Electrode method (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
5	Conductivity Meter	Electrode method, conductivity cell (Approved by EPA, ISO, ASTM), Hanna electrode meter Certified by 2014 EMS, Certified by QMS
6	BOD Testing Method	Method 405.1, USEPA Method for Chemical Analysis of Water and Waste water
7	Atomic Adsorption Spectrophotometer	Shimadzu AA-6200, which is based on the Japan Water Standard Testing Method also approved by EPA and ASTM
8	Arsenic Test Kit	Lovibond brand Arsenic Test kit certified by DIN ISO 1997/ Follow Procedure: Meets WHO requirements:
9	Liquid-Liquid Partition Gravimetric Method	Test Method for Oil and Grease (Solvent Extractable Substances) in Water (EPA 1664)by using n-Hexane

Standards References		
Index	**Standard Names**	**References**
a	WHO Standard for Drinking Water (2011)	Guidelines for Drinking-water Quality 4rd edition, World Health Organization, 2011.
b	US EPA Drinking Water Standard 2018	2018 Edition of the Drinking Water Standards and Health Advisories, EPA 822-F-18-001, Office of Water, USEPA, Washington, DC, March 2018
c	Myanmar National Drinking Water Quality Standard	Myanmar National Standard Department, Department of Research and Innovation, Ministry of Education
d	Myanmar Emission Guideline (2015)	National Environmental Quality (Emission) Guidelines, Order No. (615/2015) MOECAF, 2015, December 29.
*	At the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity; when the zone is not defined, use 100 meters from the point of discharge.	

Quality Parameters Descriptions

pH: Although pH usually has no direct impact on consumers, it is one of the most important operational water quality parameters. Water generally becomes more corrosive with decreasing pH; however, excessively alkaline water also may be corrosive. **Temperature:** will have an impact on the acceptability of a number of other inorganic constituents and chemical contaminants that may affect taste. High water temperature enhances the growth of microorganisms and may increase problems related to taste, odor, color and corrosion. **Color:**Drinking-water should ideally have no visible color. Color in drinking-water is usually due to the presence of colored organic matter (primarily humic and fulvic acids) associated with the humus fraction of soil. Color is also strongly influenced by the presence of iron and other metals, either as natural impurities or as corrosion products. It may also result from the contamination of the water source with industrial effluents and may be the first indication of a hazardous situation.**Turbidity:** Turbidity in water is caused by suspended particles or colloidal matter that obstructs light transmission through the water. It may be caused by inorganic or organic matter or a combination of the two. Microorganisms (bacteria, viruses and protozoa) are typically attached to particulates, and removal of turbidity by filtration will significantly reduce microbial contamination in treated water. **Total Dissolved Solid (TDS):** The total of all dissolved mineral constituents, usually expressed in milligrams per liter. The concentration of dissolved solids may affect the taste of water. Water that contains more than 1,000 mg/L is unsuitable for many industrial uses. Some dissolved mineral matter is desirable, otherwise the water would have no taste. 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ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
စိုက်ပျိုးရေး၊ မွေးမြူရေးနှင့် ဆည်မြောင်းဝန်ကြီးဌာန
စိုက်ပျိုးရေးဦးစီးဌာန
(မြေအသုံးချရေးဌာနခွဲ)
ရန်ကုန်မြို့

စာအမှတ်- ခခ- ၂(၁) / ၂၀၂၅-၂၀၂၆ (၂၁၁)
နေ့စွဲ၊ ၂၀၂၅ခုနှစ်၊ စက်တင်ဘာလ(၃၀) ရက်

အကြောင်းအရာ။ **မြေနမူနာ ဓာတ်ခွဲအဖြေများပေးပို့ခြင်း**

ရည် ညွှန်း ချက်။ **ဦးအောကာဖြိုး (Animal Feed Mill Factory)** မှ **(၁၆.၉.၂၀၂၅)**နေ့ တွင်ပေးပို့သော နမူနာ။

အထက်အကြောင်းအရာပါကိစ္စနှင့် ပတ်သက်၍ ရည်ညွှန်းစာဖြင့် ပေးပို့လာသော **မြေနမူနာ (၂ - မျိုး)** အား ဓာတ်ခွဲစစ်ဆေးပြီးဖြစ်ပါ၍ ဓာတ်ခွဲတွေ့ရှိချက်အဖြေများကို ဤစာနှင့် အတူ ပူးတွဲပေးပို့ပါသည်။

