



Berong Nickel Corporation

MPSA No. 235-2007-IVB



FINAL MINE REHABILITATION AND DECOMMISSIONING PLAN



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1. Executive Summary

1.1. Introduction

The extraction of mineral resources is relatively a short-term land use considering that it is dependent on its ore reserve. It is inevitable that sooner, when ore reserve is depleted, the mine will definitely be decommissioned. Berong Nickel Corporation in Berong, Quezon remains one of the surviving mines in the country today, is no exception. BNCs operation is projected to be decommissioned by 2022 and for the next six (6) years, rehabilitation of the mine shall be the prime activity. This plan shall only cover the rehabilitation and decommissioning of mining area, settling ponds and mine haul road. Other components such as port facilities, camp admin complex, mechanical workshop, stockyards, forest nursery among others will remain in-situ to support projects under application within the area of Barangay Berong, Quezon, Palawan.

Berong Nickel Corporation (BNC) is a Philippine Securities and Exchange Commission-registered joint venture company established in 2004 by Toledo Mining Corporation and Atlas Consolidated Mining and Development Corporation (ACMDC). BNC has a Management Agreement with David M. Consunji Inc., (DMCI) a wholly owned subsidiary engaged in ore and mineral mining and exploration to supervise and manage its activities especially on technical and financial aspects of mineral exploration and development of nickel laterite in BNC areas of interest. The project is situated in the Ancestral Domain Claim of the Tagbanua Tribe located in Brgy. Berong, Quezon, Palawan with an area of 288 hectares it is covered by a Mineral Production Sharing Agreement (MPSA) No. 235-2007-IVB entered on June 08, 2007 by and between the Government represented by the DENR Secretary and Berong Nickel Corporation. It is within the Timberland/Forestland classification as per Project No.13-A, Block A of Land Classification Map No. 2141 certified on November 15, 1960. Refer to annex 16.

Out of the 288-hectare covered by MPSA, the developed or active area for operation is only 119 hectares or about 41% which include Ancillary Area (25 has. or 9%), Disturbed Area (38 has. or 13%) and Progressive Rehabilitation Area (56 has. or 19%). The remaining 169 hectares or 59% are Vegetated Areas which include Rehabilitated Area (50 has. or 17%), Undisturbed Area (114 has. or 40%) and Buffer Zone (5 has. or 2%). Please refer to Figure 1. (BNC Land Use Map).

The extraction of mineral resources is relatively a short-term land use considering that it is dependent on its ore reserve. It is inevitable that sooner, when ore reserve is depleted, the mine will definitely be decommissioned. Berong Nickel Corporation in Berong, Quezon remains one of the surviving mines in the country today, is no exception. BNCs operation is projected to be decommissioned by 2022 and for the next six (6) years, rehabilitation of the mine shall be the prime activity. This plan shall only cover the rehabilitation and decommissioning of mining area, settling ponds and mine haul road. Other components such as camp admin complex, mechanical workshop, stockyards, forest nursery among others will remain in-situ to support projects under application within the area of Barangay Berong, Quezon, Palawan.

Based on the stakeholder consultation conducted last November 26, 2021 the participants identify the favorable final land use of the mined-out area. 60% of them suggest that the area be converted into a tourism site and 40% suggest for a model agroforestry farm. For silt control structures such as the settling ponds and sump pits, most of the stakeholders suggested to convert the area into bamboo plantation area by retaining major settling ponds and be planted with bamboo along the perimeter. The stakeholders also suggested that the Mine stockpile/topsoil area be converted into agroforestry area. Plant species include the bamboo, ipil, kasoy, banana, etc. The minor roads will be decommissioned and shall be rehabilitated as part of the mined-out areas. While the major roads shall be maintained throughout the duration of the project, in which perimeters will be improved through tree enhancement, and slope stabilization activities. The facilities such as the Causeway Pier, Stockyards 4 & 7, Camp Admin, Clinic, Mechanical Workshop, Assay

Laboratory, Offices, Warehouse and Nursery will remain in-situ and will be utilized during implementation of the FMRDP or could be used/transfer to other BNC projects within Quezon. Some facilities will be use as training or learning centers for the community as part of the social plan.

In reference to the indicative schedule/timelines for the proposed rehabilitation and decommissioning procedures, the company targeted to complete the FMRD Project in six years' time with a corresponding budget allocation totalling to Php 107,729,475.00. The financial requirement will be provided by the company thru the Final Mine Rehabilitation Fund (FMRDF). Withdrawal from the FMRDF shall be based on the Work and Financial Plan approved by the MRFC.

1.2. Biophysical Closure Issue

1.2.1 Public Safety and Human Health

The various phases of mine closure will carry different types and levels of risk to different groups of people, which include the workers, contractors and community. From decommissioning to post closure period, public safety and human health within the community becomes the prime concern. The public should be protected from possible risks and unsafe conditions.

BNC's vision is to develop and enhance the area in a manner that leaves all sites as safe as possible. Part of the activities to be undertaken is to educate the community in order for them to understand the safety hazards and potential environmental impacts of mine closure. BNC commits to implement best management practices to identify, communicate and minimize potential health and safety risks.

1.2.2 Environmental Impacts

Surface mining is an extractive industry which entails earthmoving consisting of extraction and hauling of ore materials and the subsequent containment of silt material in designated settling ponds and backfilling of the overburden or

top soil to mined-out area under rehabilitation. Negative environmental effects include the disturbance of the ground and vegetation on areas directly affected by the mining operations, alteration of original land configuration, change of atmosphere and air quality in the immediate vicinities, disturbance and alteration of wildlife habitats and reduction of water resources.

1.3. Socio Economic Closure Issues

For the last 15 years, BNC continues to contribute to the social and economic life not only for BNC workers but also for its host community. Local industries as well as folks from the impact area, trade their farm products within the mine complex and enjoy other benefits that flow from the mine such as for social services, health and education.

It remains to be one of the major providers of direct and indirect employment in the municipality of Quezon. By the end of 2021, the mine will start decommissioning, many sectors will be affected. Foremost are the workforce, which will be reduced with end of ore extraction and shipment and consequently community population follows. Residents from the host and neighbouring communities relying on the services and livelihood provided by the mine will also be affected. Thus, sustaining a community after mine life shall also be an issue.

BNC is a major contributor of revenue to the Local Government Units, from the barangay level up to the national level. Government revenues will be reduced, thus affecting its delivery of services to their constituents.

Closure of the mine will also have an effect to the industries relying on the existence of the mine such as contractors, suppliers, shareholders, and entrepreneurs.

2. Company Information

2.1. Project Name : Berong Nickel Project

2.2. Company Name : Berong Nickel Corporation

2.3. Company Address :

Head Office Address	Mine Site Address
3 rd Floor DMCI Homes Corporate Center, 1321 Apolinario St, Bgy Bangkal, Makati City 1233	So. Badlisan, Bgy. Berong, Quezon, Palawan, 5304
Tel. No: (02) 823 7963 / 831 6237	Tel. No: (048) 434 9599
Fax No: (02) 831 6241 / 831 6242	Email: bncenvi.dmcimining@gmail.com

2.4. Contact Person/Designation : Mr. Tulsi Das C. Reyes / President

2.5. Legal Description of the Mine

2.5.1 Mining Tenement

Berong Nickel Corporation (BNC) is a Philippine Securities and Exchange Commission-registered joint venture company established in 2004 by Toledo Mining Corporation and Atlas Consolidated Mining and Development Corporation (ACMDC). See annex 1. BNC has a Management Agreement with David M. Consunji Inc., (DMCI) a wholly owned subsidiary engaged in ore and mineral mining and exploration to supervise and manage its activities especially on technical and financial aspects of mineral exploration and development of nickel laterite in BNC areas of interest. It is located in Bgy. Berong, Quezon, Palawan with an area of 288 hectares, and is covered by Mineral Production Sharing Agreement (MPSA) No. 235-2007-IVB entered on

June 08, 2007 by and between the Government represented by the DENR Secretary and Berong Nickel Corporation. See Annex 2.

Out of the 288-hectare covered by MPSA, the developed or active area for operation is only 119 hectares or about 41% which include Ancillary Area (25 has. or 9%), Disturbed Area (38 has. or 13%) and Progressive Rehabilitation Area (56 has. or 19%). The remaining 169 hectares or 59% are Vegetated Areas which include Rehabilitated Area (50 has. or 17%), Undisturbed Area (114 has. or 40%) and Buffer Zone (5 has. or 2%). Please refer to Figure 1. (BNC Land Use Map).

2.5.2 Environmental Compliance Certificate Granted by DENR for BNC

ECC Ref. Code: 0507-008-301ECC June 14, 2006	ECC for Berong Nickel Project
ECC-R4B-1408-0083, August 29, 2014	ECC for BNCs Causeway (Pier) Jettison Project
ECC-4B-214-PA-2236-2005 November 10, 2005	ECC for Industrial Sand and Gravel Extraction Project of ACMDC
ECC-4B-215-PA-2236-2005 November 10, 2005	ECC for Industrial Sand and Gravel Extraction Project of BNC

2.5.3 Other Regulatory Permits/Licence relevant to Mine Closure

Permit / Clearance / Certificate / Agreement	Legal Basis	Implementing Agency	Permit Number
AEPEP Certificate of Approval	RA 7942, CDAO 2010-21	MGB IV-B	AEPEP No. 2020-05- MIMAROPA
Discharge Permit (Badlisan)	RA 9275 (Sec. 14), DAO 2005-10	EMB IV-B	2015-DP-PAL-02-051
Discharge Permit (SLF)	RA 9275 (Sec. 14), DAO 2005-10	EMB IV-B	2014-DP-PAL-02-122
Discharge Permit (Yard 7)	RA 9275 (Sec. 14), DAO 2005-10	EMB IV-B	2014-DP-PAL-02-179
EPEP/FMRDP Certificate of Approval	RA 7942, DAO 1996-40/DAO 2010-21	MGB CO (CLRFSC)	EPEP & FMR/DP No. 087-2009-03
Hazwaste Certificate of Treatment	RA 6969, DAO 2013-22	EMB IV-B	COT M-M-4B-53-2019- 00028 (1-2)
Hazwaste ID	RA 6969, DAO 2013-22 (Cha. 3)	EMB IV-B	OL-GR-R4B-53-001795
Hazwaste Manifest	RA 6969, DAO 2013-22	EMB IV-B	M-M-4B-53-2019- 00028

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Hazwaste Permit to Transport	RA 6969, DAO 2013-22	EMB IV-B	OL-PTT-R3-14-004552
			OL-PTT-R3-14-005616
			OL-PTT-R3-54-006136
ISO 14001:2015 Certification	DAO 2015-07	MGB IV-B, NQA	Certificate No. 67322
MMT SO/MOA/Resolution	RA 7942, CDAO 2010-21, DAO 2017-15	MGB IV-B, MRFC	RSO 2015-09
MPSA	RA 7942	DENR CO, MGB IV-B	MPSA No. 235-2007-IVB
MRFC SO/MOA/Resolution	RA 7942, DAO 1996-40/CDAO 2010-21	MGB IV-B, CLRFSC	RSO 2007-001
PCO Accreditation	DAO 2014-02, CDAO 2010-21 (Sec 173)	EMB IV-B	COA No. 2017-R4B-01518
Permit to Operate Air Pollution Source	RA 8749, DAO 2000-81 (Part 6), MC 2007-003	EMB IV-B	2017-POA-D-0453-334
SEP Clearance	RA 7611	PCSD	MEP-022306-003
STCBP 2014	PD 705	DENR IV-B	DENR IV-B MIMAROPA-2014-0007
STCEBP 2016	PD 705	DENR IV-B	DENR IV-B MIMAROPA-2016-001
Water Permit	PD 424/PD 1067	NWRB	Water Permit No. 020884

Provided in annex 3 – 13 the copy of all the regulatory permits / licenses granted to BNC.

2.5.4 Name and Full Details of Person/s Authorized to act/represent the company with respect to the mine closure plan

Name	Position	E-mail
Tulsi Das C. Reyes	President	tulsidasreyes@gmail.com
Ramon Manuel R. Briones	VP-Operations	blackrockores@gmail.com
Deo V. Gatchalian	Compliance Manager	dev.gatchalian@gmail.com
Marc Raymund L. Zamora	Resident Manager	marc.zamora@gmail.com
Jay Pee R. Dela Cruz	MEPEO/PCO	jprodriguezdelacruz@gmail.com
Renato Y. Sabat Jr.	Mine Planning Engineer	renato.sabatjr@gmail.com
Aleamar C. Velasco	Safety Engineer	alemar.velasco@gmail.com
Deborah A. Arquio	ComRel Officer	debyarquio@gmail.com

Provided in table 5-8 the complete Organizational Structure of personnel who shall be responsible for the implementation of FMR/DP.

3. Background Information

3.1. History of the Mining Operation

Berong Nickel Corporation was registered with the Philippines Securities and Exchange Commission on September 27, 2004, for the purpose of exploring, developing and mining the Berong property located in Barangy Berong, Quezon, Palawan.

The company is 60% owned by Nickeline Resources Holdings, Inc. (NRHI), 21.3% owned by Toledo Mining Corporation (TMC) and 18.7% owned by European Nickel Plc (EN). Their parent company is Atlas Consolidated Mining and Development Corporation (ACMDC).

In 2005, BNC was granted a temporary exploration permit by the government and carried out a confirmatory exploration and resampling study in the initial open of area of the project.

In 2006, after establishing sufficient information on the economic viability of the project, the company preceded to develop the area into a commercial mining operation in which a Special Mining Permit (SMP) was issued by the Department of Environment and Natural Resources (DENR), through the Mines and Geosciences Bureau (MGB). The SMP allows the company to commence its mining operation while it completes a feasibility report as part of the requirement of the MPSA.

On June 8, 2007, the government approved MPSA No. 235-2007-IVB in favor of the company as the contractor covering an area of 288 hectares. See annex 2. The area is situated in the Ancestral Domain Claim of the Tagbanua Tribe located in Barangay Berong, Quezon, Palawan. See Figure 3.

3.1.1 Mine Component

Pre-mining Condition

BNC's mineral resource is situated in a rolling terrain where ore is deposited in a stratum like pattern relative to the slope of the ground. The ore sits at an average depth of 10 meters below the surface. The area is covered with vegetation when it was first explored by ACMDC and was part of the traditional use zone for local indigenous community.

Current Situation

BNC's method is through contour/strip mining. This technique is applicable to shallow bearing deposits with large extents. The ore is mined through a step by step clearing - topsoil stockpiling - hauling and loading and final progressive rehabilitation of mined out areas. The current production area was situated on areas 24a, 24b and area 25. See figure 5.

Implication for Mine Closure (Situation at Closure)

Mine area stabilization. Once the area is declared mined out, the slopes will be stabilized following the original contour or shape of the surface, hence, the method called "contour mining". Once the benches are covered with organic topsoil material final tree planting will follow.

Loss of employment. The closure of the mining area will cease BNC's operation, and will trigger reduction of manpower required to implement the FMRDP.

Decrease in paid taxes to the government. The closure will also result to the reduction on paid taxes both in the national and local levels of the government.

Loss of financial funding. Closure will affect company programs such as the Environmental Protection and Enhancement Program (EPEP), Social Development and Management Program (SDMP), Corporate Social

Responsibility (CSR), and other locally supported projects derived from the operation.

Final Land Use (Stakeholders aspiration / Option for Closure)

Based on the stakeholder consultation conducted to identify the favorable final land use of the area, 60% of them suggest that the area be converted into a tourism site and 40% suggest for a model agroforestry farm.

3.1.2 Silt Control

Pre-mining Condition

Before initial mining commence on 2006, BNC had established multiple settlings ponds to capture silt laden rainwater around the mining area, this is a requirement based on the company's environmental compliance certificate. The ponds were strategically constructed within the mine site vicinity to trap silt laden rainfall run-off water before it goes into nearby tributaries.

Current Situation

A total of 100 settling ponds were constructed, which has a volume capacity of 300,000 cubic meters. The pond serves as a silt material catch basin for BNC's mine site. This also serves as a source of water for on-going rehabilitation efforts and water supply for dust mitigating measures. See Figure 4.

Implication for Mine Closure (Situation at Closure)

The pond will serve as a water supply for the progressive rehabilitation efforts of the company. The pond perimeter will be stabilized, backfilled with top soil material, installed with cococoir and tree planted. See Figure 4&8.

Final Land Use (Stakeholders aspiration / Option for Closure)

Based on the stake holder consultation, most of them suggest to convert the area into bamboo plantation along the perimeter, and shall remain as water catchment ponds.

3.1.3 Mine site stockpile / Topsoil

Pre-mining Condition

As part of the initial mining activities of the project, the top organic layer of the mining area was first hauled and stockpiled in a designated area for rehab projects.

Current Situation

BNC has an identified stockpile for top soil material with a total area of 25 hectares. This will be the main source of matting material for the rehab efforts.

Implication for Mine Closure (Situation at Closure)

Once the stockpiled topsoil material is exhausted, the area will be converted into final progressive rehab.

Final Land Use (Stakeholders aspiration / Option for Closure)

The stakeholders suggested that the area be converted into agroforestry area. Plant species include the bamboo, Ipil, and fruit trees, etc.

3.1.4 Mine Haul Road

Pre-mining Condition

The haul road was established with during exploration years, originally constructed by ACMDC. The road traverses a total of 6 kilometers from the main community road up into the mine site.

Current Situation

The road was improved with structure barriers along the side, the company had also planted different tree species to reinforce existing bund wall. Continuous haul road maintenance was undertaken to ensure a safe access to the site.

Implication for Mine Closure (Situation at Closure)

Since the main haul road is the only way access to the site, this will be maintained at the duration of the FMRDP, this might also serve as an access route to neighboring BNC claims.

Final Land Use (Stakeholders aspiration / Option for Closure)

The road shall be maintained throughout the duration of the project, in which perimeters will be improved through tree enhancement, and slope stabilization activities.

3.1.5 Port, Stock Yard, Camp, and Other Facilities

Facilities such as the Causeway Pier, Stockyards 4 & 7, Camp Admin, Mechanical Workshop, Assay Laboratory, Offices, Warehouse and Nursery will remain in-situ and will be utilized during implementation of the FMRDP or could be used/transfer to other BNC projects within Quezon. Some facilities will be use as training or learning centers for the community as part of the social plan.

3.2. Objective and how it relates to the mine and its environmental and social setting

The objective of this project is to formulate and prepare a comprehensive mine rehabilitation and area transition plan pursuant to the law. This is also to enable the people to be affected, such as the employees and the residents of the surrounding communities, to prepare themselves for alternative options of livelihood and the like. BNC management, on the other hand, will have an idea on what resources will be needed.

The mine closure plan aims to look into the following:

- a. Rehabilitation of the physical environment affected by the operation.
Successful revegetation is defined as having a plant survival rate of 85% and

- self-sustaining. Reduce the risk of pollution, restore the area and landscape, improve aesthetics of the area and prevent further degradation so that resulting condition pose minimal risk to people and environment.
- b. Socio-economic aspect of the host and neighbouring communities.
 - c. Preparation for residual care. During the periodic audit/ review of the FMRDP and at the end of the FMRDP implementation. BNC commits to implement residual care that may be required to ensure the success of rehabilitation. Residual care is defined as any minor activities/adjustments that have to be undertaken or implemented after the successful implementation of the FMRDP.

3.3. Lessons learnt from progressive rehabilitation already completed

Progressive mine rehabilitation is religiously being undertaken by BNC since 2008 prior to the implementation its decommissioning plan. In a span of twelve (12) years BNC was able to completely rehabilitate an estimated area of fifty (50) hectares covering Areas 1, 2, 3, 4, 5, 11, 12,13 and 14. See Figure 9.

Because BNCs mining operations are within sloping areas, biological/vegetative and structural/engineered erosion control and slope stabilization were undertaken.

The vegetative measures involve the use of proven technologies such as installation cococoir mesh nets & cococoir logs, vegetative (grass) matting and planting of indigenous and endemic tree species along the slopes. These measures were mostly implemented in the eroding areas within the mined-out area subject for rehabilitation.

The structural measures involve the construction / installation of structures to immediately check the deterioration of active gullies, landslide, road banks and benches. The installation of such structure checks the volume of sediments that may be carried by the water runoff into the river system. Examples are the settling ponds, construction of drainage system and bund walls on rehabilitation areas and mine haul road among others.

The combination of structural and biological measures is usually concentrated in areas susceptible to erosion and along the creeks to trap sediments. Example are the settling ponds and bund walls were planted with trees and grasses. Bench correction and slope stabilization was undertaken in the mined-out areas. Typically for mined-out areas subject for rehabilitation, bench height is about 5 meters, berm width of 5 meters and bench slope of about 45°. These benches will then be subject for top-soil application or re-soiling of about 2-3ft. depending on the slope. Installation of cococoir nets will follow to minimize the rate of soil erosion.

Cococoir nets and logs has also the capacity to store/hold water or moisture which then can be beneficial to planted trees in the rehabilitation areas. BNC prepare a progressive rehabilitation program specifically on mine revegetation of Berong Nickel Project. The proposed plan consists of the following essential steps:

- Substrate amendments and species selection
- Substrate amendments and species trials
- Pilot planting
- Mine-wide revegetation

A. Substrate amendments and species selection

Species selection for mine rehabilitation is a major issue that requires critical evaluation. Factors that were considered during the implementation of this step are the following:

- Environmental conditions such as soil conditions and soil seed bank, residual trees and type of species, distance of the site to intact forest and climate.
- Biophysical limits of the species that will indicate the potential performance of the species in the particular site.
- Expected product or service of the proposed species.

- Monoculture or complementary mixtures of types of species that form complementary mixtures and their management
- Other factors such as community involvement, availability of planting materials and resources for the rehabilitation.

The list of trees suitable for planting in mined-out areas is limited because not many trees can tolerate extreme soil conditions. The initial list of species tried by BNC consists of one bio-fuel source, four high-end fruit crops and 10 forest tree species.

Substrate in mined-out areas are compacted hence there is a problem in aeration; the parent material is exposed, low moisture retention capacity, low fertility and low organic matter content. The substrate amendments tried including addition of topsoil, mulch and inorganic fertilizer in different combinations.

B. Substrate amendments and species trials

BNC established its two-year species and substrate amendments selection trials in small plots at Area 4 from October 2007 to December 2009, which measured the performance of 15 selected species in eight particular substrate amendments. Mass screening of species was done for two years to determine survival and growth since climatic and ecological matching of a new site and the original habitat of a species is rarely enough. It cannot reveal the adaptability of the species to new conditions or its ability to grow satisfactorily in an area. Based on research results, the long list of species was narrowed down to five.

Based on the results sustained productivity and stability of the ecosystem could be achieved through intelligent manipulation of successional and functional diversity, by techniques such as use of legumes (narra) and Casuarinas, the

groups of species that can rapidly add humus, nitrogen and other nutrients to the soil.

Emphasis is directed towards use of trees indigenous to the site and/or pioneer forest tree species in combination with economically important species that are adaptable and can survive harsh environmental conditions. In this case, the establishment of grass and legume covers protect the soil from further erosion. These are also expected to produce organic matter and build up soil nitrogen through the leguminous trees such as narra as well as other indigenous species like Palawan agoho, agoho del monte, agoho, saket, tanabag, salmaguen and tikog.

Bamboo will be included as one potential saleable commodity, which was proven to tolerate the exposed and harsh conditions in the project site through the recently concluded species trials research. The species is also suspected to be endomycorrhizal. Bamboo has been tagged as the “green gold”. Bamboo products such as handicrafts and furniture are known not only in the Philippines but in other countries as well. Major commercial bamboo species, namely, kawayan-tinik, kawayan-kiling, bayog, and bolo can be propagated by culm cuttings. These may be planted directly in the plantation site or raised in the nursery for mass propagation. See Figure 8.

C. Pilot Planting

Pilot planting using the shortlisted species is an essential intermediate step from a species trial to large scale revegetation. With this, the optimum cultural and managerial techniques can be determined and the vital decision on whether or not to proceed with the complete rehabilitation program using these chosen species can then be made.

BNC established its pilot rehabilitation trial based on the results of species and substrate amendments selection trials undertaken. The pilot plantation was established in the first mined-out area (Area 4) from February to November 2010.

The selected species for pilot mine revegetation of Berong Nickel Corporation based on successional and functional biodiversity are as follows:

Indigenous species: narra (legumes); Agoho del monte/agoho/Palawan agoho (mycorrhizal), saket, salamaguen and tanabag

2011 Pilot Rehabilitation Trial Annual Monitoring

In 2011, BNC assess/evaluate the one-year old pilot rehabilitation trial that was planted using the selected species based on the results of the previous research trial. The monitoring activity aimed to assess and evaluate performance of planted seedlings to confirm or disprove the findings during the species and substrate amendments selection trials, as well as to observe the ecological status of the area. The results determine decisions on whether or not to proceed with the large-scale revegetation plan.

The results of monitoring are summarized below:

- Soil analysis revealed that pH is within favorable range for plant growth.
- Soil nutrient analysis revealed inherent low level of soil nitrogen, average level for potassium and phosphorus, which may be attributed to the type of soil added to the rehabilitation area. The added soils may have contained parent materials naturally low in soil nutrients. These results show that although pH level fell within the range favourable for plant growth, the area does not have enough available nutrients for plant utilization.
- The recorded percent soil organic matter (SOM) of the old topsoil/substrate was higher at 2.20 percent compared to the plot with the newly-added topsoil, which was 2.10 percent. This was possibly due to the decayed woodchips used in the previous research trial, and the parent material in the newly-added soil.
- Low organic matter content of the soil (with <2 %) can lead to unfavorable plant growth.

- Growth measurement and evaluation results indicated good growth such that 90% of the agoho seedlings showed positive height growth increments while narra and saket had 100%.
- Considering the impoverished site condition in the mined-out area, narra, and saket recorded 100% survival while agoho had 89.50%.
- Symptoms of nutrient deficiencies were observed such as yellowing of leaves, slow or no growth, leaf edges turned brown and curled with small necrotic spots and withered leaves of some seedlings during field inspection.
- Rill erosion may have affected the growth performance of some planted seedlings within the plots wherein exposed roots of plants were observed along its watercourse.

The mined-out area will eventually recover. Based on the 2011 monitoring results, pioneer species and colonizers were already observed growing in the area such as grasses, shrubs and herbs.

2012 Pilot Rehabilitation Trial Annual Monitoring

The second monitoring of the pilot rehabilitation trial was undertaken in 2012 with the results summarized below:

- Soil analysis revealed that pH is within favourable range for plant growth.
- Soil nutrient analysis revealed still inherent low level of macronutrients (N, P, K), organic matter and cation exchange capacity (CEC).
- Positive growth and survival of all four planted species were observed despite the impoverished condition of the area.
- Presence of soil biota and other organisms suggests that the mined-out area is well on its way to recovery
- Pioneer species and colonizers were observed growing in the area such as grasses, shrubs and herbs.
- Symptoms of nutrient deficiencies (e.g. yellowing of the leaves, stunted growth) were still observed during the field inspection.
- Rill erosion was still observed that may have affected growth performance of some plants within the plots wherein exposed roots of plants were observed along its watercourse.

D. Mine-wide Revegetation

Results of pilot planting determined whether or not the identified species, together with the early successional colonizers will eventually be planted on a large scale. By this time, the optimum cultural and managerial techniques have been determined and the vital decision to proceed with the complete rehabilitation program using these chosen species is made. Assessment of the pilot plantings served as the pivot point for the species and soil amendment combinations used in intermediate plantings. See Table 4. Seedling inventory.

4. Stakeholder Involvement

Summary of stakeholder involvement activities and other community interaction conducted including stakeholder expectation in relation to mine closure objectives and strategies as well as agreement /s reached.

There are two major components of Mine Transition Plan (MTP). Part I is the Social Auditing and Part II is the Technical / Environmental Audit Planning.

In the social audit component, the residents of the host and neighboring communities including the Indigenous Cultural Communities (ICC) as well as the employees and their dependents and the local government units are consulted on what are their perceptions and future plans when the inevitable time comes. Special attention focuses on:

- Alternative livelihood for the miners/workers and their dependents who opt to stay in the community after cessation of operation
- Impacts on the residents of surrounding communities; how to sustain the maintenance of the existing facilities like the farm to market roads and other socio-economic project that the Company has been extending.

Residents from the host and neighboring communities, the workers and their dependents, and the representative from the local Government Units actively participated in the series of consultation for the purpose of obtaining their aspirations, expectations, and suggestions relative to Mine Closure / Transition Plan. A total of 30 attended said consultation conducted last November 26, 2020.

Based on the consultation, all stakeholders organize BNC as the main provider for employment, business opportunities and community development in the area. Further, they are aware of the effect of decommissioning on the economic and social status of all stakeholders as well as on the effect on the environment. To lessen this effect and considering the existing facilities such as roads and other infrastructures and utilities and necessary for community life, the stakeholder envision the company to be converted into a tourism and educational center to provide alternative livelihood or employment opportunities.

The Stakeholders expects the Company to maintain and rehabilitate its major facilities to be environmentally sound such as mine area, silt control, mine site stockpile or topsoil and mine haul road. Further they expect BNC to maintain the roads and utilities such as water refilling station and clinical service to sustain the community.

To realize this, the LGUs and the communities including the Indigenous Cultural Community (ICC) of the Tagbanua Tribe are supportive to convert the area to an alternative use as well as to the environmental rehabilitation. On the part of the LGUs, they shall issue legislative measure as well as coordinate with other government line agencies after determining the critical needs in maintaining and developing the area. The community on the other hand is willing to organize and cooperate with the authorities and the ICC Tribal Leaders on how to develop and sustain the area.

5. Risk Assessment

5.1. Identify sources of risk based on safety, environment, social and cost

The sources of risk identified can be categorized into following:

- a. BIO-PHYSICAL- these include mine area, settling ponds and road networks.
The main identified hazards comprise of overtopping and collapse of decommissioned settling ponds, physical instability of the resulting to slide, erosions and sedimentation.
- b. SOCIO-ECONOMIC- the main identified socio-economic hazards are associated with the sustainability of utilities (such as water, electricity and communications) social services (health, education, peace and order) and infrastructure supports (road networks, water systems), business development, employment and food security.

5.2. Summary of closure and rehabilitation scenarios, assumptions and uncertainties

5.2.1 Environmental Risk

Structure	Potential Risks	Mitigation Management Measure
Mining Area	Potential scouring and erosion of benches	Control measure is to install / construct structural and vegetative measures such as proper bench correction and slope gradient; construction of drainage system; installation coir nets; and tree planting.
	Potential air pollution due operation of heavy equipment during land preparation phase	Control measure is to continue the conduct of air sampling under self-monitoring and quarterly MMT validation.
	Potential contamination of adjacent water bodies	Control measure is to continue the conduct of water sampling under self-monitoring and quarterly MMT validation.
	Potential entry of unauthorized personnel resulting to bodily injury and or death.	Control measure is to retain post guards at the mining area to prevent intruders from entering and get rid of company liability.
Silt Control	Potential overtopping and collapse of decommissioned pond due to floodwater	Construction of spillway and or drainage system to minimize scouring. Planting of grass and trees to hold and stabilize the soil.
	Potential sedimentation	Control measure is to retain settling ponds in strategic locations and properly dredged and maintained as needed arises.
	Public safety resulting to injury or death.	Control measure is to install warning signages and retain post guards at the mining area to prevent intruders from entering and get rid of company liability.
Minesite Stockpile	Potential soil erosion	Control measure is to remove or transfer all remaining ore stockpile from the mining area down to the stockyard area.
	Dust emission during transfer/removal of the stockpile	Control measure is the provision of water truck during the removal operation.
Mine Haul Road	Potential scouring and collapse of road networks	Control measure is to construct retaining walls/bund walls and proper drainage system.
	Potential dust emission	Control measure is to plant the retaining walls / bund walls with trees to minimize further dispersion of dust.

5.2.2 Safety Associated Risk

a. Platforming of Topsoil

No.	Work Area	Hazard (Major)	Hazard (Specific)	Risk	Potential Loss or Damage	Risk Rating			Controls
1.	Plat forming of top soil	Motion Mechanical	Moving trucks/heavy equipment (dozer/excavator)	Struck against other equipment, materials and/or personnel	Property Damage	4	C	High	Only the designated or authorized operator is allowed to use the unit.
									Application and implementation of heavy equipment operation and maintenance procedure.
									(Re-) orientation on heavy equipment operation and maintenance procedure must be conducted at least annually.
					Personal injury, death	4	E	High	Provision and orientation of safety spotter in all loading and dumping area. Application of safety spotter procedure.
									Provision and implementation of periodic road repair and maintenance.
									Provision and implementation of emergency rescue and response program
2.	Plat forming of top soil	Gravity	Excavation/precipice/ravine/cliff or height of the bench	Fall to lower level	Property Damage	5	C	Extreme	Provision and orientation of safety spotter in all loading and dumping area. The spotter must keep a safe distance of at least four (4) meters away from the equipment and stand wherein an operator or driver can see him/her.
									Wearing of PPE (hard hat, reflectorized vest, safety shoes/boots)
									Implementation of Medical Emergency Preparedness and Response Program.
SSW:	Only the designated (authorized) operator is allowed to use the equipment.								Equipment must have at least three (3) meters away from the edge of excavation/precipice/ravine/cliff when working. The track pad of the crawler type equipment must be perpendicular with the cut of excavation.
									The operator must ensure stable foundation of the ground prior to working.

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									Provision of safety signs such as “Danger: Deep Excavation” and “Danger: Steep slope”
									Provision and implementation of emergency rescue and response program
									Wearing of reflectorized vest, hard hat, safety shoes/ boots.
									Implementation of Medical Emergency Preparedness and Response Program.
			Soil collapse	Struck by falling materials, landslide or collapse	Personal Injury, Death	2	E	Extre me	SSW: Planning and implementation of Mine Plan. The safety engineer and geologist shall conduct assessment and inspection to the waste dumping area. Continuous daily inspection and monitoring shall be conducted by the concerned supervisor, safety inspector, operator, driver and spotter every shift of the day to detect possible soil collapse in the stockpile being work.
									PPE: Wearing of reflectorized vest, hard hat, safety shoes/ boots.
									Implementation of Medical Emergency Preparedness and Response Program.
					Property Damage	2	E	Extre me	SSW: Planning and implementation of Mine Plan. The safety engineer and geologist shall conduct assessment and inspection to every newly opened mine area. Continuous daily inspection and monitoring shall be conducted by the concerned supervisor, safety inspector, operator, driver and spotter every shift of the day to detect possible soil collapse.
									PPE: Wearing of reflectorized vest, hard hat, safety shoes/ boots.
									Implementation of Medical Emergency Preparedness and Response Program.
3.	Loading and dumping of top soil	Motion	Moving trucks and heavy equipment performing the loading	Struck against other equipment, materials or person	Property Damage and Personal Injury	5	C	Extre me	Only the authorized driver/operator is allowed to operate a unit.
									Interval defensive driving skills seminar.
									Provision of spotter at loading and dumping area.

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			and dumping activity						
		Mechanical	Running dump trucks on deteriorated road, protruding boulder	Running dump trucks might struck against the deteriorated road with a protruding boulder	Property damage	4	A	Moderate	<p>Provision and implementation of periodic road repair and maintenance.</p> <p>Only the authorized driver/operator is allowed to operate a unit.</p> <p>Interval defensive driving skills seminar.</p>
4.	Benching and re-contouring/re-sloping	Gravity	Height of the bench due to bench forming	Fall from different level	Property damage	5	C	Extreme	Equipment must have at least two (2) meters away from the excavation, the track pad of the crawler type equipment must be perpendicular with the cut of excavation.
		Gravity	Lifting of top soil/subsoil material using bucket of the excavator, during re-sloping activity	Personnel might strike by falling materials from the bucket of the excavator	Personal Injury	5	D	Extreme	<p>Personnel in the area must wear reflectorized vest, hard hat, safety shoes/ boots.</p> <p>No ground personnel allowed to enter within the perimeter of working excavator without permission from the operator or without communicating with the operator.</p> <p>Only the authorized driver/operator is allowed to operate a unit.</p> <p>Emergency preparedness – provision of competent medical practitioner (first aider, doctor and nurses) and also medical equipment ambulance</p>
5.	Installation of coco coir, geotextile fabric, laminated sack or coco logs	Gravity	Tripping hazard due to the presence of the materials such as coco coir, geotextile fabric and coco logs that might	Fall to different levels	Personal Injury	4	C	High	<p>Personnel must watch their steps while performing activity to avoid tripping.</p> <p>Complacency towards work must be discussed during toolbox meeting</p>

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			obstruct the pathway						
		Motion	Moving of coco coir, geotextile fabric, laminated sack or coco logs, these might hit with other materials or workers present in the area	Personnel in the area might struck by coco coir, geotextile fabric, laminated sack or coco logs	Personal Injury	4	C	High	Wearing of reflectorized vest, hard hat, safety shoes/ boots. Personnel must be vigilant in their surrounding while performing activity to avoid being hit by the materials used for installation.
		Motion	Prolonged bending due to installation of materials	Back Injury, Muscle strain	Personal Injury	4	C	High	Personnel must have intervals of rest.

B. Tree Planting

No.	Work Area/Flow	Hazard (Major)	Hazard (Specific)	Risk	Potential Loss or Damage	Risk Rating			Controls
1.	Hauling of seedlings from nursery to rehab site - manual handling (lifting and carrying)	Motion - Ergonomics	Improper body positioning upon lifting and carrying of seedlings	Back injury, Sprain, Strain due to improper positioning	Personal Injury/ Illness	5	A	High	Practice proper manual lifting and carrying techniques. Train and educate workers regarding Proper Manual Handling Techniques during toolbox meeting.
		Motion				5	C		Provision of pathway for the employee.

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	Transportation of seedlings from nursery to rehab		Running vehicle, no pathway for pedestrian, driver is lack of knowledge & awareness, entering the blind spot of the equipment or mechanical failure.	Vehicular accident	Personal Injury, death			Extreme	<p>Pedestrian must use the provided pathway.</p> <p>Identify & provide pathway for the employee. Conduct defensive driving seminar for all drivers.</p> <p>Do not enter in the equipment perimeter without the knowledge of the driver. Establish eye to eye contact.</p> <p>PPE: wearing of reflectorized vest, hard hat, safety shoes/boots</p> <p>Emergency preparedness – provision of competent medical practitioner (first aider, doctor and nurses) and also medical equipment ambulance.</p>
2.	Hole Digging	Chemical	Presence of dust in the area	Eye Injury and Respiratory Illness	Personal Injury and Illness	3	A	Low	Personnel must wear PPE such as goggles & dust mask.
		Mechanical	Sharp edges of hole digger used for digging	Personnel might get cuts and other wounds while working	Personal Injury	3	A	Low	Personnel must wear PPE such as rubber coated gloves.
									Personnel must be careful when using hole digger to avoid getting wounded.
		Biological	Presence of venomous/ poisonous snakes, centipedes, scorpion or other insects	snake bites and other insect bites	Personal Injury	4	C	High	Survey the project area for the possible habitat of snakes & other harmful insects before commencing with the activity, avoid if seen. Do not kill nor interfere with the fauna.
									Wearing of long sleeves, bonnet, hard hat, safety shoes/boots, gloves
									Emergency preparedness – provision of competent medical practitioner (first aider, doctor and nurses) and also medical equipment ambulance
3.	Planting	Chemical,	Presence of dust in the area	Eye Injury and Respiratory Illness	Personal Injury and Illness	3	A	Low	Personnel must wear PPE such as goggles & dust mask

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		Biological	Presence of snakes, centipedes, scorpion or other insects	snake bites and other insect bites	Personal Injury	4	C	High	Survey the project area for the possible habitat of snakes & other harmful insects before commencing with the activity, avoid if seen. Do not kill nor interfere with the fauna.
									Wearing of long sleeves, bonnet, hard hat, safety shoes/boots, gloves
									Emergency preparedness – provision of competent medical practitioner (first aider, doctor and nurses) and also medical equipment ambulance.
4.	Planting	Gravity	Slope or slanting area	Fall to lower level	Personal injury	4	C	High	Using of lifeline when necessary.
									Installation of danger barricade in slope or slanting area.

C. Costal Facilities

No.	Work Area/Flow	Hazard (Major)	Hazard (Specific)	Risk	Potential Loss or Damage	Risk Rating			Controls
1.	Coastal Facilities	Chemical	Paint leaching	Water pollution	Damage or disturbance to marine life	1	B	Low	<p>Compliance with the requirements of the government agencies such as Philippine Ports Authority (PPA) and Philippine Coast Guard (PCG). PPA and PCG Audit.</p> <p>Chemicals shall be handled according to the BNC Chemical Procedure. Only chemical handlers are allowed to work with chemicals.</p> <p>Provision and implementation of emergency preparedness and response for environmental emergency (chemical/oil spill).</p> <p>Organization of Emergency Response Team (ERT). Conduct of periodic drill.</p> <p>Provision of materials and equipment to be used for emergency. Spill boom, absorbent materials, etc. were provided. Further, MARPOL structure was established at the Pier to ensure all necessary materials and equipment</p>

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									for the response is readily available when emergency occurs. Coordination with concerned government agencies during emergency.
2.	Coastal Facilities	Motion and chemical	Vessel collision, heavy swell, bad weather condition, typhoon, chemical/oil/ ore spill	Water pollution	Damage or disturbance to marine life, property damage, personal injury and/or death	1	B	Low	<p>Ensure that all vessel for the operation is compliant with the requirements of government agencies. PPA and PCG Audit.</p> <p>Daily monitoring of weather through weather forecast. Stop the barge loading activity upon observing of bad weather or experiencing heavy sea swell.</p> <p>Secure the vessels in the designated shelter area (Catuayan).</p> <p>Provision and implementation of emergency preparedness and response for environmental emergency (chemical/oil spill).</p> <p>Organization of Emergency Response Team (ERT). Conduct of periodic drill.</p> <p>Provision of materials and equipment to be used for emergency. Spill boom, absorbent materials, etc. were provided. Further, MARPOL structure was established at the Pier to ensure all necessary materials and equipment for the response is readily available when emergency occurs.</p> <p>Coordination with concerned government agencies during emergency.</p>
3.	Coastal Facilities	Chemical	Sabotage, explosion, and chemical/oil/ ore spill	Water pollution	Damage or disturbance to marine life, property damage, personal	1	B	Low	<p>Ensure that all vessel for the operation is compliant with the requirements of government agencies. PPA and PCG Audit.</p> <p>Provision of security guards in the area.</p>

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					injury and/or death				<p>Provision and implementation of emergency preparedness and response for environmental emergency (chemical/oil spill).</p> <p>Organization of Emergency Response Team (ERT). Conduct of periodic drill.</p> <p>Provision of materials and equipment to be used for emergency. Spill boom, absorbent materials, etc. were provided. Further, MARPOL structure was established at the Pier to ensure all necessary materials and equipment for the response is readily available when emergency occurs.</p> <p>Coordination with concerned government agencies during emergency.</p>
4.	Pier/ Breakwater	Artificial structure	Pier /Breakwater	Disturbance to marine life	Damage or disturbance to marine life, property damage, personal injury and/or death	1	B	Low	<p>The Pier and Breakwater were coordinated to the concerned government agencies before its construction.</p> <p>Installation of warning sign (markings) to serve as guide of maneuvering vessels.</p> <p>Provision and implementation of emergency preparedness and response for environmental emergency (chemical/oil spill).</p> <p>Organization of Emergency Response Team (ERT). Conduct of periodic drill.</p> <p>Provision of materials and equipment to be used for emergency. Spill boom, absorbent materials, etc. were provided. Further, MARPOL structure was established at the Pier to ensure all necessary materials and equipment for the response is readily available when emergency occurs.</p> <p>Coordination with concerned government agencies during emergency.</p>

6. Final Mine Rehabilitation and/or Decommissioning Plan or Mine Closure Plan

6.1. Final Land Use of the Site

Mine rehabilitation is a combination of structural measures and vegetation re-establishment. Embarking on rehabilitation schemes should have a carefully planned and executed experimental program to avoid costly failures. The target is to get the right activities in the right places in order to conserve biodiversity and enhance options for people's livelihoods at the landscape level. The BNC mining area is located within steep topography, soil erosion within the area is expected especially during heavy rainfall. There will be disturbances in the landform and instability of the slopes but this is only temporary. Out of the total claimed area for mining and exploration of 288 hectares, the areas developed or active areas which include mined-out areas, ancillary areas (settling ponds, parking areas and road networks) and progressive rehabilitation areas of about 119 hectares.

Once the operation will cease, the FMRDP will immediately commence. The areas subject for decommissioning were the previously mined area, settling ponds and mine haul roads. As proposed by the LGU-Berong during the public consultation these areas can be used for eco-tourism and agro-forestry purposes. Infrastructures such as the Port facilities, Forest Nursery, Warehouse, Mechanical workshop, heavy equipment, Clinic and offices among others will not be subjected for decommissioning but will be utilized during the implementation of the FMRDP. As suggested by LGU-Quezon, BNC technical personnel with accreditation to TESDA and DOLE and existing equipment and facilities can be used as skill training facility to train and re-train personnel on a certain skill such as Hydraulic Excavator Operators, Welders and Mechanic among others.

6.2. Mine closure criteria and performance standards for all identified mine components

The completion criteria are set of indicators which, upon being met, will demonstrate the success of rehabilitation. The criteria presented are specific to the project component being rehabilitated or closed.

The Company is aiming for a post-land use similar or closed to the pre-mining state. Hence, revegetation through progressive rehabilitation of the affected areas is proposed and the focus of this FMRDP. Minimum Standard includes a stable and revegetated mine area. The provisions by law for the periodic review of the FMRDP every two (2) years will provide the necessary tool to ensure the success of progressive rehabilitation. See figure 9.

Criteria	Performance Standards
Tree health	More than 75% of trees are healthy and growing
Leaf nutrient analysis	Nutrient analysis conducted on representative trees indicate minimal deficiencies
Presence of treeless areas	No treeless areas greater than 1 ha are present
Absence of significant erosion gullies	No erosion gullies >2m deep and/or 2m wide are present on the outer slopes
Soil fertility	Levels of soil macro- and micro-nutrients are likely to be sufficient to ensure that trees do not experience nutrient deficiencies

6.3. Details of Decommissioning Plan

Decommissioning is the transitional stage period between cessation of operations and actual closure that begins near or at the cessation of production and ends with the removal of all unwanted infrastructures.

Listed below are the following Areas that require decommissioning with the corresponding rehabilitation strategy, timing and the technique chosen to meet the rehabilitation success and the closure criteria.

6.3.1 Areas for Decommissioning / Final Land use per area

Areas for Decommissioning	Decommissioning Strategy, Timing, and Technique Including Mitigating Measures	Final Land Use
Mining Area	After the mine production cease its operations, FMRDP shall immediately be implemented. Slope stabilization through benching and construction of proper drainage during the dry season will be undertaken to minimize scouring and erosion of stabilized bench. Planting of endemic and indigenous tree species such as Agocho, Palian, Almaciga and Bamboo including rattan will be timed during rainy season.	As proposed by the LGU-Berong during the public consultation these areas can be used for eco-tourism and agro-forestry purposes and may be place under DENR-CENRO's Community Based Forest Management (CBFM) program or National Greening Program.
Silt Control Structures	After the mine production, some silt control structures will be maintained until full rehabilitation of the mined-out parcels. As rehabilitation is progressive. Maintenance through dredging and construction of proper drainage to eliminate if not lessen potential siltation and contamination of adjacent river system will timed during dry season. Settling pond bundwalls and slopes will be planted with	Decommissioned and rehabilitated with marketable timbers such as Gmelina, Mahogany and Bamboo and may be place under DENR-CENRO's Community Based Forest Management (CBFM) program or National Greening Program.

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	<p>Bamboo and Tikog-tikog grass for added stabilization of the pond.</p> <p>Settling ponds rented and constructed on private property shall be retained for two more years and may be converted to Tilapia fishpond.</p> <p>Settling ponds that are no longer required will be decommissioned and rehabilitated.</p>	May be converted as inland fish pond for Tilapia and Catfish production.
Mine Stockpile / Top soil	Top soil and subsoil were purposely set aside for rehabilitation purposes. All Stabilized benches are subject for re-soiling prior to tree planting works. Re-soiling work shall be done only during dry season.	Rehabilitated and may be place under DENR-CENRO's Community Based Forest Management (CBFM) program or National Greening Program.
Mine Access Road	<p>Major access roads will remain in situ during the implementation of the FMRDP and for the use of the community as well.</p> <p>Progressive rehabilitation will be implemented until the area is stabilized. Roads leading to the mine site will be maintained to allow access to areas until full recovery of the area is achieved.</p>	Considered useful by the community during the public consultation and shall be maintained during FMRDP implementation. Mine haul road bundwalls will be planted with Agoho, Acacia Mangium and Batino for further stabilization and shall act as dust control measure. Signs and convex

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	<p>Mine haul road bundwalls will be planted with Agoho, Acacia Mangium and Batino for further stabilization and shall act as dust control measure. Signs and convex mirrors will be retained during the implementation of FMRDP.</p> <p>Minor access roads shall be decommissioned and rehabilitated.</p>	mirrors will be retained during the implementation of FMRDP
Facilities such as the Causeway Pier, Stockyards 4&7, Camp Admin, Mechanical Workshop, Assay Laboratory, Offices, Warehouse and Nursery		Facilities will remain in-situ and will be utilized during implementation of the FMRDP or could be used/transfer to other BNC projects within Quezon. Some facilities may be use as training or learning centers for the community as part of the social plan.

6.3.2 Equipment/Facilities for Decommissioning

A. Heavy Equipment

Majority of the heavy equipment such as Hydraulic Excavators, Crawler Tractors and Dump Trucks will be utilized in the rehabilitation of the mined-out area. Some will be safekept for transfer to other prospective BNC projects or can be sold to prospective outside buyers. Subject to BNC safety rules and policies the decommissioning of those equipment owned by the Hauling Contractors will be under their responsibility. Provided in Table 9 the full list of equipment to be decommissioned.

B. Other Light Vehicles

Some of the light vehicles such as man-haulers and service vehicles will be utilized during FMRDP implementation to cater personnel and material necessary for the project. Some will be safekept for transfer to other prospective BNC projects or can be sold to prospective outside buyers. Provided in Table 9 the full list of equipment to be decommissioned.

C. Infrastructure facilities

Infrastructures such as forest nursery, warehouse, hazardous waste facility, mechanical workshop, port facilities, accommodation buildings and water re-filling station will remain in-situ and will be utilized during implementation of the FMRDP or could be used/transfer to other BNC projects within Berong.

D. Other Equipment & Instruments

Clinical equipment/instruments such as ambulance, dental chair and weighing scale among others, shall be safekept for possible use to other mining projects within Berong or could be donated to the Local Government Units depending upon the need and subject for approval of the management.

6.4. Details of the Final Mine Rehabilitation Plan

6.4.1 Rehabilitation and Reforestation / Revegetation

a. Reforestation of Mine site and Vicinities

Aside from target areas, previous plantation areas with low survival will be replanted for enhancement. After the operation, the reforestation / rehabilitation of the mined-out areas and silt control structures will follow. The preparation of the area will be done by using heavy equipment such as hydraulic excavators, crawler tractors and dump trucks. As designed, the final configuration of the area will incorporate road network for accessibility and proper drainage system to minimize potential soil erosion. The parameters considered in the rehabilitation plan to control potential soil erosion and sedimentation prior to revegetation are the following:

1. Bench correction and stabilization of the mine slope areas.
2. Construction of proper drainage system
3. Spreading of top soil on the affected areas
4. Installation of cococoir mesh nets
5. Tree planting of endemic / indigenous tree species

b. Settling Pond rehabilitation/Decommissioning Plan

When all mined-out and disturbed areas are completely rehabilitated, water run-offs will then be diverted away from the settling ponds to avoid collapsed

when left. Settling ponds will be backfilled, stabilized and planted with Bamboo and others forest trees such as Agoho and Batino.

Those settling ponds located near the community area or being rented by the company will remain in-situ and will be continuously rented and utilized by the company for the period of three (3) years or until such time that the earthmoving works are completely done.

6.4.2 Materials, Operational and Financial Resources

The materials for backfilling or topsoiling will be sourced from the stockpiled topsoil set aside during operation stage. Seedlings will be sourced from the company nursery and wildling collection from the community. The financial requirement will be provided by the company thru the Final Mine Rehabilitation Fund (FMRDF). Withdrawal from the FMRDF shall be based on the Work and Financial Plan approved by the MRFC.