(ဒေါက်တာသန္တာညီ)
ဒုတိယညွှန်ကြားရေးမှူး
ဓာတ်ခွဲခန်းတာဝန်ခံ
မြေအသုံးချရေးဌာနခွဲ

မိတ္တူကို-
-ရုံးလက်ခံ။

DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL ANALYTICAL DATA SHEET AND SOIL INTEPRETATION OF RESULTS

ဦးအောကာဖြိုး (Animal Feed Mill Factroy) (16.9.2025)

State - ရန်ကုန်တိုင်းဒေသကြီး။ Sheet No. 1

Township - လှိုင်သာယာမြို့နယ် (အနောက်ပိုင်း)။ Sr No. S 1 - 2 /2025

Sr No.	Sample	pH Soil:Water 1:2.5	pH
1	S - 1	4.73	Strongly Acid
2	S - 2	6.96	Near Neutral

(ဒေါက်တာသန္တာညီ)
ဒုတိယညွှန်ကြားရေးမှူး
ဓာတ်ခွဲခန်းတာဝန်ခံ
မြေအသုံးချရေးဌာနခွဲ

DEPARTMENT OF AGRICULTURE (LAND USE)

SOIL ANALYTICAL DATA SHEET

ဦးအာကာဖြိုး (Animal Feed Mill Factroy) (16.9.2025)

State - ရန်ကုန်တိုင်းဒေသကြီး။

Township - လှိုင်သာယာမြို့နယ် (အနောက်ပိုင်း)။

Sheet No. 2

Sr No. S 1 - 2 /2025

Sr No.	Sample	Zinc (Zn) ppm	Copper (Cu) ppm	Iron (Fe) ppm	Manganese (Mn) ppm	Lead (Pb) ppm	Cadmium Cd) ppm	Nickle (Ni) ppm	Chromium (Cr) ppm
1	S - 1	1.8196	2.528	141.9	11.96	1.34	Not Detected	2.228	Not Detected
2	S - 2	0.6182	0.912	28.306	4.872	0.72	Not Detected	0.314	Not Detected

မှတ်ချက်။ ။မြေနမူနာတွဲအဖြေအ Zinc (Zn),Copper (Cu), Iron (Fe), Manganese (Mn), Lead (Pb) နှင့် Nickle (Ni)) ပါဝင်မှုသည် စိုက်ပျိုးမြေတွင်

ပါဝင်သင့်သည့် MPL(Maximum permissible Limit) ထက် မကျော်လွန်ပါ။ (Ref : FAO, WHO))

(ဒေါက်တာသန္တာညီ)

ဒုတိယညွှန်ကြားရေးမှူး

ဓာတ်ခွဲခန်းတာဝန်ခံ

မြေအသုံးချရေးဌာနခွဲ

Appendix - 4

CSR Program

Golden Apex International Trading Co., Ltd

လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်ရေး ဆောင်ရွက်မှု

နိုင်ငံတော်စီမံအုပ်ချုပ်ရေးကောင်စီ

ဂုဏ်ပြုမှတ်တမ်းလွှာ



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
နိုင်ငံတော်စီမံအုပ်ချုပ်ရေးကောင်စီ

ဂုဏ်ပြုမှတ်တမ်းလွှာ

မြန်မာနိုင်ငံအတွင်း ၂၀၂၅ ခုနှစ်၊ မတ်လ ၂၈ ရက်နေ့ မွန်းလွဲ ၁၂ နာရီ ၅၁ မိနစ်အချိန်တွင် အင်အား ရစ်ချီတာစကား ၇.၇ အဆင့်ရှိ အလွန်ပြင်းထန်သည့် မြေငလျင်လှုပ်ခတ်မှုကြောင့် နေပြည်တော်ကောင်စီနယ်မြေအပါအဝင် စစ်ကိုင်းတိုင်းဒေသကြီး၊ ပဲခူးတိုင်းဒေသကြီး ၊ မကွေးတိုင်းဒေသကြီး ၊ မန္တလေးတိုင်းဒေသကြီး နှင့် ရှမ်းပြည်နယ် အတွင်းရှိ ထိခိုက်နစ်နာဆုံးရှုံးခဲ့သည့် ငလျင်ဘေးဒဏ်သင့်ပြည်သူများကို ကူညီထောက်ပံ့နိုင်ရေးအတွက် Golden Apex Co.,Ltd မှ ကျပ် ၁၀၀,၀၀၀,၀၀၀ (ကျပ် သိန်းတစ်ထောင် တိတိ) ကို စေတနာသဒ္ဓါထက်သန်စွာ လှူဒါန်းပါဝင်သောကြောင့် ဤမှတ်တမ်းလွှာဖြင့် ကျေးဇူးတင် ဂုဏ်ပြုအပ်ပါသည်။