6.4.3 Monitoring Program

The Multi-partite Monitoring Team (MMT) deputized by the Mine Rehabilitation Committee (MRFC) shall conduct the monitoring and evaluation activities to ensure that the objectives are being achieved or attained. The frequency of monitoring shall be on a quarterly basis and/or as needed arises.

The implementation of the decommissioning / rehabilitation plan shall follow the community-based management approach. The company shall be the lead institution to coordinate all relevant activities with the participation from the community, the local government units concerned, the DENR and other government entities. The MRFC shall be tapped to assist in the planning and management aspect of the project while the monitoring and evaluation shall be undertaken by the MMT. On the other hand, the community will also play the

active role as beneficiaries to manage and benefit from the operations of the land use plan. The company through its Compliance Team and Tenements Team shall also play important roles in the achievement of the plan envisioned in the FMR/DP.

The Mine Rehabilitation Fund Committee (MRFC) through its Multi-partite Monitoring Team (MMT), the Contingent Liability Rehabilitation Fund – Steering Committee (CLRF-SC) and the Mines and Geo-sciences Bureau (MGB) shall monitor and/or audit the implementation of the FMR/DP.

6.5. Details of Social Plan

6.5.1 Stakeholders Involve:

The influence of Berong Nickel Corporation in socio-economic term can be divided into two groups of stakeholders: workers and their dependents; and host communities.

A. Employees.

For remaining life of BNCs operation, there will be no expected tapering of the production program. The work activities in the various department are expected to remain over the next year (2021) as the BNC end its operation. Thus, manpower staffing is not expected to decrease yet especially in the production division / department.

In preparation for mine closure, the following strategies will be adopted however to mitigate its impact:

1. Normal Attrition

As a general rule, optional and mandatory retirees shall no longer be replaced. Instead, the vacated position shall be merged / distributed among the remaining employees, subject to job re-evaluation, if warranted.

2. Conduct of Departmental Audit

A manpower audit shall be undertaken to determine necessary manpower staffing in the various departments. Affected employees may be either be transferred to other positions or offered an early retirement program. Also being considered are positions that can be outsourced.

3. Retrenchment / Retirement Program

With the projected closure of the company by 2022, majority of the labor force will be retrenched / retired. A retirement package / severance package shall be prepared and based on employee's length of service with the company or Manpower Agencies mandated by the Philippine Labor Code.

With the current manpower fleet of 574 personnel, an estimated 474 or 82% will be re-trench and the remaining 100 or 18% shall be retain to facilitate the rehabilitation and decommissioning plan. See Table 5 & 5a.

B. Host Communities.

Relative to strengthening its commitments to its host communities, it has adopted the Social Development and Management Program as an instrument for the implementation of community development programs. From 2007 to 2021, Berong Nickel Corporation will be entering into its 4th 5-year SDMP based on the minimum basic needs conducted by the government as well as the public consultation and the strategic planning with community leaders

and residents, the identified needs, problems and concerns of the residents is the general poverty of the people due to lack of infrastructure supports and delivery of the basic services on health and education and lack of employment and livelihood opportunities. As part of social plan after the last year of SDMP, the company will continue to support the community by ensuring sustainability of the livelihood programs. In addition, the company shall continuously support the community in terms of health services and social services. Details of additional support to the community will be included on SDMP for 2022.

6.5.2 Labor Support Policies and Programs

In coordination with the Department of Labor and Employment and TESDA, the following plans will undertake:

A. Project Objectives

1. Identify the beneficiaries' training needs
2. Train / re-train target beneficiaries on skills and capability towards employability in areas of wage employment as well towards gainful self-employment
3. Set-up special employment facilitation assistance project/activity for the displaced workers and their dependents
4. Empower the displaced workers and their dependents to be more competitive to other wage employment through skill upgrading, as well as to be self-sufficient thru enterprise development and product development, designing and labelling
5. Enable the displaced workers with entrepreneurship potentials to establish a livelihood project / enterprise of their own.
6. Assist the beneficiaries land a job overseas and local through job fairs.

B. Expected Outputs

1. Skills and Capability trainings and re-trainings of displaced workers and their dependent towards possible wage employment
2. Skills enhancement/upgrading of displaced workers / dependents with existing knowledge and skills for more employment competency
3. Training for Production / livelihood for possible self-employment as an alternative
4. Training for IT enable home industries (Telemarketing, Medical Transcription) for mine's displaced/unemployed women and young workers.
5. Employment Facilitation with the following activities:
 - Skill registration and assessment
 - Job matching
 - Job counselling
 - Job referrals to wage employment, training or microfinance institutions
 - Job placements to wages, self-employment and overseas
 - Conduct of local jobs fair
 - Career guidance

The Community Relations Officer shall be responsible for the implementation of the Community Relations Plan (CRP). See table 9. Organization of the CRP will be included in the Social Development Management Plan for 2022. The main objective of the plan is to ensure that the identified projects and programs shall be implemented appropriately and strategically.

Multi-partite Monitoring Team consists of identified MMT members, municipal and barangays local government and stakeholders, will regularly monitoring the CRPs accomplishments during FMRDP implementation.

7. Maintenance and monitoring plans

6.1 Maintenance Details of Maintenance and Monitoring Plan

7.1.2 The Environmental Monitoring and Evaluation System (EMES):

1. Objective

Tap locally relevant processes for gathering, analyzing, and using information.
To build on local community activity to increase their capacity to record and analyze local conditions.

2. Results / Output of EMES:

- a. Analysis of performance for the period in review
- b. Identified issues and concerns, recommendations and commitments
- c. Identified strengths and weaknesses and solutions; and
- d. Complied with the conditions in the AEPEP, EPEP and ECC

3. Uses of the EMES information:

EMES is used to assess the project implementation of its environmental programs.

4. Processes:

- a. Compile basic information concerning the mining community
- b. Identify priorities for EME
- c. Training, Orientation Seminar and Workshops on how to undertake the EMES for members of the MMT
- d. Establish the EMES where the MMT determines the most important activities, the source and impact area and the resources to be monitored and methods to be used.
- e. Compile data using the field method

- f. Analyze data and identify word
- g. Validate and verify results
- h. Present findings and recommendations to the MRFC
- i. Make decisions to improve EMES
- j. Revise and strengthen the EMES

6.2 Maintenance and monitoring programs and procedure

During the implementation of the FMRDP, the BNC Closure Team will oversee the implementation of the maintenance and monitoring plans. Environmental monitoring works such as water quality, ambient air & noise monitoring, and annual biodiversity assessment such as coastal resource assessment and flora & fauna assessment will be continuously implemented throughout the duration of the FMRDP. The Community health and socio-economic assessment will be conducted twice during FMRDP implementation. The environmental, community relations, safety and health personnel of BNC will spearhead the maintenance and monitoring.

This will be in addition to the monitoring and/or audit conducted by the Mine Rehabilitation Fund Committee (MRFC) through the Multi-partite Monitoring Team (MMT) and the Contingent Liability Rehabilitation Fund - Steering Committee (CLRFS) and the Mines and Geosciences Bureau (MGB).

In compliance with regulation, BNC will likewise submit a progress report containing details of fully, partially, and on-going rehabilitation activities relative to the implementation of the FMRDP. The report will be submitted to the MRF Committee for review and evaluation within thirty (30) days from the end of the term of the preceding work and financial plan. The results of the review and evaluation shall be integrated in the succeeding years work and financial plan.

The maintenance and monitoring plans will be prepared by the BNC Closure Team in coordination with the MMT and third-party service providers. This will be conducted annually. The intent is to have a realistic plan based on actual scenario as possible.

6.3 Long-term management and maintenance

At the end of the FMRDP implementation and based on the assessment of BNC that the objectives of project closure, as contained in the approved FMRDP have been achieved, BNC will prepare and submit a Final Rehabilitation Report with third party Environmental Audit for pre-evaluation by the MRF Committee and final approval by the CLRF Steering Committee.

The MRF Committee and/or CLRF Steering Committee, after due review and evaluation of the FRR with EA, may issue a Certificate of Final Relinquishment to BNC signifying approval of the FRR with EA and freeing BNC from any further obligations insofar as the rehabilitated area/s are concerned.

If residual care is still needed, BNC will submit a Site Management Plan detailing how the identified residual rehabilitation commitments are to be managed along with the corresponding funding requirement.

8. Schedule of Operations and Costs

Table 1. Schedule of Operation and Costs

Activities	Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
1. MINE CLOSURE								
A. Re-trenchment of Employees								
2. SOCIO-ECONOMIC								
A. Re-employment Counseling		50,000	50,000					100,000.00
B. Skill Development Trainings/Seminar		50,000	50,000					100,000.00
C. Meetings and consultations with Community		20,000	20,000	20,000	20,000	20,000	20,000	120,000.00
3. HEAVY EQUIPMENT OPERATIONS/ RENTAL								
Slope Stabilization / Benching / Drainage System & Surface Preparation	102 Has Under FMR	32,094,400.00	32,094,400.00	25,396,800.00				89,585,600.00
4. MINE-WIDE REHABILITATION								-
A. Seedling Propagation / Procurement	510,000 @ P4.00/s	340,000.00	340,000.00	340,000.00	340,000.00	340,000.00	340,000.00	2,040,000.00
B. Plantation Establishment								-
1. Site Preparation (procurement & installation of cococoir net)	1000 @ P4,700/s	783,333.33	783,333.33	783,333.33	783,333.33	783,333.33	783,333.33	4,700,000.00
2. Holing (15cm x 15cm @ 2m x 1m)	510,000 @ P1.00/s	85,000.00	85,000.00	85,000.00	85,000.00	85,000.00	85,000.00	510,000.00
3. Planting (including seedling transport)	510,000 @ P1.75/s	148,750.00	148,750.00	148,750.00	148,750.00	148,750.00	148,750.00	892,500.00
C. Plantation Maintenance								-
1. Ring weeding	510,000 @ P0.50/s	42,500.00	42,500.00	42,500.00	42,500.00	42,500.00	42,500.00	255,000.00
2. Replanting (15% mortality / Seedling procurement)	76,500 @ P4.00/s	51,000.00	51,000.00	51,000.00	51,000.00	51,000.00	51,000.00	306,000.00
3. Seedling transport/holding & planting	76,500 @ P2.75/s	35,062.50	35,062.50	35,062.50	35,062.50	35,062.50	35,062.50	210,375.00
4. Fireline/Fire break Establishment		16,666.67	16,666.67	16,666.67	16,666.67	16,666.67	16,666.67	100,000.00
5. Patrol Works		5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	30,000.00
5. POST-CLOSURE MAINTENANCE, MONITORING AND INSPECTIONS								
Annual Terrestrial Flora and Fauna Assessment	1 /yr	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	2,700,000.00
Annual Coastal Resource Assessment	1 /yr	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	450,000.00	2,700,000.00
Quarterly Monitoring of air, water and noise quality	4/yr	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00	3,000,000.00
Community health and socio-economic Assessment	2 Assessment			300,000.00			300,000.00	600,000.00
Preparation of Final Rehabilitation Report (FRR)							100,000.00	100,000.00
TOTAL		34,701,712.50	34,701,712.50	28,304,112.50	2,607,312.50	2,607,312.50	3,007,312.50	107,729,475.00

Table 2. Cost Estimate

EQUIPMENT RENTAL					
ITEM	QTY.	DESCRIPTION	RATE/HR	EST. HRS.OF OPERATION	TOTAL
1	6	*Hydraulic Excavator	2,420.00	3120	45,302,400.00
2	2	*Crawler Dozer	3,220.00	2080	13,395,200.00
3	6	*Dump Truck	1,650.00	3120	30,888,000.00
SUB-TOTAL					89,585,600.00
MINE-WIDE REHABILITATION					
ITEM	QTY.	DESCRIPTION	UNIT	UNIT COST	TOTAL
1	510,000	Seedling Propagation / Procurement	Pcs	4.00	2,040,000.00
2	1,000	Site Preparation (procurement & installation of cococoir net)	Pcs	4,700.00	4,700,000.00
3	510,000	Holing (15cm x 15cm @ 2m x 1m)	Holes	1.00	510,000.00
4	510,000	Planting (including seedling transport)	Pcs	1.75	892,500.00
5	510,000	Ring weeding	Pcs	0.50	255,000.00
6	76,500	Replanting (15% mortality / Seedling procurement)	Pcs	4.00	306,000.00
7	76,500	Seedling transport/holding & planting	Pcs	2.75	210,375.00
8	50,000	Fireline/Fire break Establishment	Sq.m	2.00	100,000.00
9	102	Patrol Works	Has	295.00	30,000.00
SUB-TOTAL					9,043,875.00
POST-CLOSURE MAINTENANCE, MONITORING AND INSPECTIONS					
ITEM	QTY.	DESCRIPTION	UNIT	UNIT COST	TOTAL
1	6	Annual Terrestrial Flora and Fauna Assessment	Assessment	450,000.00	2,700,000.00
2	6	Annual Coastal Resource Assessment	Assessment	450,000.00	2,700,000.00
3	24	Quarterly Monitoring of air, water and noise quality	Assessment	150,000.00	3,000,000.00
4	2	Community health and socio-economic Assessment	Assessment	300,000.00	600,000.00
5	1	Preparation of Final Rehabilitation Report (FRR)		100,000.00	100,000.00
SUB-TOTAL					7,300,000.00
GRAND TOTAL (PhP)			Php 107,729,475.00		

*Based on BNCs actual Construction Equipment Rate

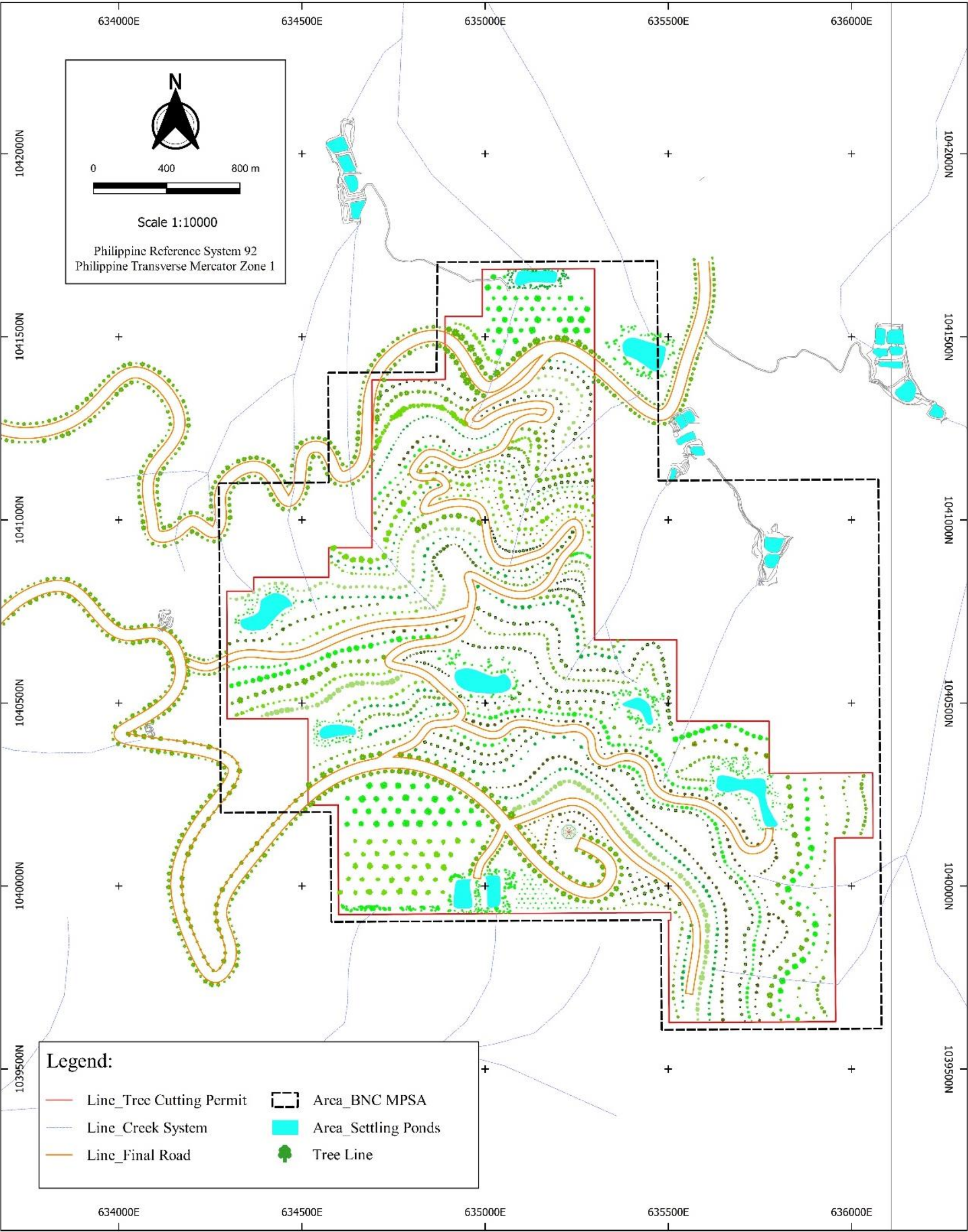
*Average 5 Hrs. daily operation at a maximum of 8 months operation per year or equivalent to 3,120 Hrs of operation


BERONG NICKEL CORPORATION
Final Mine Rehabilitation and Decommissioning Plan

Table 3. Indicative schedule/timelines for the rehabilitation and decommissioning procedures

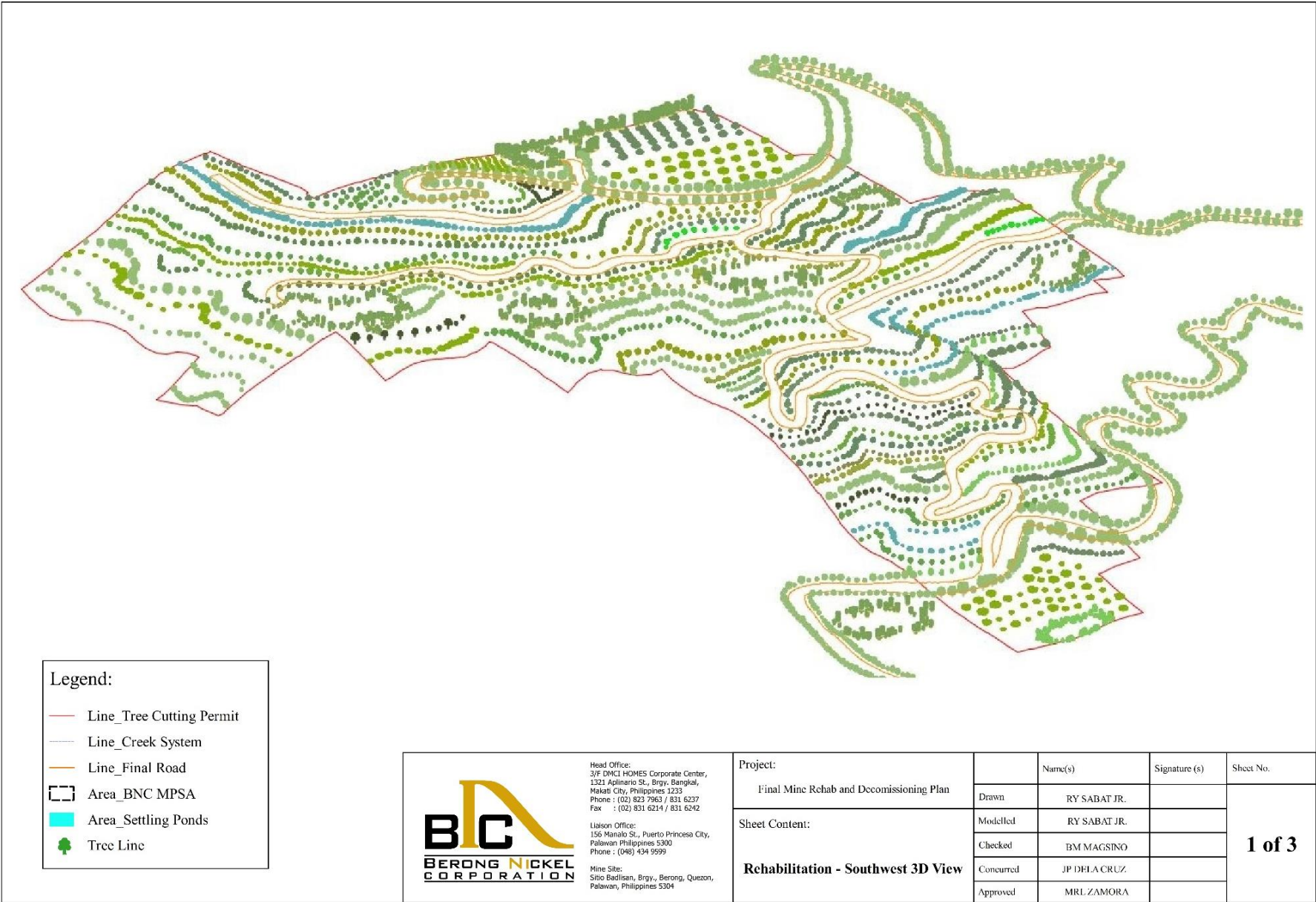
Activities	Years from closure						Number of Years of Implementation
	Closure Planning	Closure, Decommissioning and Rehabilitation		Maintenance and Monitoring		Relinquishment	
	-3	-2	-1	1	2	3	
1. MINE CLOSURE							
A. Re-trenchment of Employees	X						1
2. SOCIO-ECONOMIC							
A. Re-employment Counseling	X	X					2
B. Skill Development Trainings/Seminar	X	X					2
C. Meetings and consultations with Community	X	X	X	X	X	X	6
3. HEAVY EQUIPMENT OPERATIONS/ RENTAL							
Slope Stabilization / Benching / Drainage System & Surface Preparation	X	X	X				3
4. MINE-WIDE REHABILITATION	X	X	X	X	X	X	6
A. Seedling Propagation / Procurement							
B. Plantation Establishment							
1. Site Preparation (procurement & installation of cococoir net)							
2. Holing (15cm x 15cm @ 2m x 1m)							
3. Planting (including seedling transport)							
C. Plantation Maintenance							
1. Ring weeding							
2. Replanting (15% mortality / Seedling procurement)							
3. Seedling transport/holding & planting							
4. Fireline/Fire break Establishment							
5. Patrol Works							
4. POST-CLOSURE MAINTENANCE, MONITORING AND INSPECTIONS							
A. Annual Terrestrial Flora and Fauna Assessment	X	X	X	X	X	X	6
B. Annual Coastal Resource Assessment	X	X	X	X	X	X	6
C. Quarterly Monitoring of air, water and noise quality	X	X	X	X	X	X	6
D. Community health and socio-economic Assessment			X			X	2
E. Preparation of Final Rehabilitation Report (FRR)							
5. FINAL RELINQUISHMENT							
Preparation of Final Rehabilitation Report (FRR)						X	1
Issuance of Certificate of Final Relinquishment						X	1

9. Artist's Perspective of the Final Land Use

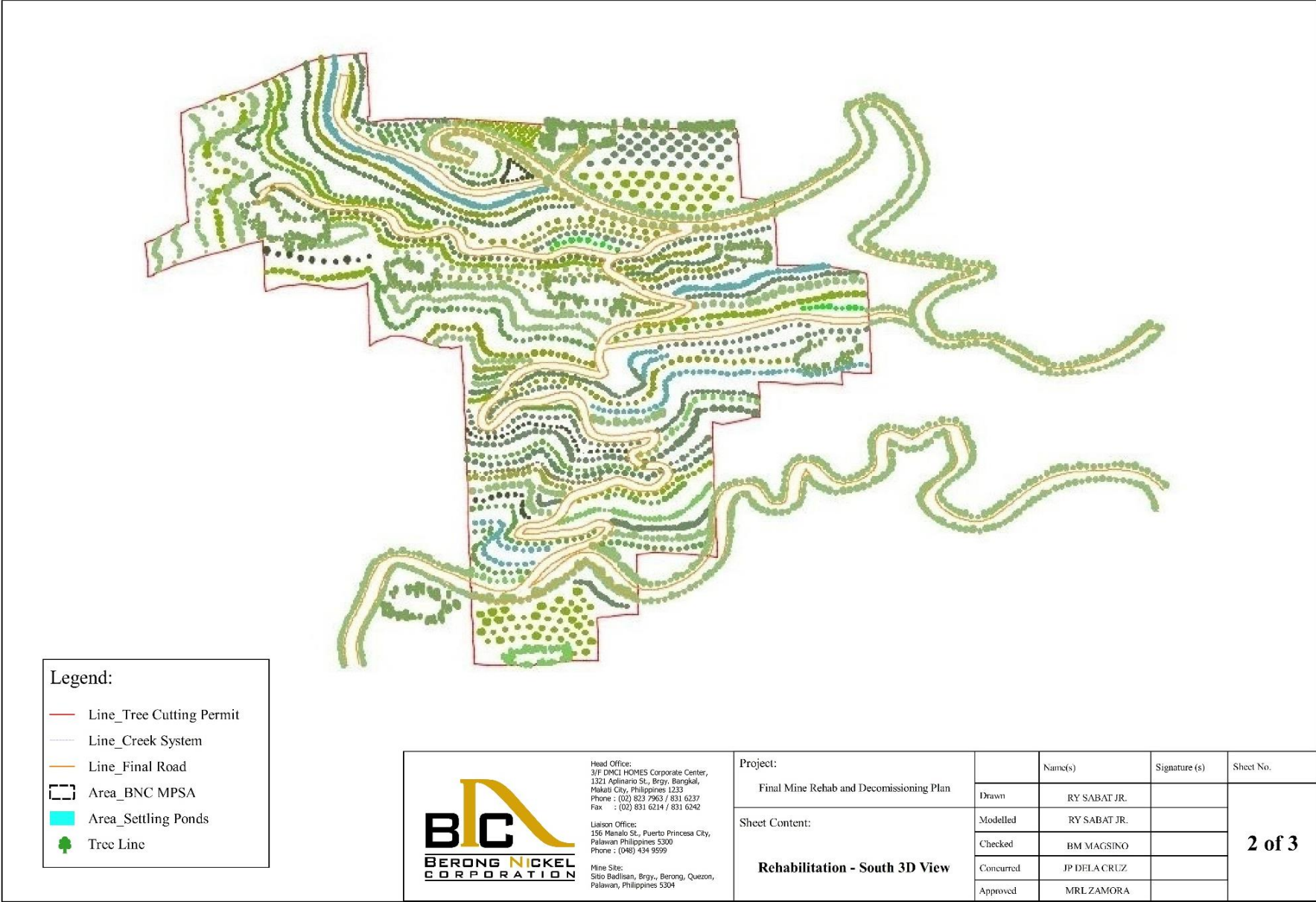


<div><div>BERONG NICKEL CORPORATION</div></div> <div>Head Office: 3/F DMCI HOMES Corporate Center, 1321 Aglinario St., Brgy. Bangkal, Makati City, Philippines 1233 Phone : (02) 823 7963 / 831 6237 Fax : (02) 831 6214 / 831 6242</div> <div>Liaison Office: 156 Manalo St., Puerto Princesa City, Palawan Philippines 5300 Phone : (048) 431 9599</div> <div>Mine Site: Sitio Badlisan, Brgy., Berong, Quezon, Palawan, Philippines 5304</div>	Project:		Name(s)	Signature (s)	Sheet No.
	Final Mine Rehab and Decomissioning Plan	Drawn	RY SABAT JR.		1 of 1
	Sheet Content: Rehabilitation Plan View	Modelled	RY SABAT JR.		
		Checked	BM MAGSINO		
		Concurred	JP DELA CRUZ		
		Approved	MRI. ZAMORA		

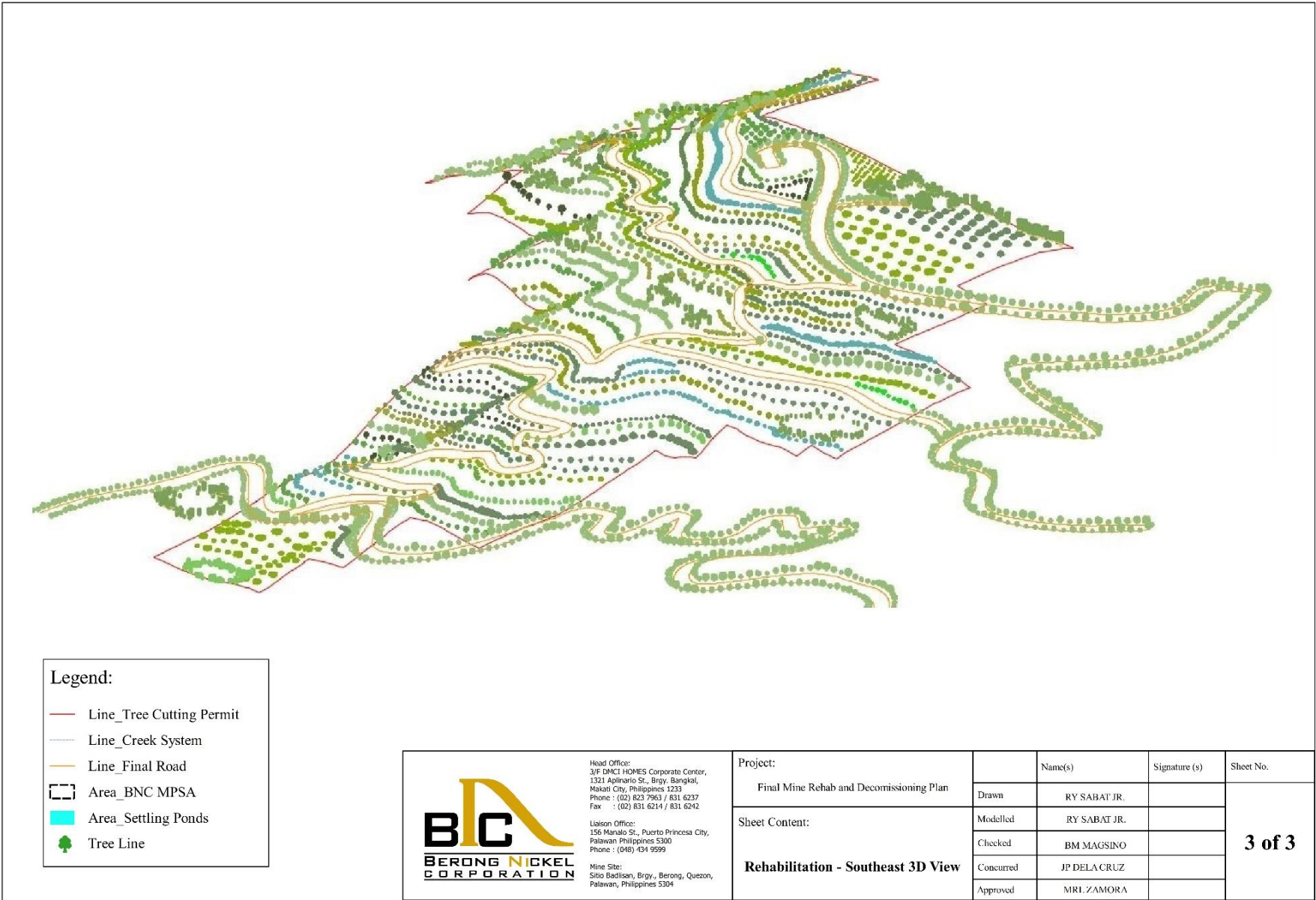
BERONG NICKEL CORPORATION
Final Mine Rehabilitation and Decommissioning Plan



BERONG NICKEL CORPORATION
Final Mine Rehabilitation and Decommissioning Plan



BERONG NICKEL CORPORATION
Final Mine Rehabilitation and Decommissioning Plan




10. Name and Signature of Person(s) preparing and FMRDP

Prepared by:


JAY PEE R. DELA CRUZ
MEPEO/PCO


RENATO Y. SABAT JR.
Mine Planning Engineer

Noted by:


MARC RAYMUND L. ZAMORA
Resident Manager

Approved by:

RAMON MANUEL R. BRIONES
VP - Operations

PROGRESSIVE MINE REHABILITATION



Slope Stabilization, Bench Correction, Re-soiling



Installation of Coccoir Mesh Nets & Drainage system



Tree Planting using Indigenous Tree Species



8 year Plantation @ Area 5



12 year Plantation @ Area 4









Rehabilitation Site @ Area 3







ADOPT A MANGROVE FOREST

7

BARANGAY

78

AREA COVERED

780,300

MANGROVES PLANTED



ADOPT -A- MANGROVE FOREST PROJECT-Bgy. Tabon, Q.P



ADOPT -A- MANGROVE FOREST PROJECT- Bgy. Panitian, Q.P





AMFP-Bgy. Aramaywan, Q.P



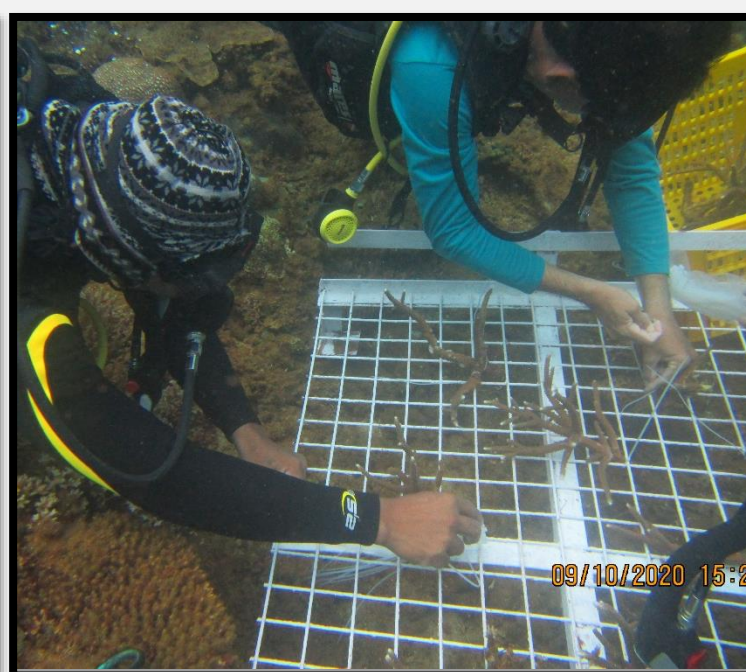
AMFP-Bgy. Pulot Shore, S.E





TAKLOBO CONSERVATION PROGRAM





CORAL GARDENING PROGRAM





REPUBLIC OF THE PHILIPPINES
SECURITIES AND EXCHANGE COMMISSION
SEC Building, EDSA, Greenhills
City of Mandaluyong, Metro Manila

COMPANY REG. NO. CS200414409

CERTIFICATE OF INCORPORATION

KNOW ALL MEN BY THESE PRESENTS:

This is to certify that the Articles of Incorporation and By-Laws of

BERONG NICKEL CORPORATION

were duly approved by the Commission on this date upon the issuance of this Certificate of Incorporation in accordance with the Corporation Code of the Philippines (Batas Pambansa Blg. 68), and copies of said Articles and By-Laws are hereto attached.


This Certificate grants juridical personality to the corporation but does not authorize it to undertake business activities requiring a Secondary License from this Commission such as, but not limited to acting as: broker or dealer in securities, government securities eligible dealer (GSED), investment adviser of an investment company, close-end or open-end investment company, investment house, transfer agent, commodity/financial futures exchange/broker/merchant, financing company, pre-need plan issuer, general agent in pre-need plans and time shares/club shares/membership certificates issuers or selling agents thereof. Neither does this Certificate constitute as permit to undertake activities for which other government agencies require a license or permit.

As a registered corporation, it shall submit annually to this Commission the reports indicated at the back of this certificate.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of this Commission to be affixed at Mandaluyong City, Metro Manila, Philippines, this 27th day of September, Two Thousand Four.


BENITO A. CATARAN
Director

Company Registration and Monitoring Department


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COVER SHEET

Ms. Arcego

9/10

9/13

#204710-86

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00000516906 #

S.E.C. Registration Number

BERONG NICKEL CORPORAT
ION,
(Company's Full Name)

7TH FLR. QUAD ALPHA
CENTRUM 125 PIONEER ST.
MANDALUYONG CITY
(Business Address: No. Street City/Town/Province)

Atty. Roberto O. Parel
Contact Person

8163716 to 19
Company Telephone Number

Dec. 31
Month Day
Fiscal Year

FORM TYPE

Month Day
Annual Meetings

Secondary License Type, If Applicable

Dept. Requiring this Doc.

Amended Articles Number/Section

Total No. of Stockholders

Domestic Foreign

File Number

Document I.D.

RECORDS
LCU
Cashier

STAMPS

1. Indefinite to
change name
(not legal)

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PAGE 2 OF 2 PAGES
VERIFIED BY:

ARTICLES OF INCORPORATION 2011 SEP 13 PM 2 27

OF

BERONG NICKEL CORPORATION

KNOW ALL MEN BY THESE PRESENTS:

That we, all of legal age, majority of whom are citizens and residents of the Republic of the Philippines, have this day voluntarily associated ourselves together for the purpose of forming a corporation under the laws of the Philippines.

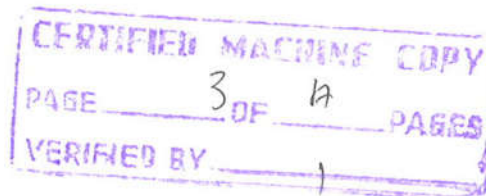
AND WE HEREBY CERTIFY:

FIRST: That the name of the said corporation shall be:

BERONG NICKEL CORPORATION, INC.

PRIMARY PURPOSE

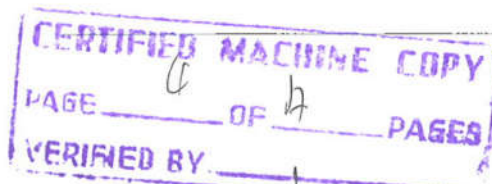
To carry on, either solely or in co-venture with others, the business of searching, prospecting, exploration and location of ores and mineral resources and to conduct all ground and airborne geophysical surveys, geochemical surveys, and other work or means commonly regarded as exploration work for the purpose of determining the existence of mineral resources, extent, quality and quantity and the feasibility of mining them for profit; or applying for exploration permit, and mineral production sharing agreement and other mineral agreements; and of mining, milling, concentrating, converting, smelting, treating, refining, preparing for market, manufacturing, buying, selling, exchanging and otherwise producing and dealing in all kinds of ores, metals, minerals, hydrocarbons, acids and chemicals, and in the products and by-products of every kind and description and by whatsoever process, the same can be or may hereafter be produced; to



purchase, lease, option, locate or otherwise acquire, own, exchange, sell, or otherwise dispose of, pledge, mortgage, deed in trust, hypothecate, and deal in mines, mining claims, mineral lands, coal lands, timber lands, water and water rights, shares of stocks of mining companies with interests in mines in the same area, and other property, both real and personal, and generally to do everything necessary, suitable or proper for the accomplishment of any of the purposes stated herein, or which shall at any time appear conducive to or expedient for the protection or benefit of the Corporation under the provisions of the relevant mining laws.

SECONDARY PURPOSES

1. To purchase, acquire, own or lease real properties such as lands, buildings, factories, plants, workshops, structures and warehouses and machinery, equipment and other personal properties as may be allowed by law and necessary or incidental to the conduct of the corporate business, and to pay in cash, shares of its capital stock, debentures and other evidences of indebtedness, or other securities, as may be deemed expedient, for any business or property acquired by the Corporation.
2. To borrow or raise money necessary to meet the financial requirements of its business by the issuance of bonds, promissory notes and other evidences of indebtedness, and to secure the repayment thereof by mortgage, pledge, deed of trust or lien upon the properties of the corporation or to issue pursuant to law shares of its capital stock, debentures and other evidences of indebtedness in payment for properties acquired by the corporation or for money borrowed in the prosecution of its lawful business;
3. To invest and deal with the money and properties of the corporation in such manner as may from time to time be considered wise or expedient for the advancement of its interests and to sell, dispose of or transfer the business, properties and goodwill of the corporation or any part thereof for such consideration and under such terms as it shall see fit to accept.



4. To aid in any manner any corporation, association, or trust estate, domestic or foreign, or any firm or individual, any shares of stock in which or any bonds, debentures, notes, securities, evidences of indebtedness, contracts, or obligations of which are held by or for this corporation, directly or indirectly or through other corporations or otherwise;

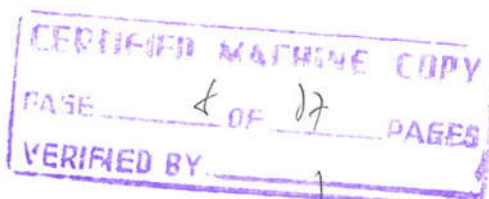
5. To enter into any lawful arrangement for sharing profits, union of interest, utilization or farmout agreement, reciprocal concession, or cooperation, with any corporation, association, partnership, syndicate, entity, person or governmental, municipal or public authority, domestic or foreign, in the carrying on of any business or transaction deemed necessary, convenient or incidental to carrying out any of the purposes of this corporation;

6. To acquire or obtain from any government or authority, national, provincial, municipal or otherwise, or any corporation, company or partnership or person, such charter, contracts, franchise, privileges, exemption, licenses and concessions as may be conducive to any of the objects of the corporation;

7. To establish and operate one or more branch offices of agencies and to carry on any of all of its operation and business without any restrictions as to place or amount including the right to hold, purchase or otherwise acquire, lease, mortgage, pledge and convey or otherwise deal in and with real and personal property anywhere within the Philippines;

8. To conduct and transact any and all lawful activities, and to do or cause to be done any one or more of the acts and things herein set forth as its purposes, within or without the Philippines, and in any and all foreign countries, and to do everything necessary, desirable or incidental to the accomplishment of the purposes or the exercise of any one of more of the powers herein enumerated, or which shall at any time appear conducive to or expedient for the protection or benefit of this corporation.

THIRD: That the place where the principal office of the corporation is to be established or located is at METRO MANILA, PHILIPPINES.



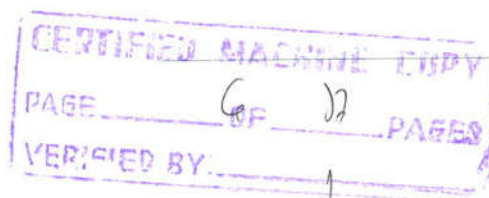
FOURTH: That the term for which said corporation is to exist is FIFTY (50) years from and after the date of incorporation.

FIFTH: That the names, nationalities and residences of the incorporators of said corporation are, as follows:

<u>NAME</u>	<u>NATIONALITY</u>	<u>ADDRESS</u>
Adrian S. Arias	Filipino	6 th Flr. Quad Alpha Centrum 125 Pioneer St., Mandaluyong City
Gener E. Asuncion	Filipino	15 th Flr. Sagittarius Cond. HV dela Costa St. Salcedo Village, Makati City
Roberto Rafael V. Lucila	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill. Makati City
Roberto O. Parel	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill. Makati City
Yvonne Angeli L. Tupas	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill. Makati City

SIXTH: That the number of directors of said CORPORATION shall be FIVE (5) and that the names, nationalities and residences of the directors who are to serve until their successors are elected and qualified as provided by the by-laws are, as follows:

<u>NAME</u>	<u>NATIONALITY</u>	<u>ADDRESS</u>
Adrian S. Arias	Filipino	6 th Flr. Quad Alpha Centrum 125 Pioneer St., Mandaluyong City
Gener E. Asuncion	Filipino	15 th Flr. Sagittarius Cond. HV dela Costa St. Salcedo Village, Makati City



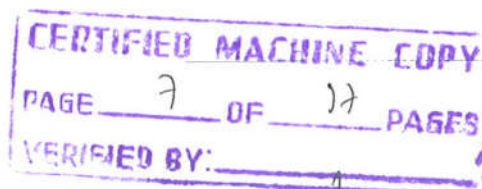
Roberto Rafael V. Lucila	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill Makati City
Roberto O. Parel	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill. Makati City
Yvonne Angeli L. Tupas	Filipino	15 th Flr. Sagittarius Condominium H.V. dela Costa St., Salcedo Vill. Makati City

SEVENTH: That the authorized capital stock of said CORPORATION is TEN MILLION PESOS (P10,000,000.00) Philippine Currency, and said capital stock is divided into TEN MILLION (10,000,000) SHARES, having a par value of ONE PESO (P1.00) each.

EIGHTH: That the amount of said capital stock which has been actually subscribed is TWO MILLION FIVE HUNDRED PESOS (P2,500,000.00) Philippine Currency, and the following persons have subscribed for the number of shares and the amount of capital stock indicated opposite their respective names:

<u>NAME</u>	<u>CITIZENSHIP</u>	<u>NO. OF SHARES</u>	<u>AMOUNT SUBSCRIBED</u>
Atlas Consolidated Mining & Development Corp.	Filipino	1,249,997	P1,249,997.00
Minoro Mining & Exploration Corp.	Filipino	1,249,998	P1,249,998.00
Roberto Rafael V. Lucila	Filipino	1	P1.00
Roberto O. Parel	Filipino	1	P1.00
Gener E. Asuncion	Filipino	1	P1.00
Yvonne Angeli L. Tupas	Filipino	1	P1.00
Adrias S. Arias	Filipino	1	P1.00
		<u>2,500,000</u>	<u>P2,500,000.00</u>

NINTH: That the following persons have paid on the shares of capital stock for which they have subscribed the amount set out after their respective names:



<u>NAME</u>	<u>AMOUNT PAID</u>
Atlas Consolidated Mining & Development Corporation	P1,249,997.00
Minoro Mining & Exploration Corp.	P1,249,998.00
Roberto Rafael V. Lucila	P1.00
Roberto O. Parel	P1.00
Gener E. Asuncion	P1.00
Yvonne Angeli L. Tupas	P1.00
Adrian S. Arias	P1.00

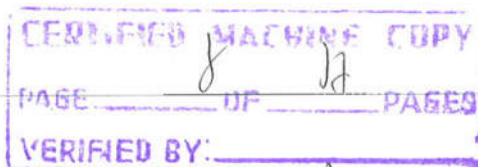
	P2,500,000.00

TENTH: That no issuance of transfer of shares of stock of the corporation which will reduce the ownership of Filipino citizens to less than the required percentage of the outstanding capital stock required by the law to be owned by Filipino citizens, shall be allowed or permitted to be recorded in the proper books of the corporation. This restriction shall be printed or indicated in all the certificates of stock to be issued by the corporation.

ELEVENTH: That **ROBERTO O. PAREL** has been elected by the subscribers as the Treasurer of the corporation to act as such until his successor is duly elected and shall have qualified in accordance with the by-laws; and that, as such Treasurer, he has been authorized to receive for the corporation, and to issue in its name receipts for, all subscriptions paid in by the subscribers.

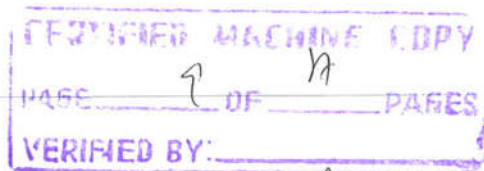
TWELVE: In general, corporate actions requiring the approval of the Board of Directors shall be decided by the affirmative vote of the majority of the entire membership of the Board of Directors. However, the following corporate actions shall require the two-thirds (2/3) vote of the Board of Directors:

- a) approval of the annual business plan, budget and capital expenditures;
- b) issuance of shares, bonds, debentures, stock options, warrants, or other securities whether or not convertible to Shares;
- c) any borrowing, advance or credit in whatever form in excess of an amount equivalent to P300,000, including the constitution of a mortgage, charge, hypothecation or lien over any asset to secure the aforesaid obligation;
- d) terms and conditions of disposal or transfer of any asset, whether or not such disposal or transfer is in the ordinary course of business;



- 7
- e) giving of warranties, guaranties or indemnities;
 - f) entering into joint venture agreements or management contracts (other than the Management Contract entered or to be entered into between the corporation and TMM MANAGEMENT, INC.);
 - g) entering into agreements with a shareholder or its Affiliate;
 - h) any amendment to the Articles of Incorporation or By-Laws;
 - i) merger or consolidation with any other corporation;
 - j) investment of corporate funds in a corporation other than those related to the business of the corporation;
 - k) passing of a resolution dissolving the corporation;
 - l) in the event of a listing of shares in any stock exchange, the terms and conditions of listing;
 - m) investments requiring a cash outlay of more than US\$1,000,000, (other than the investment required to rehabilitate and produce the Toledo Copper Project);
 - n) approval of performance bonuses and other incentives to employees and officers;
 - o) approval of operating policies and/or policy manuals;
 - p) approval of organizational development strategies and programs;
 - q) approval of internal audit programs;
 - r) approval of corporate financing plans, whether involving debt or equity financing;
 - s) bidding guidelines, terms and conditions, as well as approval of contracts to be awarded to contractors and sub-contractors;
 - t) sale, lease, exchange, mortgage, pledge, or disposal of all or substantially all of the property or assets, including goodwill, of the corporation;
 - u) declaration of dividends; and
 - v) such other acts and things as the Board may determine to require its unanimous vote.

IN WITNESS WHEREOF, we have hereunto set our hands this
____ day of AUG 27 2004 2004 at Makati City, Philippines.




ADRIAN S. ARIAS


GEN. E. ASUNCION

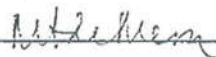

ROBERTO RAFAEL V. LUCILA

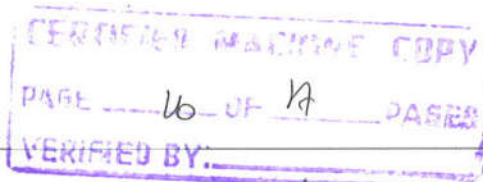

ROBERTO O. PAREL


YVONNE ANGELI L. TUPAS

Signed in the Presence of:


Jaitay


N. De Mesa



ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)
 MAKATI CITY)

BEFORE ME, a Notary Public in and for Makati City, Philippines,
 this ____ day of 27 AUG 2004 2004, personally appeared:

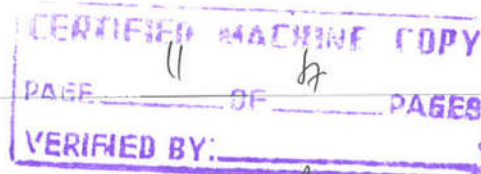
<u>Name</u>	<u>CTC No.</u>	<u>Date/Place Issue</u>
Adrian S. Arias	14188321	1-16-04/Mandaluyong City
Gener E. Asuncion	15291026	4-6-05/Makati City
Roberto Rafael V. Lucila	7017658	2-26-04/Camalig, Albay
Roberto O. Parel	15291124	4-6-04/Makati City
Yvonne Angeli L. Tupas	18992504	3-3-04/Barotac Viejo,

all known to me and to me known to be the same persons who executed the foregoing Articles of Incorporation and they acknowledged to me that the same is their free and voluntary act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on the date and at the place first above-written. */mc*

Doc. No. 347;
 Page No. 70;
 Book No. II;
 Series of 2004. */*

[Signature]
 J. A. MORENO
 Notary Public
 Unit Doc. 31, 2004
 PTR No. 2017041 / 1-Ped
Makati City



TREASURER'S AFFIDAVIT

REPUBLIC OF THE PHILIPPINES)
MAKATI CITY, METRO MANILA) S. S.

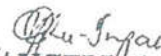
I, ROBERTO O. PAREL, being duly sworn, depose and state:

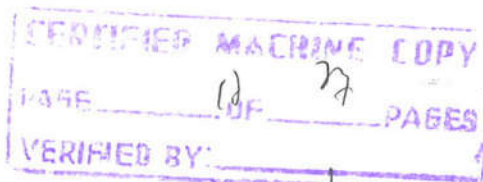
That I have been elected by the subscribers of BERONG NICKEL CORPORATION (the "Corporation") as Treasurer thereof, to act as such until my successor has been duly elected and qualified in accordance with the by-laws of the Corporation, and that as such Treasurer, I hereby certify under oath that at least twenty-five percent (25%) of the authorized capital stock of the Corporation has been subscribed, and at least twenty-five percent (25%) of the total subscription has been paid and received by me in cash in the amount of not less than Philippine Pesos Two Million Five Hundred Thousand (P2,500,000.00) in accordance with the Corporation Code.


ROBERTO O. PAREL
Treasurer

SUBSCRIBED AND SWORN to before me this AUG 24 2004 day of 2004
affiant exhibiting to me his Community Tax Certificate No. 15291124 issued at Makati
City on April 6, 2004.