ဥက္ကဋ္ဌ
နိုင်ငံတော်စီမံအုပ်ချုပ်ရေးကောင်စီ

၂၀၂၅ ခုနှစ်၊ ဧပြီလ ၁ ရက်

ငလျင်ဘေးသင့်ပြည်သူများအတွက် သိန်း ၁၀၀၀ အလှူ

စိုက်ပျိုးရေး၊ မွေးမြူရေးနှင့် ဆည်မြောင်းဝန်ကြီးဌာန

ဂုဏ်ပြုမှတ်တမ်းလွှာ



လျှင်ဘေးသင့်ပြည်သူများအတွက် သိန်း ၁၅၀ အလှူ

စီးပွားရေးနှင့် ကူသန်းရောင်းဝယ်ရေးဝန်ကြီးဌာန

ဂုဏ်ပြုမှတ်တမ်းလွှာ



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

စီးပွားရေးနှင့်ကူးသန်းရောင်းဝယ်ရေးဝန်ကြီးဌာန

COMMERCE

ဂုဏ်ပြုမှတ်တမ်းလွှာ

မြန်မာနိုင်ငံအတွင်း ၂၀၂၅ ခုနှစ်၊ မတ်လ ၂၈ ရက်နေ့ မွန်းလွဲ ၁၂ နာရီ ၅၁ မိနစ်အချိန်တွင် အင်အား ရန်(စ်)တာစကား ၀.၀ အဆင့်ရှိ အလွန်ပြင်းထန်သည့် မြေငလျင်လှုပ်ခတ်မှုကြောင့် ခနဉ်းပြည်တော်ကောင်စီနယ်မြေ အပါအဝင် စစ်ကိုင်းတိုင်းဒေသကြီးနှင့် မန္တလေးတိုင်းဒေသကြီး အတွင်းရှိ စီးပွားရေးနှင့်ကူးသန်းရောင်းဝယ်ရေးဝန်ကြီးဌာနမှ လျှင်ခေးသင့် ဝန်ထမ်းနှင့် မိုရိုသူများကို ကူညီထောက်ပံ့ဖေးနိုင်ခရေးအတွက် GOLDEN APEX CO.,LTD မှ ကျပ် ၄၀,၀၀၀,၀၀၀ (ကျပ်သိန်းလေးရာတိတိ) ကို ဒေတနာသဒ္ဓါထက်သန်စွာ လှူဒါန်းပါသောကြောင့် ဤမှတ်တမ်းလွှာဖြင့် ကျေးဇူးတင် ဂုဏ်ပြုအပ်ပါသည်။

၁၀.၄.၂၀၂၅

ထွန်းဆုံ

ပြည်ထောင်စုဝန်ကြီး

၂၀၂၅ ခုနှစ်၊ ဧပြီလ ၁၀ ရက်

လျှင်ခေးသင့်ပြည်သူများအတွက် သိန်း ၄၀၀ အလှူ

အသေးစား၊ အငယ်စားနှင့် အလတ်စား စီးပွားရေး လုပ်ငန်းများ ဖွံ့ဖြိုးတိုးတက်ရေး အေဂျင်စီ MSME ထုတ်ကုန်ပြိုင်ပွဲ OROP ထုတ်ကုန်

(ဒုတိယဆု)



လူမှုပတ်ဝန်းကျင်ဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်ရေး ဆောင်ရွက်မှု

ငလျင်ဘေးသင့်ပြည်သူများအတွက်

အလှူငွေပေးအပ်လှူဒါန်းပွဲ



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ကျွန်ုပ်တို့ကမ္ဘာမြေကို စိမ်းလန်းပါစေ။