Doc. No. 1;
Page No. 1;
Book No. II;
Series of 2004.


YVONNE ANGELIC C. LEE-TUPAS
NOTARY PUBLIC
UNTIL DECEMBER 31, 2004
PTR NO. 7017446
JAN. 8, 2004
MAKATI CITY



BY- LAWS
OF
BERONG NICKEL CORPORATION

ARTICLE I

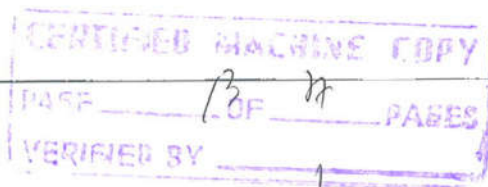
SUBSCRIPTION, ISSUANCE AND TRANSFER OF SHARES

Section 1. Subscriptions - Subscribers to the capital stock of the corporation shall pay to the corporation the subscription value or price of the stock in accordance with the terms and conditions prescribed by the Board of Directors. Unpaid subscriptions shall not earn interest unless determined by the Board of Directors.

Section 2. Certificates - Each stockholder shall be entitled to one or more certificates for such fully paid stock subscription in his name in the books of the corporation. The certificates shall contain the matters required by law and the Articles of Incorporation. They shall be in such form and design as may be determined by the Board of Directors and numbered consecutively. The certificates, which must be issued in consecutive order, shall bear the signature of the President or Chairman of the Board, manually countersigned by the Secretary or Assistant Secretary, and sealed with the corporate seal.

Section 3. Transfer of Shares - Subject to the restrictions, terms and conditions contained in the Articles of Incorporation and restated below, shares may be transferred, sold, ceded, assigned or pledged by delivery of the certificates duly indorsed by the stockholder, his attorney-in-fact, or other legally authorized person. The transfer shall be valid and binding on the corporation only upon record thereof in the books of the corporation, cancellation of the certificate surrendered to the Secretary, and the issuance of a new certificate to the transferee.

No shares of stock against which the corporation holds unpaid claim shall be transferable in the books of the corporation.



All certificates surrendered for transfer shall be stamped "Cancelled" on the face thereof, together with the date of cancellation, and attached to the corresponding stub with the certificate book.

Section 4. Lost Certificates - In case any certificate for the capital stock of the corporation is lost, stolen or destroyed, a new certificate may be issued in lieu thereof in accordance with the procedure prescribed under Section 73 of the Corporation Code.

ARTICLE II

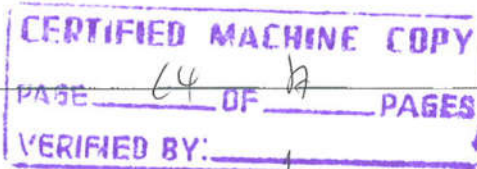
MEETINGS OF STOCKHOLDERS

Section 1. Regular Meetings - The regular meetings of stockholders, for the purpose of electing directors and for the transaction of such business as may properly come before the meeting, shall be held at the principal office every ~~last~~ Wednesday of April of each year, or if said day be a legal holiday, ~~then on the day~~ following.

Section 2. Special Meeting - The ~~special~~ meetings of stockholders, for any purpose or purposes, ~~may at any time~~ be called by any of the following: (a) Board of Directors, at its own instance, or at the written request of stockholders representing majority of the outstanding capital stock; (b) President.

Section 3. Place of Meeting - ~~Stockholders'~~ meetings, whether regular or special, shall be held in the principal office of the corporation or at any place designated by the Board of Directors in the city or municipality where the principal office of the corporation is located.

Section 4. Notice of Meeting - Notices for regular or special meetings of stockholders may be sent by the Secretary by personal delivery or by mail at least ~~two~~ (2) weeks prior to the date of the meeting to each stockholder of record at his last known post office address, or by publication in a newspaper of general circulation. The notice shall state the place, date and hour of the meeting, and the purpose or purposes for which the meeting is called. In all meetings,



only matters stated in the notice can be the subject of motions or deliberations at such meeting.

When the meeting of the stockholders is adjourned to another time or place, it shall not be necessary to give any notice of the adjourned meeting if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken. At the reconvened meeting, any business may be transacted that might have been transacted on the original date of the meeting.

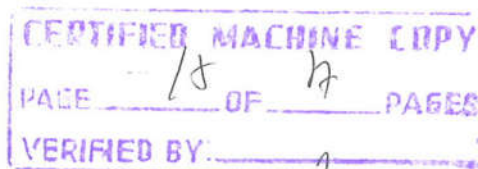
Section 5. Quorum - Unless otherwise provided by law, in all regular or special meeting of stockholders, a majority of the outstanding capital stock must be present or represented in order to constitute a quorum. If no quorum is constituted, the meeting shall be adjourned until the requisite amount of stock shall be present.

Section 6. Conduct of Meeting - The meeting of the stockholders shall be presided over by the Chairman of the Board, or in his absence, the President, or if none of the foregoing is in office and present and acting, by a chairman to be chosen by the stockholders. The Secretary shall act as Secretary of every meeting, but if not present, the chairman of the meeting shall appoint a secretary of the meeting. The chairman of the meeting may adjourn the meeting from time to time, without notice other than announced at the meeting.

Section 7. Manner of Voting - At all meetings of stockholders, a stockholder may vote in person or by proxy executed in writing by the stockholder or his duly authorized attorney-in-fact. Unless otherwise provided in the proxy, it shall be valid only for the meeting at which it has been presented to the secretary.

All proxies must be in the hands of the secretary before the time set for the meeting. Such proxies filed with the Secretary may be revoked by the stockholders either in an instrument in writing duly presented and recorded with the Secretary prior to a scheduled meeting or by their personal presence at the meeting.

Section 8. Closing of Transfer Books or Fixing of Record Date - For the purpose of determining the stockholders entitled to notice of, or to vote at, any meeting of stockholders or any



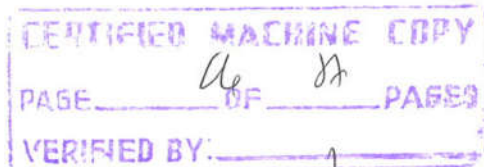
adjournment thereof or to receive payment of any dividend or of making a determination of stockholders for any other proper purpose, the Board of Directors may provide that the stock and transfer books be closed for a stated period, but not to exceed, in any case, twenty (20) days. If the stock and transfer books be closed for the purpose of determining stockholders entitled to notice of, or to vote at, a meeting of stockholders, such books shall be closed for at least ten (10) working days immediately preceding such meeting. In lieu of closing the stock and transfer books, the Board of Directors may fix in advance a date as the record date which shall in no case be more than twenty (20) days prior to the date on which the particular action requiring such determination of stockholders is to be taken, except in instances where applicable rules and regulations provide otherwise.

ARTICLE III

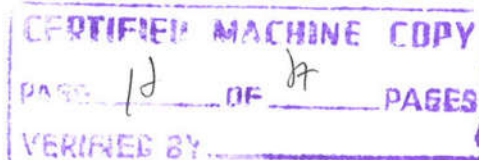
BOARD OF DIRECTORS

Section 1. Powers of the Board - Unless otherwise provided by law, the corporate powers of the corporation shall be exercised, all business conducted and all property of the corporation controlled and held by the Board of Directors to be elected by and from among the stockholders. Without prejudice to such general powers and such other powers as may be granted by law, the Board of Directors shall have the following express powers:

- a) From time to time, to make and change rules and regulations not inconsistent with these by-laws for the management of the corporation's business and affairs;
- b) To purchase, receive, take or otherwise acquire in any lawful manner, for and in the name of the corporation, any and all properties, rights, interest or privileges, including securities and bonds of other corporations, as the transaction of the business of the corporation may reasonably or necessarily require, for such consideration and upon such terms and conditions as the Board may deem proper or convenient;



- c) To invest the funds of the corporation in another corporation or business or for any other purposes other than those for which the corporation was organized, whenever in the judgment of the board of directors the interests of the corporation would thereby be promoted, subject to such stockholders' approval as may be required by law;
- d) To incur such indebtedness as the Board may deem necessary and, for such purpose, to make and issue evidence of such indebtedness including, without limitation, notes, deeds of trust, instruments, bonds, debentures, or securities, subject to such stockholder approval as may be required by law and/or pledge, mortgage, or otherwise encumber all or part of the properties and rights of the corporation;
- e) To guarantee, for and in behalf of the corporation obligations of other corporations or entities in which it has lawful interest;
- f) To make provisions of the discharge of the obligations of the corporation as they mature, including payment for any property, or in stocks, bonds, debentures, or other securities of the corporation lawfully issued for the purpose;
- g) To sell, lease, exchange, assign, transfer or otherwise dispose of any property, real or personal, belonging to the corporation whenever in the Board's judgment, the corporation's interest would thereby be promoted;
- h) To establish pension, retirement, bonus, profit-sharing, or other types of incentives or compensation plans for the employees, including officers and directors of the corporation and to determine the persons to participate in any such plans and the amount of their respective participation;
- i) To prosecute, maintain, defend, compromise or abandon any lawsuit in which the corporation or its officers are either plaintiffs or defendants in



connection with the business of the corporation, and likewise, to grant installments for the payments or settlement of whatever debts are payable to the corporation;

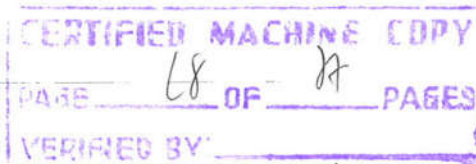
- j) To delegate, from time to time, any of the powers of the Board which may lawfully be delegated in the course of the current business or businesses of the corporation to any standing or special committee or to any officer or agent and to appoint any persons to be agents of the corporation with such powers (including the power to sub-delegate) and upon such terms, as may be deemed fit;
- k) To implement these (by-laws and to act on any matter not covered by these by-laws, provided such matter does not require the approval or consent of the stockholders under any existing law, rule or regulation.

Section 2. Election and Term - The Board of Directors shall be elected during each regular meeting of stockholders and shall hold office for one (1) year and until their successors are elected and qualified.

Section 3. Vacancies - Any vacancy occurring in the Board of Directors other than by removal by the stockholders or by expiration of term, may be filled by the vote of at least a majority of the remaining directors; if still constituting a quorum; otherwise, the vacancy must be filled by the stockholders at a regular or at any special meeting of the stockholders called for the purpose. A director so elected to fill a vacancy shall be elected only for the unexpired term of his predecessor in office.

Any directorship to be filled by reason of an increase in the number of directors shall be filled only by an election at a regular or at a special meeting of stockholders duly called for the purpose, or in the same meeting authorizing the increase of directors if so stated in the notice of the meeting.

The vacancy resulting from the removal of a director by the stockholders in the manner provided by law may be filled by election



at the same meeting of stockholders without further notice, or at any regular or at special meeting of stockholders called for the purpose, after giving notice as prescribed in these by-laws.

Section 4. Meetings - Regular meetings of the Board of Directors shall be held once every quarter of the year on such dates and at such times and places as may be called by the Chairman of the Board, or in his absence, the President, or upon the request of a majority of the directors and shall be held at such places as may be designated in the notice.

Section 5. Notice - Notice of the regular or special meeting of the Board, specifying the date, time and place of the meeting, shall be communicated by the Secretary to each director personally, or by telephone, telex, telegram, or by written or oral message. A director may waive this requirement, either expressly or impliedly.

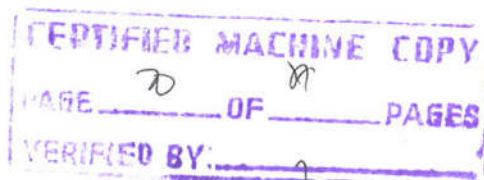
Section 6. Quorum - A majority of the number of directors as fixed in the Articles of Incorporation shall constitute a quorum for the transaction of corporate business; and every decision of at least a majority of the directors present at a meeting at which there is a quorum shall be valid as a corporate act, except for the election of officers which shall require the vote of a majority of all the members of the Board. However, the following corporate actions shall require the two-thirds (2/3) vote of the Board of Directors:

- a) approval of the annual business plan, budget and capital expenditures;
- b) issuance of shares, bonds, debentures, stock options, warrants, or other securities whether or not convertible to Shares;
- c) any borrowing, advance or credit in whatever form in excess of an amount equivalent to P300,000, including the constitution of a mortgage, charge, hypothecation or lien over any asset to secure the aforesaid obligation;
- d) terms and conditions of disposal or transfer of any asset, whether or not such disposal or transfer is in the ordinary course of business;
- e) giving of warranties, guaranties or indemnities;
- f) entering into joint venture agreements or management contracts (other than the Management Contract entered or to be entered

into between the corporation and TMM MANAGEMENT, INC.);

- g) entering into agreements with a shareholder or its Affiliate;
- h) any amendment to the Articles of Incorporation or By-Laws;
- i) merger or consolidation with any other corporation;
- j) investment of corporate funds in a corporation other than those related to the business of the corporation;
- k) passing of a resolution dissolving the corporation;
- l) in the event of a listing of shares in any stock exchange, the terms and conditions of listing;
- m) investments requiring a cash outlay of more than US\$1,000,000, (other than the investment required to rehabilitate and produce the Toledo Copper Project);
- n) approval of performance bonuses and other incentives to employees and officers;
- o) approval of operating policies and/or policy manuals;
- p) approval of organizational development strategies and programs;
- q) approval of internal audit programs;
- r) approval of corporate financing plans, whether involving debt or equity financing;
- s) bidding guidelines, terms and conditions, as well as approval of contracts to be awarded to contractors and sub-contractors;
- t) sale, lease, exchange, mortgage, pledge, or disposal of all or substantially all of the property or assets, including goodwill, of the corporation;
- u) declaration of dividends; and
- v) such other acts and things as the Board may determine to require its unanimous vote.

Section 7. Conduct of the Meetings - Meetings of the Board of Directors shall be presided over by the Chairman of the Board, or in his absence, the President or if none of the foregoing is in office and present and acting, by any other director chosen by the Board. The Secretary shall act as secretary of every meeting, or if not present, the Chairman of the meeting shall appoint a secretary of the meeting.



Section 8. Compensation - By resolution of the Board, each director shall receive a reasonable per diem allowance for his attendance at each meeting of the Board. As compensation, the Board shall receive and allocate an amount of not more than ten percent (10%) of the net income before income tax of the corporation during the preceding year. Such compensation shall be determined and apportioned among the directors in such manner as the Board may deem proper, subject to the approval of stockholders representing at least a majority of the outstanding capital stock at a regular or special meeting of the stockholders.

ARTICLE IV

OFFICERS

Section 1. Election/Appointment - Immediately after their election, the Board of Directors shall formally organize by electing the Chairman, the President, one or more Vice Presidents, the Treasurer, and the Secretary, at said meeting.

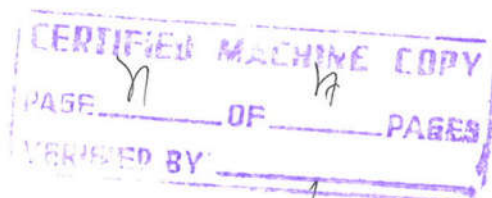
The Board may, from time to time, appoint such other officers as it may determine to be necessary or proper.

Any two (2) or more positions may be held concurrently by the same person, except that no one shall act as President and Treasurer or Secretary at the same time.

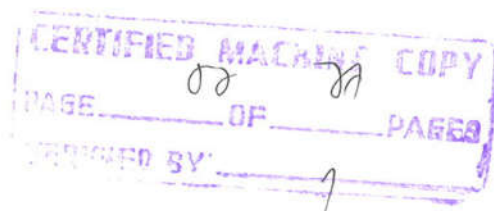
Section 2. Chairman of the Board - The Chairman of the Board of Directors shall preside at the meetings of the directors and the stockholders. He shall also exercise such powers and perform such duties as the Board of Directors may assign to him.

Section 3. President - The President, who shall be a director, shall be the Chief Executive Officer of the corporation and shall also have administration and direction of the day-to-day business affairs of the corporation. He shall exercise the following functions:

- a) To preside at the meetings of the Board of Directors and of the stockholders in the absence of the Chairman of the Board of Directors;



- b) To initiate and develop corporate objectives and policies and formulate long range projects, plans and programs for the approval of the Board of Directors, including those for executive training, development and compensation;
- c) To have general supervision and management of the business affairs and property of the corporation;
- d) To ensure that the administrative and operational policies of the corporation are carried out under his supervision and control;
- e) Subject to guidelines prescribed by laws, to appoint, remove, suspend or discipline employees of the corporation, prescribe their duties, and determine their salaries;
- f) To oversee the preparation of the budgets and the statements of accounts of the corporation;
- g) To prepare such statements and reports of the corporation as may be required of him by law;
- h) To represent the corporation at all functions and proceedings;
- i) To execute on behalf of the corporation all contracts, agreements and other instruments affecting the interests of the corporation which require the approval of the Board of Directors, except as otherwise directed by the Board of Directors;
- j) To make reports to the Board of Directors and stockholders;
- k) To sign certificates of stock;
- l) To perform such other duties as are incident to his office or are entrusted to him by the Board of Directors.



The President may assign the exercise or performance of any of the foregoing powers, duties and function to any other officer(s), subject always to his supervision and control

Section 4. The Vice-President(s) - If one or more Vice-Presidents are appointed, he/they shall have such powers and shall perform such duties as may from time to time be assigned to him/them by the Board of Directors or by the President.

Section 5. The Secretary - The Secretary must be a resident and a citizen of the Philippines. He shall be the custodian of and shall maintain the corporate books and record and shall be the recorder of the corporation's formal actions and transactions. He shall have the following specific powers and duties:

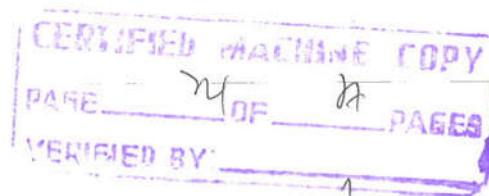
- a) To record or see to the proper recording of the minutes and transactions of all meetings of the directors and the stockholders and to maintain minute books of such meetings in the form and manner required by law;
- b) To keep or cause to be kept record books showing the details required by law with respect to the stock certificates of the corporation, including ledgers and transfer books showing all shares of the corporation subscribed, issued and transferred;
- c) To keep the corporate seal and affix it to all papers and documents requiring a seal, and to attest by his signature all corporate documents requiring the same;
- d) To attend to the giving and serving of all notices of the corporation required by law or these by-laws to be given;
- e) To certify to such corporate acts, countersign corporate documents or certificates, and make reports or statements as may be required of him by law or by government rules and regulations;
- f) To act as the inspector at the election of directors and, as such, to determine the number of shares of stock outstanding and entitled to vote, the shares of stock

represented at the meeting, the existence of a quorum, the validity and effect of proxies, and to receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots or consents, determine the result, and do such acts as are proper to conduct the election or voting. The Secretary may assign the exercise or performance of any or all of the foregoing duties, powers and functions to any other person or persons, subject always to his supervision and control.

- g) To perform such other duties as are incident to his office or as may be assigned to him by the Board of Directors or the President.

Section 6. The Treasurer - The Treasurer of the corporation shall be its chief fiscal officer and the custodian of its funds, securities and property. The Treasurer shall have the following duties:

- a) To keep full and accurate accounts of receipts and disbursements in the books of the corporation;
- b) To have custody of, and be responsible for, all the funds, securities and bonds of the corporation;
- c) To deposit in the name and to the credit of the corporation, in such bank as may be designated from time to time by the Board of Directors, all the moneys, funds, securities, bonds and similar valuable effects belonging to the corporation which may come under his control;
- d) To render an annual statements showing the financial condition of the corporation and such other financial report as the Board of Directors, the Chairman or the President may, from time to time, require;
- e) To prepare such financial reports, statements, certifications and other documents which may, from time to time, be required by government rules and



regulations and to submit the same to the proper government agencies;

- f) To exercise such powers and perform such duties and functions as may be assigned to him by the President.

Section 7. Term of Office - The term of office of all officers shall be for a period of one (1) year and until their successors are duly elected and qualified. Such officers may however be sooner removed for cause.

Section 8. Vacancies - If any position of the officers becomes vacant by reason of death, resignation, disqualification or for any other cause, the Board of Directors, may elect a successor who shall hold office for the unexpired term.

Section 9. Compensation - The by-laws officers shall receive such remuneration as the Board of Directors may determine. All other officers shall receive such remuneration as the Board of Directors may determine upon recommendation of the President. A director shall not be precluded from serving the corporation in any other capacity as an officer, agent or otherwise, and receiving compensation therefor.

ARTICLE V

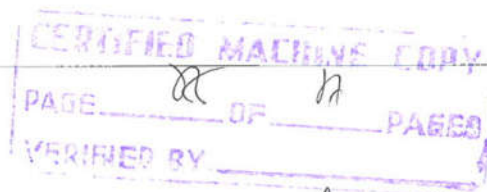
OFFICES

Section 1. The principal office of the corporation shall be located at the place stated in Article III of the Articles of Incorporation. The corporation may have such other branch offices, either within or outside the Philippines as the Board of Directors may designate or as the business of the corporation may, from time to time, require.

ARTICLE VI

AUDIT OF BOOKS AND FISCAL YEAR

Section 1. External Auditors - At the regular stockholders' meeting, the external auditor or auditors of the corporation for the ensuing year shall be appointed. The external auditor or auditors



shall examine, verify and report on the earnings and expenses of the corporation.

Section 2. Fiscal Year - The fiscal year of the corporation shall begin on the first day of January and end on the last day of December of each year.

Section 3. Dividends - Dividends shall be declared and paid out of the unrestricted earnings which shall be payable in cash, property, or stock to all stockholders on the basis of outstanding stock held by them, as often and at such times as the Board of Directors may determine and in accordance with law and applicable rules and regulations.

ARTICLE VII

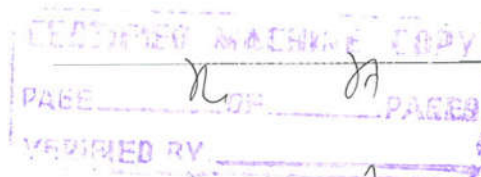
AMENDMENTS

Section 1. The by-laws may be amended or repealed by the affirmative vote of at least two-thirds (2/3) of the Board of Directors and the stockholders representing a majority of the outstanding capital stock at any stockholders' meeting called for that purpose. However, the power to amend, modify, repeal or adopt new by-laws, may be delegated to the Board of Directors by the affirmative vote of stockholders representing not less than two-thirds of the outstanding capital stock; provided, however, that any such delegation of powers to the Board of Directors to amend, repeal or adopt new by-laws may be revoked by the vote of the stockholders representing a majority of the outstanding capital stock at a regular or special meeting.

ARTICLE VIII

SEAL

Section 1. Form and Inscriptions - The corporate seal shall be determined by the Board of Directors.

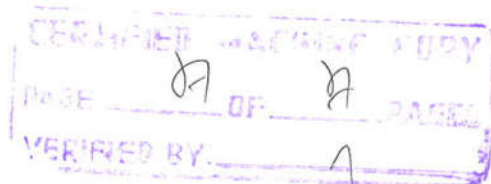


ARTICLE IX

ADOPTION CLAUSE

The foregoing by-laws was adopted by all the stockholders of the corporation on AUG 24 2004 at the principal office of the corporation.

IN WITNESS WHEREOF, we, the undersigned stockholders present at said meeting and voting thereat in favor of the adoption of said by-laws, have hereunto subscribed our names this ____ day of ____ 2004 at AUG 27 2004.


ADRIAN S. ARIAS
GENIER E. ASUNCION
ROBERTO RAFAEL V. LUCILA
ROBERTO O. PAREL
YVONNE ANGELI L. TUPAS



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
Regional Office No. IVB-MIMAROPA
7/F DENR By The Bay Bldg., 1515 Roxas Blvd., Ermita, M. M.
Tel No. 536-02-14 Telefax 302-13-69



29 June 2007

BERONG NICKEL CORPORATION

7th floor, Quad Alpha Centrum,
125 Pioneer St.,
Mandaluyong City

Sir:

Enclosed herewith is a copy of **MINERAL PRODUCTION SHARING AGREEMENT No. MPSA-235-2007-IVB** entered on June 8, 2007 by and between the Government represented by the Secretary, DENR and BERONG NICKEL CORPORATION covering an area situated in Brgy. Berong, Quezon, Palawan, and duly registered with this Office.

Please be guided accordingly.

Very truly yours,


ROLAND A. DE JESUS
OIC-Regional Director

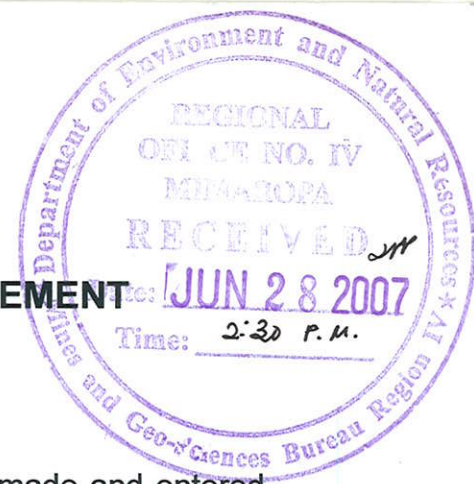
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MINERAL PRODUCTION SHARING AGREEMENT

No. 235 - 2007 - IVB



This **MINERAL PRODUCTION SHARING AGREEMENT** is made and entered into in Quezon City, Philippines, this _____ day of JUN 08 2007 by and between:

THE REPUBLIC OF THE PHILIPPINES, herein referred to as the **GOVERNMENT**, represented in this act by the Secretary of the Department of Environment and Natural Resources, with offices at the Department of Environment and Natural Resources Building, Visayas Avenue, Diliman, Quezon City

and

BERONG NICKEL CORPORATION, a corporation duly organized and existing under the laws of the Republic of the Philippines, herein referred to as the **CONTRACTOR**, with office at 7th Floor, Quad Alpha Centrum, 125 Pioneer St. Mandaluyong City, and represented in this act by its President, Mr. Frank N. Lubbock, as authorized by its Board of Directors (please refer to ANNEX "A")

WITNESSETH :

WHEREAS, the 1987 Constitution of the Republic of the Philippines provides in Article XII, Section 2 thereof that all lands of the public domain, waters, minerals, coal, petroleum and other natural resources are owned by the State and that their exploration, development and utilization shall be under the full control and supervision of the State;

WHEREAS, the Constitution further provides that the State may directly undertake such activities, or it may enter into a Co-Production, Joint Venture, or Mineral Production Sharing Agreement with Filipino citizens, or cooperatives, partnerships, corporations or associations at least sixty per centum of whose capitalization is owned by such citizens;

WHEREAS, pursuant to Republic Act No. 7942, otherwise known as "The Philippine Mining Act of 1995," which took effect on 09 April 1995, the Secretary of the Department of Environment and Natural Resources is authorized to enter into Mineral Production Sharing Agreements in furtherance of the objectives of the Government and the Constitution to bolster the national economy through sustainable and systematic development and utilization of mineral lands;

WHEREAS, the Government desires to avail itself of the financial resources, technical competence and skill, which the Contractor is capable of applying to the mining operations of the project contemplated herein;

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WHEREAS, the Contractor desires to join and assist the Government in the initial rational exploration and possible development and utilization for commercial purposes of *nickel, iron, cobalt, chromite and other associated mineral deposits* existing in the Contract Area (as herein defined);

WHEREAS, the Contractor has access to all the financing, technical competence, technology and environmental management skills required to promptly and effectively carry out the objectives of this Agreement;

NOW, THEREFORE, for and in consideration of the foregoing premises, the mutual covenants, terms and conditions hereinafter set forth, it is hereby stipulated and agreed as follows:

SECTION I

SCOPE

- 1.1. This Agreement is a Mineral Production Sharing Agreement entered into pursuant to the provisions of the Act and its implementing rules and regulations. The primary purpose of this Agreement is to provide for the rational exploration, development and commercial utilization of *nickel, iron, cobalt, chromite and other associated mineral deposits* existing within the Contract Area, with all necessary services, technology and financing to be furnished or arranged by the Contractor in accordance with the provisions of this Agreement. The Contractor shall not, by virtue of this Agreement, acquire any title over the Contract/Mining Area without prejudice to the acquisition by the Contractor of the land/surface rights through any mode of acquisition provided for by law.
- 1.2. The Contractor shall undertake and execute, for and on behalf of the Government, sustainable mining operations in accordance with the provisions of this Agreement, and is hereby constituted and appointed, for the purpose of this Agreement, as the exclusive entity to conduct mining operations in the Contract Area.
- 1.3. The Contractor shall assume all the exploration risk such that if no minerals in commercial quantity are developed and produced, it will not be entitled to reimbursement.
- 1.4. During the term of this Agreement, the total value of production and sale of minerals derived from the mining operations contemplated herein shall be accounted for and divided between the Government and the Contractor in accordance with Section VIII hereof.

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SECTION II





DEFINITIONS

As used in this Agreement, the following words and terms, whether singular or plural, shall have the following respective meaning:

- 2.1. Act refers to Republic Act No. 7942, otherwise known as the "Philippine Mining Act of 1995."
- 2.2. Agreement means this Mineral Production Sharing Agreement.
- 2.3. Associated Minerals mean other ores/minerals, which occur together with the principal ore/mineral.
- 2.4. Bangko Sentral means Bangko Sentral ng Pilipinas.
- 2.5. Budget means an estimate of expenditures to be made by Contractor in mining operations contemplated hereunder to accomplish the Work Program for each particular period.
- 2.6. Bureau means Mines and Geosciences Bureau.
- 2.7. Calendar Year or Year means a period of twelve (12) consecutive months starting with the first day of January and ending on December 31, while "Calendar Quarter" means a period of three consecutive months with the first calendar quarter starting with the first day of January.
- 2.8. Commercial Production means the production of sufficient quantity of minerals to sustain economic viability of mining operations reckoned from the date of commercial operation as declared by the Contractor or as stated in the feasibility study, whichever comes first.
- 2.9. Constitution or Philippine Constitution means the 1987 Constitution of the Republic of the Philippines adopted by the Constitutional Convention of 1986 on October 15, 1986 and ratified by the People of the Republic of the Philippines on February 2, 1987.
- 2.10. Contract Area means the area onshore or offshore delineated under the Mineral Production Sharing Agreement subject to the relinquishment obligations of the Contractor and properly defined by latitude and longitude or bearing and distance.
- 2.11. Contract Year means a period of twelve (12) consecutive months counted from the Effective Date of this Agreement or from the anniversary of such Effective Date.
- 2.12. Contractor means Berong Nickel Corporation or its assignee(s) of interest under this Agreement: Provided, That the assignment of any of such interest is accomplished pursuant to the pertinent provisions of the implementing rules and regulations of the Act.

- 2.13. Declaration of Mining Project Feasibility means a document proclaiming the presence of minerals in a specific site, which are recoverable by socially acceptable, environmentally safe and economically sound methods specified in the Mine Development Plan.
- 2.14. Department or DENR means the Department of Environment and Natural Resources.
- 2.15. Director means the Director of Mines and Geosciences Bureau.
- 2.16. Effective Date means the date of execution of this Agreement by the Contractor and by the Secretary on behalf of the Government.
- 2.17. Environment means all facets of man's surroundings: physical, ecological, aesthetic, cultural, economic, historic, institutional and social.
- 2.18. Exploration means searching or prospecting for mineral resources by geological, geophysical and geochemical surveys, remote sensing, test pitting, trenching, drilling, shaft sinking, tunneling or any other means for the purpose of determining the existence, extent, quality and quantity of mineral resources and the feasibility of mining them for profit.
- 2.19. Exploration Period shall mean the period from the Effective Date of this Agreement, which shall be for two (2) years, renewable for like periods but not to exceed a total term of six (6) years for nonmetallic minerals and eight (8) years for metallic minerals, subject to the pertinent provisions of the implementing rules and regulations of the Act.
- 2.20. Force Majeure means acts or circumstances beyond the reasonable control of the Contractor including, but not limited to war, rebellion, insurrection, riots, civil disturbances, blockade, sabotage, embargo, strike, lockout, any dispute with surface owners and other labor disputes, epidemics, earthquake, storm, flood or other adverse weather conditions, explosion, fire, adverse action by the Government or by any of its instrumentality or subdivision thereof, act of God or any public enemy and any cause as herein described over which the affected party has no reasonable control.
- 2.21. Foreign Exchange means any currency other than the currency of the Republic of the Philippines acceptable to the Government and the Contractor.
- 2.22. Government means the Government of the Republic of the Philippines or any of its agencies and instrumentalities.
- 2.23. Gross Output means the actual market value of the minerals or mineral products from each mine or mineral land operated as a separate entity, without any deduction for mining, processing, refining, transporting, handling, marketing or any other expenses: Provided, That if the minerals or mineral products are sold or consigned abroad by the Contractor under C.I.F. terms, the actual cost of ocean freight and insurance shall be deducted: Provided further, That in the case of mineral concentrates which are not traded in commodity exchanges in

the Philippines or abroad such as copper concentrate, the actual market value shall be the world price quotation of the refined mineral products contained thereof prevailing in the said commodity exchanges, after deducting the smelting, refining, treatment, insurance, transportation and other charges incurred in the process of converting mineral concentrates into refined metal traded in those commodity exchanges.

- 2.24. Mine Development refers to work undertaken to prepare an ore body or a mineral deposit for mining, including the construction of necessary infrastructure and related facilities.
- 2.25. Minerals mean all naturally occurring inorganic substances in solid, liquid, gas or any intermediate state excluding energy materials such as coal, petroleum, natural gas, radioactive materials and geothermal energy.
- 2.26. Mineral Products mean materials derived from mineral ores/rocks and prepared into marketable state by metallurgical processes which include beneficiation, cyanidation, leaching, smelting, calcination and other similar processes.
- 2.27. Mining Area means that portion of the Contract Area identified by the Contractor as defined and delineated in a Survey Plan duly approved by the Director/Regional Director concerned for purposes of development and/or utilization and sites for support facilities.
- 2.28. Mining Operations means mining activities involving exploration, feasibility study, environmental impact assessment, development, utilization, mineral processing and mine rehabilitation.
- 2.29. Notice means notice in writing, telex or telecopy (authenticated by answer back or confirmation received) addressed or sent as provided in Section 16.2 of this Agreement.
- 2.30. Ore means naturally occurring substance or material from which a mineral or element can be mined and/or processed for profit.
- 2.31. Pollution means any alteration of the physical, chemical and/or biological properties of any water, air and/or land resources of the Philippines, or any discharge thereto of any liquid, gaseous or solid wastes or any production of unnecessary noise or any emission of objectionable odor, as will or is likely to create or render such water, air, and land resources harmful, detrimental or injurious to public health, safety or welfare or which will adversely affect their utilization for domestic, commercial, industrial, agricultural, recreational or other legitimate purposes.
- 2.32. Secretary means the Secretary of the Department of Environment and Natural Resources.
- 2.33. State means the Republic of the Philippines.    

- 2.34. Work Program means a document which presents the plan of major mining operations and the corresponding expenditures of the Contractor in its Contract Area during a given period of time, including the plan and expenditures for development of host and neighboring communities and of local geoscience and mining technology, as submitted and approved in accordance with the implementing rules and regulations of the Act.

SECTION III

TERM OF AGREEMENT

- 3.1. This Agreement shall have a term of twenty five (25) years from Effective Date, and may be renewed thereafter for another term not exceeding twenty five (25) years. The renewal of this Agreement, as well as the changes in the terms and conditions thereof, shall be upon mutual consent by the parties. In the event the Government decides to allow mining operations thereafter by other Contractor, this must be through competitive public bidding. After due publication of notice, the Contractor shall have the right to equal the highest bid upon reimbursement of all reasonable expenses of the highest bidder.

SECTION IV

CONTRACT AREA

- 4.1. Size, Shape, and Location of Contract Area - This Agreement covers a Contract Area of approximately Two Hundred Eighty Eight (288.00) hectares, situated in Barangay Berong, Municipality of Quezon, Province of Palawan and bounded by the following geographical coordinates (please refer to ANNEX "B" - 1:50,000 scale Location Map/Sketch Plan):

Corner	Latitude	Longitude
1	9° 24' 09.604"	118° 14' 00.455"
2	9° 24' 09.539"	118° 13' 30.958"
3	9° 24' 19.304"	118° 13' 30.936"
4	9° 24' 19.282"	118° 13' 21.103"
5	9° 24' 38.811"	118° 13' 21.060"
6	9° 24' 38.680"	118° 12' 22.063"
7	9° 24' 28.916"	118° 12' 22.086"
8	9° 24' 28.871"	118° 12' 02.420"
9	9° 24' 38.635"	118° 12' 02.398"
10	9° 24' 38.680"	118° 12' 22.063"
11	9° 24' 38.811"	118° 13' 21.060"
12	9° 24' 48.576"	118° 13' 21.038"
13	9° 24' 48.598"	118° 13' 30.871"

Corner	Latitude	Longitude
14	9° 24' 58.363"	118° 13' 30.849"
15	9° 24' 58.385"	118° 13' 39.720"
16	9° 25' 08.149"	118° 13' 40.660"
17	9° 25' 08.192"	118° 14' 00.326"
18	9° 24' 48.662"	118° 14' 00.369"
19	9° 24' 48.705"	118° 14' 20.035"
20	9° 23' 59.881"	118° 14' 20.142"
21	9° 23' 59.839"	118° 14' 00.477"

SECTION V

EXPLORATION PERIOD

- 5.1. Timetable for Exploration - The Contractor shall commence Exploration activities not later than three (3) months after the Effective Date for a period of two (2) years, renewable for like periods but not to exceed a total term of six (6) years for nonmetallic minerals and eight (8) years for metallic minerals, subject to annual review and approval by the Director in accordance with the implementing rules and regulations of the Act.

The one (1)-year term of the Temporary Exploration Permit No. TEP-IVB-008-2005 and issued on November 15, 2005 is considered as part of the Exploration Period (please refer to ANNEX "C").

- 5.2. Renewal of Exploration Period - In case the Contractor opts for a renewal of its Exploration Period, it shall file prior to the expiration thereof, a renewal application in the Mines and Geosciences Bureau Central Office, accompanied by the mandatory requirements stipulated in the implementing rules and regulations of the Act. The Director may grant the renewal of the Exploration Period on condition that the Contractor has substantially complied with the terms and conditions of the Agreement.

In cases where further exploration is warranted beyond the six (6) - or eight (8)-year period and on condition that the Contractor has substantially implemented the Exploration and Environmental Work Programs as verified by the Bureau, the Director may further grant renewal of the Exploration Period: Provided, That the Contractor shall be required to set up a performance surety equivalent to the expenditure requirement of the Exploration and Environmental Work Programs.

- 5.3. Work Programs and Budgets - The Contractor shall strictly comply with the approved Exploration and Environmental Work Programs together with their corresponding Budgets (please refer to ANNEXES "D" and "E").

The amount to be spent by the Contractor in conducting Exploration activities under the terms of this Agreement during the Exploration Period shall be in the aggregate of not less than that specified for each of the Contract Years, as follows:

For the Exploration Work Program:

1st Contract Year	:	PhP 70,520,280.00
2nd Contract Year	:	PhP 20,544,190.00
Total	:	PhP 91,064,470.00

For the Environmental Work Program : PhP 8,278,590.00

In the event of renewal of the Exploration Period, the amount to be spent every year shall first be agreed upon by the parties.

In the event of termination of this Agreement, the Contractor shall only be obliged to expend the pro-rata amount for the period of such Contract Year prior to termination. If during any Contract Year, the Contractor should expend more than the amount to be expended as provided above, the excess may be subtracted from the amount required to be expended by the Contractor during the succeeding Contract Years, and should the Contractor, due to unforeseen circumstances or with the consent of the Government, expend less during a year, then the deficiency shall be applied to the amount to be expended during the succeeding Contract Years.

- 5.4. Relinquishment of Total/Portion of the Contract Area - During the Exploration Period, the Contractor may relinquish totally or partially the original Contract Area. After the Exploration Period and prior to or upon approval of a Declaration of Mining Project Feasibility by the Director, the Contractor shall finally relinquish any portion of the Contract Area not necessary for mining operations and not covered by any Declaration of Mining Project Feasibility.
- 5.5. Final Mining Area - The Director may allow the Contractor to hold more than one (1) final Mining Area subject to the maximum limits set under the implementing rules and regulations of the Act: Provided, That each final Mining Area shall be covered by a Declaration of Mining Project Feasibility.
- 5.6. Declaration of Mining Project Feasibility – Within the term of the Exploration Period, the Contractor shall file in the Regional Office concerned, the Declaration of Mining Project Feasibility of the Contract Area/final Mining Area supported by Mining Project Feasibility Study, Three (3)-Year Development and Construction or Commercial Operation Work Program, complete geologic report, an application for survey and the pertinent Environmental Compliance Certificate, among other applicable requirements. Failure of the Contractor to submit the

Declaration of Mining Project Feasibility during the Exploration Period shall be considered a substantial breach of this Agreement.

5.7. Survey of the Contract Area - The Contractor shall cause the survey of the perimeter of the Contract Area/final Mining Area through an application for survey, complete with requirements, filed in the Regional Office concerned simultaneous with the submission of the Declaration of Mining Feasibility. Survey returns shall be submitted to the Regional Director concerned for approval within one (1) year from receipt of the Order of Survey complete with the mandatory requirements stated in the implementing rules and regulations of the Act.

5.8. Reporting

a. During the Exploration Period, the Contractor shall submit to the Director, through the Regional Director concerned, quarterly and annual accomplishment reports under oath on all activities conducted in the Contract Area from the Effective Date of this Agreement. The quarterly report shall be submitted not later than fifteen (15) days at the end of each Calendar Quarter while the annual accomplishment report shall be submitted not later than thirty (30) days from the end of each Calendar Year. Such information shall include detailed financial expenditures, raw and processed geological, geochemical, geophysical and radiometric data plotted on a map at a minimum 1:50,000 scale, copies of originals of assay results, duplicated samples, field data, copies of originals from drilling reports, maps, environmental work program implementation and detailed expenditures showing discrepancies/ deviations with approved exploration and environmental plans and budgets as well as all other information of any kind collected during the exploration activities. All information submitted to the Bureau shall be subject to the confidentiality clause of this Agreement.

b. Final Report - The Contractor shall submit to the Director, through the Regional Director concerned, a final report under oath upon the expiration of the Exploration Period which shall be in the form and substance comparable to published professional reports of respectable international institutions and shall incorporate all the findings in the Contract Area including location of samples, assays, chemical analysis, and assessment of mineral potentials together with a geologic map of 1:50,000 scale at the minimum showing the results of the exploration. Such report shall also include detailed expenditures incurred during the Exploration Period. In case of diamond drilling, the Contractor shall, upon request of the Director/Regional Director concerned, submit to the Regional Office concerned a quarter of the core samples, which shall be deposited in the Regional Office Core Library for safekeeping and reference.

c. Relinquishment Report - The Contractor shall submit a separate relinquishment report with a detailed geologic report of the

relinquished area accompanied by maps at a scale of 1:50,000 and results of analyses and detailed expenditures, among others.

SECTION VI

DEVELOPMENT AND CONSTRUCTION PERIOD

- 6.1. Timetable - The Contractor shall complete the development of the mine including the construction of production facilities within thirty six (36) months from the submission and approval of the Declaration of Mining Project Feasibility, subject to such extension based on justifiable reasons as the Director may approve, upon recommendation of the Regional Director concerned.
- 6.2. Reporting
- a. Annual - The Contractor shall submit, within sixty (60) days after December 31 of each year, to the Director, through the Regional Director concerned, an annual report, which states the major activities, achievements and detailed expenditures during the year covered, including maps, assays, rock and mineral analyses and geological and environmental progress reports during the Development and Construction Period.
 - b. Final Report - Within six (6) months from the completion of the development and construction activities, the Contractor shall submit a final report to the Director, through the Regional Director concerned. Such report shall integrate all information in maps of appropriate scale and quality, as well as in monographs or reports in accordance with international standards.

SECTION VII

OPERATING PERIOD

- 7.1. Timetable - The Contractor shall submit, within thirty (30) days before completion of mine development and construction of production facilities, to the Director, through the Regional Director concerned, a Three-Year Commercial Operation Work Program. The Contractor shall commence commercial utilization immediately upon approval of the aforesaid Work Program. Failure of the Contractor to commence Commercial Production within the period shall be considered a substantial breach of the Agreement.
- 7.2. Commercial Operation Work Program and Budget - During the Operating Period, the Contractor shall submit to the Director, through the Regional Director concerned, Work Programs and Budgets covering a period of three (3) years each, which shall be submitted not later than thirty (30) days before the expiration of the period covered by the previous Work Program.
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The Contractor shall conduct Mining Operations and other activities for the duration of the Operating Period in accordance with the duly approved Work Programs and corresponding Budgets.

7.3. Expansion and Modification of Facilities - The Contractor may make expansions, modifications, improvements, and replacements of the mining facilities and may add new facilities as the Contractor may consider necessary for the operations: Provided, That such plans shall be embodied in an appropriate Work Program approved by the Director.

7.4. Reporting

a. Quarterly Reports - Beginning with the first Calendar Quarter following the commencement of the Operating Period, the Contractor shall submit, within thirty (30) days after the end of each Calendar Quarter, to the Director, through the Regional Director concerned, a Quarterly Report stating the tonnage of production in terms of ores, concentrates, and their corresponding grades and other types of products; value, destination of sales or exports and to whom sold; terms of sales and expenditures.

b. Annual Reports - During the Operating Period, the Contractor shall submit within sixty (60) days from the end of each Calendar Year, to the Director, through the Regional Director concerned, an Annual Report indicating in sufficient detail:

b.1. The total tonnage of ore reserves, whether proven, probable, or inferred, the total tonnage of ores, kind by kind, broken down between tonnage mined, tonnages transported from the minesite and their corresponding destination, tonnages stockpiled in the mine and elsewhere in the Philippines, tonnages sold or committed for export (whether actually shipped from the Philippines or not), tonnages actually shipped from the Philippines (with full details as to purchaser, destination and terms of sale), and if known to the Contractor, tonnages refined, processed or manufactured in the Philippines with full specifications as to the intermediate products, by-products or final products and of the terms at which they were disposed;

b.2. Work accomplished and work in progress at the end of the year in question with respect to all the installations and facilities related to the utilization program, including the investment actually made or committed; and

b.3. Profile of work force, including management and staff, stating particularly their nationalities, and for Filipinos, their place of origin (i.e., barangay, town, province, region).

The Contractor shall also comply with other reporting requirements provided for in the implementing rules and regulations of the Act.

SECTION VIII

FISCAL REGIME

- 8.1. General Principle - The fiscal regime of this Agreement shall be governed by the principle according to which the Government expects a reasonable return in economic value for the utilization of non-renewable mineral resources under its national sovereignty while the Contractor expects a reasonable return on its investment with special account to be taken for the high risk of exploration, the terms and conditions prevailing elsewhere in the industry and any special efficiency to be gained by a particularly good performance of the Contractor.
- 8.2. Registration Fees - Within fifteen (15) days upon receipt of the notice of approval of the Agreement from the Regional Office concerned, the Contractor shall cause the registration of this Agreement with the said Regional Office and pay the registration fee at the rate provided in the existing rules and regulations. Failure of the Contractor to cause the registration of this Agreement within the prescribed period shall be sufficient ground for cancellation of the same.
- 8.3. Occupation Fees - Prior to registration of this Agreement and at the same date every year thereafter, the Contractor shall pay to the Municipal/City Treasurer concerned an occupation fee over the Contract Area at the annual rate provided in the existing rules and regulations. If the fee is not paid on the date specified, the Contractor shall pay a surcharge of twenty five percent (25%) of the amount due in addition to the occupation fees.
- 8.4. Share of the Government - The Government Share shall be the excise tax on mineral products at the time of removal and at the rate provided for in Republic Act No. 7729 amending Section 151 (a) of the National Internal Revenue Code, as amended, as well as other taxes, duties and fees levied by existing laws. The Excise Tax shall be timely and completely paid to the nearest Bureau of Internal Revenue Office in the province concerned.

For purposes of determining the amount of the herein Government Share, the Contractor shall strictly comply with the auditing and accounting requirements prescribed under existing laws and regulations.

The Government Share shall be allocated in accordance with Sections 290 and 292 of Republic Act No. 7160, otherwise known as "The Local Government Code of 1991."

- 8.5. Pricing of Sales - The Contractor shall dispose of the minerals and by-products produced at the highest market price prevailing in the locality: The Contractor shall also pay the lowest achievable marketing commissions and related fees and shall negotiate for more advantageous terms and conditions subject to the right to enter into long-term sales or marketing contracts or foreign exchange and

commodity hedging contracts, which the Government acknowledges to be acceptable notwithstanding that the sale price of the minerals and by-products may from time to time be lower, or the terms and conditions of sales are less favorable, than that available elsewhere. The Contractor shall seek to strike a balance between long-term sales or marketing contracts or foreign exchange and commodity hedging contracts comparable to policies followed by independent producers in the international mining industry.

The Contractor shall likewise seek a balanced distribution among consumers. Insofar as sales to Contractor's affiliate(s) are concerned, prices shall be at arm's length standard, and competing offers for large scale and long-term contracts shall be procured. Before any sale and/or shipment of mineral product is made, existing and future marketing contract(s)/sales agreement(s) shall be submitted to the Director, copy furnished the Regional Director concerned, for registration. At the same time, the Contractor shall regularly inform the Director in writing of any revisions, changes or additions in said contract(s)/agreement(s).

The Contractor shall reflect in its Monthly/Quarterly Report on Production, Sales and Inventory of Minerals, as well as in the Integrated Annual Report, the corresponding registration number(s) of the marketing contract(s)/agreement(s) governing the export or sale of minerals.

- 8.6. Associated Minerals - If minerals other than *nickel, iron, cobalt, chromite and other associated mineral deposits* are discovered in commercial quantities in the Contract Area, the value thereof shall be added to the value of the principal mineral in computing the Government share.

SECTION IX

WORK PROGRAMS

- 9.1. Submission to Government - Within the periods stated herein, the Contractor shall prepare and submit to the Director, through the Regional Director concerned, a Work Program and corresponding Budget for the Contract Area stating the Mining Operations and expenditures which the Contractor proposes to carry out during the period covered with the details and particulars set forth elsewhere in this Agreement or in the supporting documents.
- 9.2. Government's Examination and Revision of Work Program - Should the Government decide to propose a revision to a certain specific feature in the Work Program or Budget, it shall, within thirty (30) days after receipt thereof, provide a Notice to the Contractor specifying in reasonable detail its reasons therefore. Promptly thereafter, the Government and Contractor will meet and endeavor to agree on the revision proposed by the Government. In any event, the revision of any portion of said Work Program or Budget in which the Government shall fail to notify the Contractor of the proposed revision shall, insofar as possible, be carried

out as prescribed herein. If the Government should fail within sixty (60) days from receipt thereof to notify Contractor of the proposed revisions, the Work Program and Budget proposed by the Contractor shall be deemed to be approved.

- 9.3. Contractor's Changes to Work Program - It is recognized by the Government and the Contractor that the details of any Work Program may require changes in the light of changing circumstances. The Contractor may make such changes: Provided, That it shall not change the general objective of the Work Program: Provided further, That changes which entail a negative variance of at least twenty percent (20%) shall be subject to the approval of the Director.

In case of any positive variance, the Contractor shall submit to the Director, through the Regional Director concerned, a copy each of the Work Programs, for information.

- 9.4. The Government's approval of a proposed Work Program and Budget will not be unreasonably withheld.

SECTION X

ENVIRONMENTAL PROTECTION AND MINE SAFETY AND HEALTH

- 10.1. The Contractor shall manage its Mining Operations in a technically, financially, socially, culturally and environmentally responsible manner to achieve the sustainable development objectives and responsibilities as provided for under the implementing rules and regulations of the Act.
- 10.2. The Contractor shall ensure that the standards of environmental protection are met in the course of the Mining Operations. To the extent possible, control of pollution and the transformation of the mined-out areas or materials into economically and socially productive forms must be done simultaneously with mining.
- 10.3. The Contractor shall submit an Environmental Work Program during the Exploration Period as prescribed in the implementing rules and regulations of the Act.
- 10.4. An Environmental Compliance Certificate (ECC) shall be secured first by the Contractor prior to the conduct of any development works, construction of production facilities and/or mine production activities in the Contract Area.
- 10.5. The Contractor shall submit within thirty (30) calendar days after the issuance and receipt of the ECC, an Environmental Protection and Enhancement Program (EPEP) using MGB Form No. 16-2 covering all areas to be affected by development, utilization and processing activities under this Agreement. The Contractor shall allocate for its initial environment-related capital expenditures approximately ten percent (10%) of the total project cost or in such amount depending on the environmental/geological condition, nature and scale of operations and technology to be employed in the Contract Area.

10.6. The Contractor shall submit, within thirty (30) days prior to the beginning of every calendar year, an Annual Environmental Protection and Enhancement Program (AEPEP), using MGB Form 16-3, which shall be based on the approved EPEP. The AEPEP shall be implemented during the year for which it was submitted. To implement its AEPEP, the Contractor shall allocate annually three to five percent (3%-5%) of its direct mining and milling costs depending on the environmental/geologic condition, nature and scale of operations and technology employed in the Contract Area.

10.7. The Contractor shall establish a Contingent Liability and Rehabilitation Fund (CLRF) which shall be in the form of the Mine Rehabilitation Fund (MRF) and the Mine Waste and Tailings Fee (MWTF).

The MRF shall be based on the financial requirements of the approved EPEP as a reasonable environmental deposit to ensure satisfactory compliance with the commitments/strategies of the EPEP/AEPEP and availability of funds for the performance of the EPEP/AEPEP during the specific project phase. The MRF shall be deposited as Trust Fund in a government depository bank and shall be used for physical and social rehabilitation of areas affected by mining activities and for research on the social, technical and preventive aspects of rehabilitation.

The MWTF shall be collected based on the amounts of mine waste and mill tailings generated during the conduct of Mining Operations. The MWTF collected shall accrue to a Mine Waste and Tailings Reserve Fund and shall be deposited in a government depository bank for payment of compensation for damages caused by the Mining Operations.

10.8. The Contractor shall set up mitigating measures such as mine waste and mill tailings disposal system, mine rehabilitation or plan, water quality monitoring, etc. to minimize land degradation, air and water pollution, acid rock drainage and changes in hydrogeology.

10.9. The Contractor shall set up an Environmental and Safety Office at its minesite manned by qualified personnel to plan, implement and monitor its approved EPEP.

10.10. The Contractor shall be responsible in the monitoring of environmental, safety and health conditions in the Contract Area and shall strictly comply with all the rules and regulations embodied under DAO No. 2000-98, otherwise known as the "Mine Safety and Health Standards."

10.11. The Contractor shall be responsible for the submission of a final mine rehabilitation and/or decommissioning plans, including its financial requirements and incorporating the details and particulars set forth in the implementing rules and regulations of the Act.

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SECTION XI

RIGHTS AND OBLIGATIONS OF THE PARTIES

11.1. Obligations of the Contractor:

- a. To exclusively conduct sustainable Mining Operations within the Contract Area in accordance with the provisions of the Act and its implementing rules and regulations;
- b. To construct and operate any facilities specified under the Mineral Agreement or approved Work Program;
- c. To determine the exploration, mining and treatment process to be utilized in the Mining Operations;
- d. To extract, remove, use and dispose of any tailings as authorized by an approved Work Program;
- e. To secure all permits necessary or desirable for the purpose of Mining Operations;
- f. To keep accurate technical records about the Mining Operations, as well as financial and marketing accounts, and make them available to Government representatives authorized by the Director for the purpose of assessing the performance and compliance of the Contractor with the terms of this Agreement. Authorized representatives of other Government Agencies may also have access to such accounts in accordance with existing laws, rules and regulations;
- g. To furnish the Bureau all the data and information gathered from the Contract Area and that all the books of accounts and records shall be open for inspection;
- h. To allow access to Government during reasonable hours in inspecting the Contract Area and examining pertinent records for purposes of monitoring compliance with the terms of this Agreement;
- i. To hold the Government free and harmless from all claims and accounts of all kinds, as well as demands and actions arising out of the accidents or injuries to persons or properties caused by Mining Operations of the Contractor and indemnify the Government for any expenses or costs incurred by the Government by reason of any such claims, accounts, demands or actions;
- j. In the development of the community:
 - j.1. To recognize and respect the rights, customs and traditions of indigenous cultural communities over their ancestral

lands and to allocate royalty payment of not less than one percent (1%) of the value of the gross output of minerals sold;

- j.2. To coordinate with proper authorities in the development of the mining community and for those living in the host and neighboring communities through social infrastructure, livelihood programs, education, water, electricity and medical services. Where traditional self-sustaining income and the community activities are identified to be present, the Contractor shall assist in the preservation and/or enhancement of such activities;
- j.3. To allot annually a minimum of one percent (1%) of the direct mining and milling costs necessary to implement the activities undertaken in the development of the host and neighboring communities. Expenses for community development may be charged against the royalty payment of at least one percent (1%) of the gross output intended for the concerned indigenous cultural community;
- j.4. To give preference to Filipino citizens who have established domicile in the neighboring communities, in the hiring of personnel for its mining operations. If necessary skills and expertise are currently not available, the Contractor must immediately prepare and undertake a training and recruitment program at its expense; and
- j.5. To incorporate in the Mining Project Feasibility Study the planned expenditures necessary to implement (j.1) to (j.3) of this Section;
- k. In the development of Mining Technology and Geosciences:
 - k.1. In the course of its operations, to produce geological, geophysical, geochemical and other types of maps and reports that are appropriate in scale and in format and substance which are consistent with the internationally accepted standards and practices. Such maps shall be made available to the scientific community in the most convenient and cost effective forms, subject to the condition that the Contractor may delay release of said information for a reasonable period of time which shall not exceed three (3) years;
 - k.2. To systematically keep the data generated from the Contract/ Mining Area such as cores, assays and other related information, including economic and financial data and make them accessible to students, researchers and other persons responsible for developing mining, geoscience and processing technology subject to the condition that the Contractor may delay release of data to

the science and technology community within a reasonable period of time which shall not exceed three (3) years;

- k.3. To transfer to the Government or local mining company the appropriate technology it may adapt in the exploration, development and commercial utilization of the minerals in the Contract Area;
- k.4. To allocate research and development budget for the advancement of mining technology and geosciences in coordination with the Bureau, research institutions, academe, etc.; and
- k.5. To replicate data, maps and reports cited in (k.1) and (k.2) and furnish the Bureau for archiving and systematic safekeeping which shall be made available to the science and technology community for conducting research and undertaking other activities which contribute to the development of mining, geoscience and processing technology and the corresponding national pool of manpower talents: Provided, however, that the release of data, maps and the like shall be similarly constrained in accordance with (k.1) and (k.2) above;
- l. To incorporate in the Mining Feasibility Study the planned expenditures necessary to implement all the plans and programs set forth in this Agreement; and
- m. To pay all other taxes and fees mandated by existing laws, rules and regulations.

11.2. Rights of the Contractor:

- a. To conduct Mining Operations within the confines of its Contract/Mining Area in accordance with the terms and conditions hereof and without interfering with the rights of other Contractors/Lessees/Operators/ Permittees/Permit Holders;
- b. Possession of the Contract Area, with full right of ingress and egress and the right to occupy the same, subject to surface and easement rights;
- c. To use and have access to all declassified geological, geophysical, drilling, production and other data relevant to the mining operations;
- d. To sell, assign, transfer, convey or otherwise dispose of all its rights, interests and obligations under the Agreement subject to the approval of the Government;
- e. To employ or bring into the Philippines foreign technical and specialized personnel, including the immediate members of their families as may be required in the operations of the Contractor,

subject to applicable laws and regulations: Provided, That if the employment connection of such foreign persons with the Contractor ceases, the applicable laws and regulations on immigration shall apply to them. Every time foreign technologies are utilized and where alien executives are employed, an effective program of training understudies shall be undertaken. The alien employment shall be limited to technologies requiring highly specialized training and experience subject to the required approval under existing laws, rules and regulations;

- f. To enjoy easement rights and use of timber, water and other natural resources in the Contract Area subject to pertinent laws, rules and regulations and the rights of third parties;
- g. Repatriation of capital and remittance of profits, dividends and interest on loans, subject to existing laws and Bangko Sentral ng Pilipinas rules and regulations; and
- h. To import when necessary all equipment, spare parts and raw materials required in the operations in accordance with existing laws and regulations.

11.3. Obligations of the Government:

- a. To ensure that the Contractor has the Government's full cooperation in the exercise of the rights granted to it under this Agreement;
- b. To use its best efforts to ensure the timely issuance of necessary permits and similar authorizing documents for use of the surface of the Contract Area; and
- c. To cooperate with the Contractor in its efforts to obtain financing contemplated herein from banks or other financial institutions: Provided, That such financing arrangements will in no event reduce the Contractor's obligation on Government rights hereunder.

SECTION XII

ASSETS AND EQUIPMENT

- 12.1. The Contractor shall acquire for the Mining Operations only such assets that are reasonably estimated to be required in carrying out such Mining Operations.
- 12.2. All materials, equipment, plant and other installations of a movable nature erected or placed on the Contract Area by the Contractor shall remain the property of the Contractor. The Contractor shall have the right to remove and re-export such materials and equipment, plant and other installations from the Philippines, subject to existing rules and

regulations. In case of cessation of Mining Operations on public lands occasioned by its voluntary abandonment or withdrawal, the Contractor shall have a period of one (1) year from the time of cessation within which to remove its improvements; otherwise, all social infrastructures and facilities shall be turned over or donated tax free to the proper government authorities, national or local, to ensure that said infrastructures and facilities are continuously maintained and utilized by the host and neighboring communities.

SECTION XIII

EMPLOYMENT AND TRAINING OF PHILIPPINE PERSONNEL

- 13.1. The Contractor agrees to employ, to the extent possible, qualified Filipino personnel in all types of mining operations for which they are qualified; and after Commercial Production commences shall, in consultation and with consent of the Government, prepare and undertake an extensive training programme suitable to Filipino nationals in all levels of employment. The objective of said programme is to reach within the timetable set forth below the following targets of "Filipinization:"

	Unskilled (%)	Skilled (%)	Clerical (%)	Professional (%)	Management (%)
Year 1	100	100	100	75	75
Year 3	100	100	100	80	80
Year 5	100	100	100	90	90
Year 7	100	100	100	95	95
Year 10	100	100	100	95	95
Year 15	100	100	100	95	95

- 13.2. Cost and expenses of training such Filipino personnel and the Contractor's own employees shall be included in the Operating Expenses.
- 13.3. The Contractor shall not discriminate on the basis of gender and shall respect the right of women workers to participate in policy and decision-making processes affecting their rights and benefits.

SECTION XIV

ARBITRATION

- 14.1. The Government and the Contractor shall consult with each other in good faith and shall exhaust all available remedies to settle any and all disputes or disagreements arising out of or relating to the validity, interpretations, enforceability, or performance of this Agreement before resorting to arbitration as provided for in Section 14.2. below.

- 14.2. Any disagreement or dispute which can not be settled amicably within a period of one (1) year from the time the issue is raised by a Party shall be settled by a tribunal of three (3) arbitrators. This tribunal shall be constituted as follows: one to be appointed by the Contractor and the other to be appointed by the Secretary. The first two appointed arbitrators shall consider names of qualified persons until agreement on a mutually acceptable Chairman of the tribunal is selected. Such arbitration shall be initiated and conducted pursuant to Republic Act No. 876, otherwise known as the "Arbitration Act."

In any event, the arbitration shall be conducted applying the substantive laws of the Republic of the Philippines.

- 14.3. Each party shall pay fifty percent (50%) of the fees and expenses of the Arbitrators and the costs of arbitration. Each party shall pay its own costs and attorney's fee.

SECTION XV

SUSPENSION OR TERMINATION OF CONTRACT, TAX INCENTIVES AND CREDITS

- 15.1. This Agreement may be suspended for failure of the Contractor: (a) to comply with any provision or requirement of the Act and/or its implementing rules and regulations; (b) to pay on time the complete taxes, fees and/or other charges demandable and due the Government.
- 15.2. This Agreement terminates or may be terminated for the following causes: (a) expiration of its term, whether original or renewal; (b) withdrawal from the Agreement by the Contractor; (c) violation by the Contractor of the Agreement's terms and conditions; (d) failure to pay taxes, fees/or charges or financial obligations for two (2) consecutive years; (e) false statement or omission of facts by the Contractor; and (f) any other cause or reason provided under the Act and its implementing rules and regulations, or any other relevant laws and regulations.
- 15.3. All statements made in this Agreement shall be considered as conditions and essential parts hereof, and any falsehood in said statements or omission of facts which may alter, change or affect substantially the fact set forth in said statements shall be a ground for its revocation and termination.
- 15.4. The Contractor may, by giving due notice at any time during the term of this Agreement, apply for its cancellation due to causes which, in the opinion of the Contractor, render continued mining operation no longer feasible or viable. In this case, the Secretary shall decide on the application within thirty (30) days from notice: Provided, That the Contractor has met all the financial, fiscal and legal obligations.

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- 15.5. No delay or omissions or course of dealing by the Government shall impair any of its rights under this Agreement, except in the case of a written waiver. The Government's right to seek recourse and relief by all other means shall not be construed as a waiver of any succeeding or other default unless the contrary intention is reduced in writing and signed by the party authorized to exercise the waiver.
- 15.6. In case of termination, the Contractor shall pay all the fees and other liabilities due up to the end of the year in which the termination becomes effective. The Contractor shall immediately carry out the restoration of the Contract Area in accordance with good mining industry practice.
- 15.7. The withdrawal by the Contractor from the Mineral Agreement shall not release it from any and all financial, environmental, legal and fiscal obligations under this Agreement.
- 15.8. The following acts or omission, *inter alia* shall constitute breach of contract, upon which the Government may exercise its right to terminate the Agreement:
- a. Failure of the Contractor without valid reason to commence Commercial Production within the period prescribed; and/or
 - b. Failure of the Contractor to conduct mining operations and other activities in accordance with the approved Work Programs and/or any modification thereof as approved by the Director.
- 15.9. The Government may suspend and cancel tax incentives and credits if the Contractor fails to abide by the terms and conditions of said incentives and credits.

SECTION XVI

OTHER PROVISIONS

- 16.1. Any terms and conditions resulting from repeal or amendment of any existing laws or regulation or from the enactment of a law, regulation or administrative order shall be considered a part of this Agreement.
- 16.2. Notice

All notices, demands and other communications required or permitted hereunder shall be made in writing, telex or telecopy and shall be deemed to have been duly given notice, in the case of telex or telecopy, if answered back or confirmation received, or if delivered by hand, upon receipt or ten days after being deposited in the mail, airmail postage prepaid and addressed as follows:



If to the Government:

THE SECRETARY

Department of Environment and Natural Resources
DENR Building, Visayas Avenue
Diliman, Quezon City

If to the Contractor:

THE PRESIDENT

Berong Nickel Corporation
7th Floor, Quad Alpha Centrum
125 Pioneer St., Mandaluyong City

Either party may substitute or change such address on notice thereof to the other party: Provided, That the Contractor shall, in case of any change of address during the term of this Agreement, notify the Director in writing. Failure to do such notification shall be deemed as waiver by the Contractor to be informed about any communications as provided in Section 16.2 above.

16.3. Governing Law

This Agreement and the relation between the parties hereto shall be governed by and construed in accordance with the laws of the Republic of the Philippines. The Contractor hereby agrees and obliges itself to comply with the provisions of the Act, its implementing rules and regulations and other relevant laws and regulations.

16.4. Suspension of Obligation

- a. Any failure or delay on the part of any party in the performance of its obligation or duties hereunder shall be excused to the extent attributable to *Force Majeure* as defined in the Act: Provided, That the suspension of Mining Operations due to *Force Majeure* causes shall be subject to approval by the Director.
- b. If Mining Operations are delayed, curtailed or prevented by such *Force Majeure* causes, then the time for enjoying the rights and carrying out the obligations thereby affected, the term of this Agreement and all rights and obligations hereunder shall be extended for a period equal to the period involved.
- c. The Party, whose ability to perform its obligations is affected by such *Force Majeure* causes, shall promptly give Notice to the other in writing of any such delay or failure of performance, the expected duration thereof and its anticipated effect and shall use its efforts to remedy such delay, except that neither Party shall be under any obligation to settle a labor dispute: Provided, That the suspension of obligation by the Contractor shall be subject to prior approval by the Director.

16.5. Amendments

This Agreement shall not be annulled, amended or modified in any respect except by mutual consent in writing of the herein parties.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement, as of the day and year first above written

THE REPUBLIC OF THE PHILIPPINES

BY:



ANGELO T. REYES


Secretary

Department of Environment and Natural Resources

BERONG NICKEL CORPORATION

TIN: 233-903-690-000

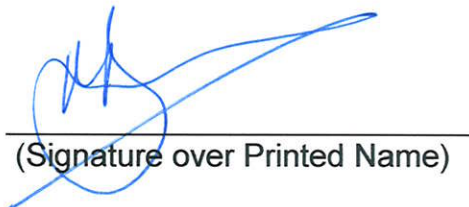
BY:



MR. FRANK N. LUBBOCK

President

SIGNED IN THE PRESENCE OF:



(Signature over Printed Name)



(Signature over Printed Name)

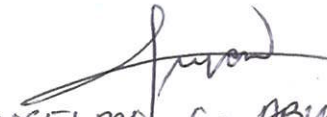
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ACKNOWLEDGMENT

Republic of the Philippines)
Quezon City) s s

Before me, a Notary Public for and in the City of Quezon, personally appeared **ANGELO T. REYES**, with Community Tax Certificate No. 15N4888 issued on Jan. 18, 2007 in Tagnig, in his capacity as Secretary of the Department of Environment and Natural Resources, and **MR. FRANK N. LUBBOCK**, with (Community Tax Certificate No. PN E 9057078 issued on Aug. 15, 2000 in Manila Phil ^{Australian}, in his capacity as President of Berong Nickel Corporation, both known to me and to me known to be the same persons who executed the foregoing instrument consisting of twenty five (25) pages, including this acknowledgment page, and acknowledged to me that the same is their voluntary acts and deeds.

IN WITNESS WHEREOF, I have hereunto set my hand and affix my notarial seal, this 22nd day of June 2007.


ANSELMO C. ABUNGCAN
Notary Public
UNTIL DEC. 31, 2008
PTR No. 8437675 01/04/07 @ C
IBP No. 677439 1/28/06 Manila

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Book No. VIII
Series of 2007

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MINES AND GEO - SCIENCES BUREAU
Regional Office No. IV **-B MIMAROPA**

CERTIFICATE OF REGISTRATION

The Filing fee therefore having been paid, the foregoing
instruments was filed for record in this Office at 2
o'clock and 30 minutes P.m. on the 26th day
June, A.D. 19 xx2007 has been recorded in
I of the records of **MINERAL REDDUCTION**
SHARING AGREEMENT of this Region on page 1
8
Filing fee paid under Official Receipt No. 8996812
date June 28, 19 xx2007 in the amount of ₱ 20,000.00

ROLAND A. DE JESUS
OIC, Regional Director
MGB-IVB (MIMAROPA)

[Handwritten signature]
[Circular stamp]
[Circular stamp]



Republic of the Philippines
Department of Environment and Natural Resources

Visayas Avenue, Diliman, Quezon City
Tel. Nos. (632) 920-4301 * (632) 928-0691 to 93
924-2540 * 928-8592
929-6626 loc. 2012 - 2014

JUN 14 2006

ECC Ref. Code: 0507-008-301

BERONG NICKEL CORPORATION

7TH Floor Quad Alpha Centrum,
125 Pioneer Street, Mandaluyong City

Attention : **Engr. ALEX R. DE LEOZ**
Vice President – Project Development

Gentlemen:

This refers to the Environmental Compliance Certificate (ECC) application for the proposed **BERONG NICKEL PROJECT** to be located in Bgy. Berong, Quezon, Palawan

After satisfying the requirements in the said application and upon recommendation of the Environmental Management Bureau (EMB), this Department has decided to grant an ECC to the abovementioned project.

You may proceed with project implementation after securing all the necessary permits from other pertinent government agencies. Please be advised, however that this Office will be monitoring the project periodically to ensure your compliance with stipulations cited in the attached ECC and compliance with other environmental laws, rules and regulations. Further, any expansion or modification of currently approved operations will be subject to the Environmental Impact Assessment (EIA) requirements.

Please be guided accordingly.

Very truly yours,


ANGELO T. REYES
Secretary

CC: **EMB Region IVB**
MGB Central Office
MGB Region IVB





Republic of the Philippines
Department of Environment and Natural Resources
Visayas Avenue, Diliman, Quezon City
Tel. Nos. (632) 920-4301 * (632) 928-0691 to 93
924-2540 * 928-8592
929-6626 loc. 2012 - 2014

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(ECC Ref. Code: 0507-008-301)

The **Department of Environment and Natural Resources (DENR)**, through the **Environmental Management Bureau (EMB)**, hereby grants this **Environmental Compliance Certificate (ECC)** to **BERONG NICKEL CORPORATION (BNC)** for its proposed **BERONG NICKEL PROJECT** to be located in Barangay Berong, Municipality of Quezon, Province of Palawan, after complying with the Environmental Impact Assessment (EIA) requirement as prescribed in the promulgated guidelines implementing Section 3(b) of P.D. No. 1121 and P.D. No. 1586.

This Certificate is being issued subject to the following conditions:

1. This Certificate shall cover the extraction and direct shipment of saprolite and/or limonite ores with combined amount of approximately one million metric tons (1,000,000 MT) per annum, including the following major project components: the mining area, haul roads, stockyards or drying areas, dried ore stockpile area, camp site and administration buildings, accommodation areas, mining contractor's equipment pool, water supply system, diesel storage system, waste dump areas, and sediment control structures, all within the area at Brgys. Talabonggan and Tungib being applied for Mineral Production Sharing Agreement, denominated as AMA No. IVB-047, bounded by geographical coordinates 9°24'00" and 9°28'00" North Latitude and 118°11'00" and 118°15'00" East Longitude covering an area of 288 hectares, as well as the pier facilities at Brgy. Berong covering an area of about 50 hectares;
2. The proponent shall submit the following:
 - 2.1 Detailed design of the silt ponds/traps for the road, mine facilities and the mine to be submitted prior to any construction and mine development;
 - 2.2 Detailed tree inventory on mining parcels scheduled for mining prior to land clearing and mining operations;
 - 2.3 Detailed coral reef study in the immediate areas to be affected by the construction of pier facilities and ore loading operations, including the identified location of the wharf, Berong River estuary and the navigational route corridor by barges and large ore carriers before commencement of pier construction;
 - 2.4 Detailed design of the pier facilities prior to project implementation;
3. All commitments, mitigating measures and monitoring requirements, especially those contained in the Environmental Impact Statement (EIS), particularly in the Environmental Management and Monitoring Plans, including all their modifications and additional information as approved by

the EMB, shall be instituted to minimize any adverse impact of the project to the environment throughout its implementation, including the following:

- 3.1 Undertake an effective and continuing Information, Education and Communication (IEC) Program to inform and educate all stakeholders, especially its local residents, about the project's mitigating measures embodied in its EIS, the conditions stipulated in this Certificate and the environment and human safety measures in mining operations for greater awareness, understanding and sustained acceptance of the project. In coordination with the Mines and Geosciences Bureau (MGB) Region IV-MIMAROPA and EMB Region IV-MIMAROPA, the proponent shall fund and implement an annual detailed IEC program.

The proponent shall take concrete steps to conduct regular dialogues with local communities in order to settle any conflicts and address their concerns so that a substantive and satisfactory public acceptance of the project can be maintained;

- 3.2 Design and construct roads with adequate drainage and minimal land and ecological disturbance. It shall implement a Roadway Maintenance and Transport Management Plan, which shall include regular maintenance of access roads and other public/private roads within the project site to offset impact of heavy vehicle traffic and nuisances/damages to the people and properties, as well as provisions for regular water spraying and requiring vehicles to maintain low speed in dusty roads;
- 3.3 Ensure that emissions, effluents and noise levels generated from project activities conform to the prescribed DENR standards for all applicable parameters;
- 3.4 Install adequate and effective air, water, and noise pollution control equipment and facilities, such as water sprays, siltation ponds, and noise barriers/dampeners, and properly maintain and ensure their maximum efficiencies at all times;
- 3.5 Conduct quarterly monitoring of air/water quality and emissions/effluent generated from the operations, the results of which shall be submitted quarterly to the EMB Region IV-MIMAROPA and the EMB. Should the monitoring results indicate exceedances of DENR standards, the proponent shall immediately cease its operations and institute remedial measures until such time that the monitoring results conform to the DENR standards.

The proponent shall likewise conduct annual community health monitoring, the results of which shall be submitted to the DOH Region IV-MIMAROPA;

- 3.6 Clearly delineate on ground, in coordination with the MGB Region IV-MIMAROPA, the exact limit of the areas to be excavated/extracted in order to determine those areas susceptible to subsidence;

- 3.7 Transport, store, and handle fuels, and other toxic and hazardous chemicals/wastes in accordance with Republic Act (R.A.) No. 6969 requirements;
- 3.8 Observe good vegetative practices, proper land use, and sound soil management throughout the project implementation. Particularly, the proponent shall:
 - 3.8.1 Properly stockpile and dispose of the mine waste materials generated from the mine, silt materials scooped-out from the silt ponds/traps, and other solid wastes in permanent, stabilized areas away from any water body and drainage systems, and maintain them in safe and non-polluting conditions;
 - 3.8.2 Strictly effect stabilization and erosion control of the affected side slopes of the roads and nearby gullies, creeks and river within the project site, as well as those of the silt ponds/traps;
 - 3.8.3 Use the recovered topsoil for re-soiling or as soil cover on waste dumps for landscaping in general or stockpile it on designated suitable areas, maintained at not more than one (1) meter high and stabilized by temporary vegetation to protect it from erosion;
 - 3.8.4 Submit to the DENR Region IV-MIMAROPA-Forestry Management Service (FMS), copy furnished the EMB Region IV-MIMAROPA, the EMB, and the Forest Management Bureau (FMB), on the first year of project implementation, and every five years thereafter, a status report on 100% inventory of all trees in forest patches in the mine site and in the buffer zone. These forest areas, including those that are not directly affected by mining activities, shall be protected and maintained in their original condition prior to project implementation. In cooperation with the Government agencies concerned, the proponent shall plant with appropriate species idle/open areas in the site;
- 3.9 Provide and maintain buffer zones of at least twenty (20) meters wide along the entire periphery of the project site, as well as between the nearest water bodies and the mine. They shall be kept with dense vegetative cover and planted with additional endemic species to enhance their conditions and serve as dust buffers and noise barriers;
- 3.10 Implement an *"Integrated Solid Waste Management Program"*, together with its contractors/subcontractors, throughout the life of the project;
- 3.11 Protect the headwaters and natural springs/wells within the project site that are being utilized as sources of potable water by the community. Should the development activities affect the headwaters and natural springs/wells, the proponent shall immediately provide alternative source of potable water to the affected community.

Small-scale water impounding structures shall be constructed to ensure water availability for the residents located downstream;

- 3.12 Have full responsibility for the proper compliance by its contractors and subcontractors with the relevant conditions of this Certificate;
4. The proponent shall, during project operation, provide cooperation and support for cultural baseline studies such as those related to Indigenous Knowledge Systems and Practice (IKSP), ethnography, genealogical study/documentation, and, cultural heritage surveys and mapping;
5. All identified environmental hazards and risks, including sedimentation; release, spill, and/or leakage of toxic or hazardous chemicals and substances (from the silt ponds/traps and fuel storage); slope failure (settling ponds/silt traps, waste dumps, and stockpiles); fire or explosion due to flammable or explosive materials (fuel oil and explosives); occurrence of typhoon, earthquakes, landslides, and flooding; and work-related accidents shall be managed and, in case of emergency, addressed immediately for the protection of the workers, nearby residents, and sensitive ecosystem; and,
6. The proponent shall comply with the environmental management and protection requirements of the pertinent provisions of the Philippine Mining Act of 1995 (R.A. No. 7942) and its implementing rules and regulations (D.A.O. No. 96-40, as amended), as well as the Memorandum of Agreement (MOA) between the EMB and MGB executed on April 16, 1998. These include, among others:
 - 6.1 Submission of Environmental Protection and Enhancement Program (EPEP), with the Final Mine Rehabilitation and/or Decommissioning Plan (FMR/DP) integrated thereto, to the MGB, for approval;
 - 6.2 Setting up of a Contingent Liability and Rehabilitation Fund (CLRF) and Environmental Trust Fund (ETF). The CLRF shall consist of the Mine Rehabilitation Fund (MRF), the Mine Waste and Tailings Fees (MWTF), and the Final Mine Rehabilitation and Decommissioning Fund (FMRDF);
 - 6.3 Organization of Mine Environmental Protection and Enhancement Office (MEPEO), which shall submit monitoring reports on compliance of the proponent with the conditions stipulated in this Certificate, as well as with the EMMPs, to EMB and the EMB Region IV-MIMAROPA;
 - 6.4 Establishment of a MRF Committee and its monitoring arm, Multipartite Monitoring Team. A DOH representative shall be included as member in the MMT. All necessary monitoring instruments (e.g., high-volume sampler, noise meter, water quality checker, piezometer, etc.) in order to ensure efficient and regular monitoring by the MEPEO and MMT shall be made available by the proponent during conduct of monitoring activities;
 - 6.5 Submission of Social Development and Management Program (SDMP) to the MGB Region IV-MIMAROPA, for approval; and,
 - 6.6 Designation of a Community Relations Officer (CRO).

7. Transfer of ownership of the project carries the same conditions in the Certificate for which written notification must be made by herein grantee to the EMB and MGB within fifteen (15) days from such transfer.

Non-compliance with any of the above-stated conditions shall be a sufficient cause for the suspension or cancellation of this Certificate and/or imposition of fine in the amount of Fifty Thousand Pesos (P50,000.00) for every violation thereof at the discretion of the EMB and in accordance with Section 9 of P.D. No. 1586.

Granted this JUN 14 2006


ANGELO T. REYES
Secretary



Draft Final ECC: Revised Feb. 15, 2006.iii02.iii06



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV – B MIMAROPA

ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

ECC-R4B-1408-0083

THIS IS TO CERTIFY THAT THE PROPONENT, the **BERONG NICKEL CORPORATION**, is granted this Environmental Compliance Certificate (ECC) for the **CAUSEWAY (PIER) JETTISON PROJECT** located at **Brgy. Berong, Quezon, Palawan** by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), MIMAROPA Region.

This Certification is being issued for the Project, with the following details:

PROJECT DESCRIPTION

This Certificate shall cover the **Causeway (Pier) Jettison Project** located at **Brgy. Berong, Quezon, Palawan** having a total area of **Twenty Five Thousand (25,000) Sq.m.** specifically described as follows:

Corner	Latitude	Longitude
1-2	09°27'58.87"	118°11'46.81"
2-3	09°28'1.00"	118°11'44.33"
3-4	09°28'7.16"	118°11'49.69"
4-1	09°28'5.02"	118°11'52.17"

The project components enumerated to wit:

- ❖ Multi-purpose Building
- ❖ Maintenance Building
- ❖ Mooring Area

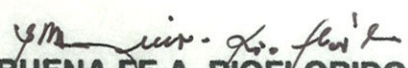
And as well, the project shall operate and maintain its facilities and amenities as contain in the submitted **Environmental Impact Statement (EIS)**.

This certification is issued in compliance to the requirements of Presidential Decree No. 1586, in accordance to Department Administrative Order No. 2003-30. The Bureau, however, is not precluded from reevaluating, adding, removing, and correcting any deficiencies or errors that may be found after issuance of this Certificate.

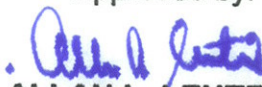
This is to certify, further, that in issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. It is expected that the proponent will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies prior to the start/implementation of the project. Furthermore, the DENR/EMB will be monitoring the project periodically to ensure compliance with the stipulations cited in the attached conditions and restrictions which are made as integral part of this ECC.

Issued at EMB MIMAROPA Region this **AUG 29 2014**

Recommending Approval:


BUENA FE A. RIOFLORIDO
Chief, Clearance and Permitting
Division/OIC, EIA Section in
Concurrent Capacity

Approved by:


ALLAN L. LEUTERIO
Regional Director



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV - B MIMAROPA

ECC-R4B-1408-0083

Causeway (Pier) Jettison Project



RDALLAN0001855

6th Floor DENR by the Bay Bldg., 1515 Roxas Blvd., Ermita Manila
RD's Office 536-9786; Admin/Finance Division Telefax No. 400-5960
PC Division 521-8904, EIA Division Telefax No. 400-5960

E-mail Address: admin-emb-r4b@denr.gov.ph and emb_mimaropa@yahoo.com

I. CONDITIONS

ENVIRONMENTAL MANAGEMENT

The proponent shall strictly implement the following mitigating, enhancement, and rehabilitating measures:

1. That green buffer zones and tree planting shall be established within and along the periphery of the project site to help attenuate noise levels, abate heat and absorb some pollutant emissions.
2. The proponent shall enter into a Memorandum of Agreement with the concerned DENR-Provincial Environment and Natural Resources Office in the implementation of the tree planting activity. The tree planting is one of the recommended activities in compliance with the government's commitment to the Kyoto Protocol Agreement.
3. That the proponent shall strictly manage all external, traffic problems, excessive surface runoff, dust, soil erosion, accidental spillage and health hazards identified in the **Environmental Impact Statement (EIS)** and, in case of emergency episodes, appropriate response activities shall be immediately undertaken for the protection of the workers/ personnel, host and nearby communities and the receiving environment.
4. That the proponent shall strictly manage all external, traffic problems, excessive surface runoff, dust, soil erosion, accidental spillage and health hazards identified in the Initial Environmental Examination Checklist (IEEC) Report and, in case of emergency episodes, appropriate response activities shall be immediately undertaken for the protection of the workers/ personnel, host and nearby communities and the receiving environment.
5. That an effective Information, Education and Communication (IEC) Plan shall be implemented in all phases of the project including communication of environmental risks of the project implementation.
6. That the solid waste management scheme as provided in the Environmental Management Plan (EMP) shall be continuously implemented from the start of the project operation.

GENERAL CONDITIONS

Further administrative conditions for the grant of this Certificate shall be strictly complied:

7. That the proponent shall religiously comply with the applicable provisions of P.D. 1586 (Philippine Environmental Impact Statement System), R.A. 9275 (Philippine Clean Water Act of 2004), R.A. 9003 (Ecological and Solid Waste Management Act of 2000), R.A. 6969 (Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990) and R.A. 8749 (Philippine Clean Air Act of 1999) and the Sanitation Code of the Philippines (P.D. 856).
8. That preservation and easement retention of natural drainage/waterways shall be undertaken and should conform with the provisions of the DENR Administrative Order No. 97-05 (Procedures in the Retention of Areas within certain distances along the Banks of Rivers, Streams, and Shores of Seas, Lakes and Oceans for Environmental Protection). If disturbed, a replacement drainage system shall be constructed within two (2) months from the disturbance.



9. That the proponent shall set-up a competent Environmental Unit and shall be duly accredited by this Office in accordance with DAO No. 26, series of 1992 (Appointment/Designation of Pollution Control Officers). The Environmental Unit shall be integrated in the proponent's organizational chart to handle all environment related aspects of the project implementation in addition to the monitoring requirements as specified in the Environmental Management Plan (EMP)/Environmental Monitoring Plan (EMoP) and other environmental commitments such as but not limited to the following:
- 9.1 Monitor actual project impacts vis-à-vis the predicted impacts and management measures in the **Environmental Impact Statement (EIS)**.
 - 9.2 Ensure that all post-assessment permits/clearances from other concerned government agencies are secured and in place.
 - 9.3 **Regular submission of a semi-annual ECC Compliance Monitoring Report** (on or before January 15 and July 15 of each year the project is operational) provided with supporting documents and in accordance with the prescribed format stipulated in the Implementing Rules and Regulations of P.D. 1586.
 - 9.4 **Submit a quarterly monitoring report using the prescribed format of the Self-Monitoring Report (SMR)** pursuant to DAO 2003-27.
 - 9.5 Submit an Abandonment Plan two (2) months prior to the abandonment activities. It shall include rehabilitation measures/clean-up, costs, remediation of areas possibly contaminated with toxic/hazardous substances and presentation of options on proposed alternative projects in the area.
10. That the proponent shall allocate ample budget for the implementation of the proposed mitigating/enhancement measures during the operation and abandonment phases of the project.
11. That health and sanitation practices shall be observed in all phases of the project and safety & personal protection equipment/devices shall always be provided to all employees/workers within the premises of the project site to prevent health and occupational hazards.
12. That a billboard containing this message: **"Notice To The Public, This CAUSEWAY (PIER) JETTISON PROJECT of BERONG NICKEL CORPORATION has been issued an Environmental Compliance Certificate (ECC-R4B-1408-0083) by the Department of Environment and Natural Resources Environmental Management Bureau MIMAROPA Region on AUG 29 2014."** shall be installed at all entry and exit points and in the perimeter of the project site facing the road to inform the general public within thirty (30) days from receipt of the ECC.
13. That a copy of the ECC shall be posted in a conspicuous location at the field office of the project site clearly visible to the public and shall be adequately framed or otherwise protected against damage and at the barangay bulletin board of the host barangay(s) within thirty (30) days from receipt of the ECC.
14. That any authorized DENR-EMB personnel, with proper identification card and travel/mission order, shall be allowed unconditional access to conduct an on-the-spot inspection and monitoring to the project without the need for prior notice to the proponent to oversee compliance to the ECC. *cell*

ECC-R4B-1408-0083
Causeway (Pier) Jettison Project

[Signature]

[Signature]

II. RESTRICTIONS

1. That no other activities should be undertaken other than what was stipulated in the **Environmental Impact Statement (EIS)** base report. Should there be an expansion of the project beyond the project description, construction of other structures beyond those stated in the **Environmental Impact Statement (EIS)** base report; or any change in the activity or location, shall be made subject to a new Environmental Impact Assessment (EIA) requirements.
2. That all appropriate construction, operational and resource-use permits/clearances from other national and local government agencies concerned (i.e. PNP, LGUs, DOH, PMRB, DOLE, DTI, etc.) shall be secured pertaining to the implementation of the project. Likewise, the proponent shall notify this Office of the reckoning date of project operation.
3. That the surplus, spoils, unsuitable soil and waste materials during construction shall be dumped/disposed properly at pre determined spoil banks and sites;
4. That all sand and gravel materials to be used in the project shall be sourced from the legitimate permittees with issued Environmental Compliance Certificate (ECC).
5. That in case of transfer of ownership/management of this project, these same conditions and restrictions shall apply and the transferee shall be required to notify this Office concerned within fifteen (15) days as regards to the transfer of ownership/management.
6. That the proponent (**BNC, Representative by Mr. Rufo S. Cabanlig, Jr.**) shall be accountable for any misrepresentation and failure to state material information in the submitted documents.

The conditions stipulated in this Certificate shall be deemed final within fifteen (15) days from receipt hereof and all conditions and restrictions set forth above shall be complied with by the herein grantee. This ECC is deemed expired if not implemented within five (5) years from the date of issuance and the proponent shall have to apply for a new ECC if it intends to pursue the project.

Non-compliance with any of the provisions of this certificate shall be a sufficient cause for the cancellation or suspension of this certificate and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (PhP50,000.00) for every violation thereof.

ECC-BAB-1408-0083
Canaway (Pier) Jetty Project



PROJECT ASSESSMENT PLANNING TOOL

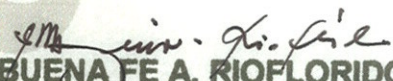
For the assistance of the Proponent, LGUs and other concerned government agencies (GAs) in the management of the project and for better coordination in mitigation on the impacts of the project on its surrounding areas and to the environment.

By way of recommendation, the following have been taken notice of by this Office and are providing these recommendations to the parties and authorities concerned for proper action and integration into their decision making-process.

Regulatory Conditions	
<p>1. The proponent shall comply with, but not limited to the following:</p> <p>1.1 P.D. 856 or the Sanitation Code of the Philippines;</p> <p>1.2 P.D. 442 or the Labor Code of the Philippines including occupational health and safety;</p> <p>1.3 R.A. 6541 or the National Building Code of the Philippines including adequate storm drainage system and other flood control measures and compliance to the Fire Safety and Emergency Preparedness;</p> <p>1.4 P. D. 705 or the Forestry Code of the Philippines</p>	<p>DOH DOLE-Bureau of Working Condition Municipal Planning & Dev't. Office/Building Official/BFP/ LGU Concerned</p> <p>Forest Management Service Region IV-B</p>
Environmental Planning Recommendations for the Proponent	
<p>1. Holistic approach to the implementation of Environmental Management Plan (EMP) of the project.</p> <p>2. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all phases of the project and to immediately address any environmental hazard that may take place.</p>	

For dissemination and proper action of the parties concerned.


JOSE REYNATO M. MORENTE
EIAR Chairman


BUENA FE A. RIOFLORIDO
Chief, Clearance and Permitting
Division/OIC, EIA Section in Concurrent
Capacity



ALLAN L. LEUTERIO
Regional Director

ECC-R4B-1408-0083
Causeway (Pier) Jettison Project

6th Floor DENR by the Bay Bldg., 1515 Roxas Blvd., Ermita Manila
RD's Office 536-9786; Admin/Finance Division Telefax No. 400-5960
PC Division 521-8904, EIA Division Telefax No. 400-5960
E-mail Address: admin-emb-r4b@denr.gov.ph and emb_mimaropa@yahoo.com

SWORN STATEMENT OF OWNER/PROPONENT

Under the provisions of Presidential Decree 1586, I, **RUFO S. CABANLIG, JR.**, Chief Operating Officer, **BERONG NICKEL CORPORATION.**, do hereby certify that the information provided to the Department of Environment and Natural Resources (DENR) – Environmental Management Bureau (EMB), MIMAROPA Region pertaining to the **CAUSEWAY (PIER) JETTISON PROJECT** are true and correct to the best of my personal knowledge and based on the records in my possession and I shall take full responsibility in complying with all conditions and restrictions contained in this Environmental Compliance Certificate (ECC).


RUFO S. CABANLIG, JR.
General Manager, Projects
**CAUSEWAY (PIER) JETTISON
PROJECT**

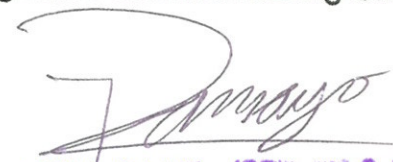
TIN: _____

01 SEP 2014

SUBSCRIBED AND SWORN TO before me this _____, the
above-named affiant taking oath with Community Tax Certificate No. _____
issued on _____ at _____.

Signature of Administering Officer

DOC. NO. 500
PAGE NO. 100
BOOK NO. XXI
SERIES OF 2014


ATTY. RAMIL JOSE B. TAMAYO
NOTARY PUBLIC TIN-231-AJ-1000
PTR NO. 2393078 UNTIL 12-31-14/ROLL NO. 48887
LIFETIME IGP NO. 888581 MANILA
OFFICE ADD. 307 3/F NATIONAL PRESS CLUB BLDG

ECC-RAB-1408-0083
Causeway (Pier) Jettison Project

ENVIRONMENTAL COMPLIANCE CERTIFICATE
ECC-4B-214-PA-2236-2005

The Department of Environment and Natural Resources-Environmental Management Bureau, MIMAROPA Region (IV-B) hereby grants this Environmental Compliance Certificate (ECC) to the Industrial Sand and Gravel Extraction Project of Atlas Consolidated Mining and Development Corporation (ACMDC) located at Berong River, So. Tungeb, Brgy. Berong, Quezon Palawan after complying with the Environmental Impact Assessment (EIA) requirement as prescribed in the promulgated guidelines implementing Section 3 (b) of P.D. 1121, Section 4 of P.D. 1151, Section 2 of P.D. 1586, Presidential Administrative Order No. 42 dated November 2, 2002 and DENR Administrative Order No. 2003-30.

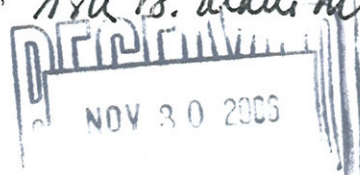
This Certificate is being issued subject to conditions stated hereunder. Non compliance with any of the conditions shall be sufficient cause for the suspension or cancellation of this Certificate and/or payment of fine in an amount not to exceed **FIFTY THOUSAND PESOS (P 50,000.00)** for every violation thereof, at the discretion of the DENR pursuant to Section 9 of P.D. 1586 and Section 16, Article IV of DENR Administrative Order No. 2003-30.

I. GENERAL PROVISIONS

1. That all other permits from other government agencies shall be secured prior to project implementation;
2. That any expansion from the existing approved operation shall be subjected to a separate EIA requirement;
3. That any misrepresentation or material falsehood on the submitted documents shall be sufficient cause for the cancellation or suspension of ECC;
4. That the transfer of ownership of this project carries with it the responsibility of complying with all conditions in this ECC, the transfer of which shall be made known to this Office through a written notification by herein grantee within fifteen (15) days from such transfer;
5. That the proponent shall secure insurance coverage that encompass payment of damages to health and property, environmental rehabilitation, remediation, and or clean up costs and expenses for any kind of environmental impairment caused by the project, copy furnish this office the policy and its annual renewal thereafter;

II. OPERATION PHASE

6. That this certificate is valid only for the **Sand and Gravel Extraction Project** with an annual production rate of 9,040 cubic meters of sand and gravel materials within an area of **50,000.00 square meters** located at the above-cited address;
7. That the Quarterly Self-Monitoring Report (SMR) shall be submitted to this office to include original production report;
8. That the silt traps and adequate overburden containment area shall be provided and properly maintained to contain silt-laden run-off;
9. That at least 5 meters along the perimeter of the approved site shall be established to serve as buffer zone;
10. That the proponent shall strictly conform with pertinent environmental provisions of R.A. 7942 (Philippine Mining Act of 1995) and its revised implementing rules and regulations as embodied under DENR Administrative Order No. 96-40;

Not a. Alarides

NOV 30 2005

11. That authorized DENR-EMB MIMAROPA personnel can initiate an on-the-spot inspection and monitoring even without prior notice;
12. That a Pollution Control Officer (PCO) / Environmental Officer for the project shall be appointed, and the name and bio-data of the same shall be submitted to this Office for accreditation;
13. That periodic sprinkling along haul road and other applicable mitigating measures shall be effected at least once a day or as maybe necessary during the dry period to minimize dust in addition to other applicable mitigating measures for the same purpose;
14. That in order to engage and observe good vegetation practices, proper land use and sound soil management in the country's brush land used/open denuded areas, upland, roadside and watershed areas, the proponent shall plant trees within their respective project site specifically buffer zone, or in coordination with concerned government agencies, shall replant the areas within the above-mentioned sites with appropriate tree species;
15. That the operation of the project shall conform with the Mining Operation Plan duly approved by the MGB Region IV-B;
16. That safety and precautionary measures shall be implemented to protect the workers at all times;
17. That all other mitigating measures cited in the submitted documents shall be implemented;
18. That this Certificate should be posted in a conspicuous location clearly visible to the public and shall be adequately framed or otherwise protected against damage.

ECC application fee duly paid as evidenced by O.R. No. 2150153 dated 01 June 2005.

Given this NOV 10 2005

Recommending Approval:


BUENA FE A. RIOFLORIDO
 OIC, Environmental Impact
 Assessment and Management Division

Approved by:


ESTER A. OLAVIDES
 OIC, Regional Director
 EMB-MIMAROPA Region

Conforme:


RENATO S. VICTORINO
 Proponent

cc: The RED, MIMAROPA Region
 The PENRO, Palawan



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
ENVIRONMENTAL MANAGEMENT BUREAU

MIMAROPA Region
6th Floor, 1515 L & S Bldg., Roxas Boulevard, Ermita, Manila
Tel. No. 536-97-86/400-5960

ENVIRONMENTAL COMPLIANCE CERTIFICATE
ECC-4B-215-PA-2236-2005

The Department of Environment and Natural Resources-Environmental Management Bureau, MIMAROPA Region (IV-B) hereby grants this Environmental Compliance Certificate (ECC) to the Industrial Sand and Gravel Extraction Project of Berong Nickel Corporation located at Berong River, So. Tungeb, Brgy. Berong, Quezon Palawan after complying with the Environmental Impact Assessment (EIA) requirement as prescribed in the promulgated guidelines implementing Section 3 (b) of P.D. 1121, Section 4 of P.D. 1151, Section 2 of P.D. 1586, Presidential Administrative Order No. 42 dated November 2, 2002 and DENR Administrative Order No. 2003-30.

This Certificate is being issued subject to conditions stated hereunder. Non compliance with any of the conditions shall be sufficient cause for the suspension or cancellation of this Certificate and/or payment of fine in an amount not to exceed FIFTY THOUSAND PESOS (P 50,000.00) for every violation thereof, at the discretion of the DENR pursuant to Section 9 of P.D. 1586 and Section 16, Article IV of DENR Administrative Order No. 2003-30.

I. GENERAL PROVISIONS

1. That all other permits from other government agencies shall be secured prior to project implementation;
2. That any expansion from the existing approved operation shall be subjected to a separate EIA requirement;
3. That any misrepresentation or material falsehood on the submitted documents shall be sufficient cause for the cancellation or suspension of ECC;
4. That the transfer of ownership of this project carries with it the responsibility of complying with all conditions in this ECC, the transfer of which shall be made known to this Office through a written notification by herein grantee within fifteen (15) days from such transfer;
5. That the proponent shall secure insurance coverage that encompass payment of damages to health and property, environmental rehabilitation, remediation, and or clean up costs and expenses for any kind of environmental impairment caused by the project, copy furnish this office the policy and its annual renewal thereafter;

II. OPERATION PHASE

6. That this certificate is valid only for the **Sand and Gravel Extraction Project** with an annual production rate of 9,040 cubic meters of sand and gravel materials within an area of **50,000.00 square meters** located at the above-cited address;
7. That the Quarterly Self-Monitoring Report (SMR) shall be submitted to this office to include original production report;
8. That the silt traps and adequate overburden containment area shall be provided and properly maintained to contain silt-laden run-off;
9. That at least 5 meters along the perimeter of the approved site shall be established to serve as buffer zone;
10. That the proponent shall strictly conform with pertinent environmental provisions of R.A. 7942 (Philippine Mining Act of 1995) and its revised implementing rules and regulations as embodied under DENR Administrative Order No. 96-40;

11. That authorized DENR-EMB MIMAROPA personnel can initiate an on-the-spot inspection and monitoring even without prior notice;
12. That a Pollution Control Officer (PCO) / Environmental Officer for the project shall be appointed, and the name and bio-data of the same shall be submitted to this Office for accreditation;
13. That periodic sprinkling along haul road and other applicable mitigating measures shall be effected at least once a day or as maybe necessary during the dry period to minimize dust in addition to other applicable mitigating measures for the same purpose;
14. That in order to engage and observe good vegetation practices, proper land use and sound soil management in the country's brush land used/open denuded areas, upland, roadside and watershed areas, the proponent shall plant trees within their respective project site specifically buffer zone, or in coordination with concerned government agencies, shall replant the areas within the above-mentioned sites with appropriate tree species;
15. That the operation of the project shall conform with the Mining Operation Plan duly approved by the MGB Region IV-B;
16. That safety and precautionary measures shall be implemented to protect the workers at all times;
17. That all other mitigating measures cited in the submitted documents shall be implemented;
18. That this Certificate should be posted in a conspicuous location clearly visible to the public and shall be adequately framed or otherwise protected against damage.

ECC application fee duly paid as evidenced by **O.R. No. 2150154** dated **01 June 2005**.

Given this NOV 10 2005.

Recommending Approval:


BUENA FE A. RIOFLORIDO
OIC, Environmental Impact
Assessment and Management Division

Approved by:


ESTER A. OLAVIDES
OIC, Regional Director
EMB-MIMAROPA Region

Conforme:


FRANK LUBBOCK
Proponent

cc: The RED, MIMAROPA Region
The PENRO, Palawan



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU
MIMAROPA Region

7/F DENR Building, 1515 Roxas Boulevard, Ermita, Manila
 Telefax No. (+632) 536-0215 / (+632) 310-1369
 Email: region4b@mgb.gov.ph



December 26, 2019

MR. CESAR F. SIMBULAN, JR.

President

Berong Nickel Corporation

3rd Floor DMCI Homes Corporate Center,
 1321 Apolinario Street, Brgy. Bangkal,
 Makati City, Philippines

Dear Mr. Simbulan:

This is in connection with your submitted **Annual Environmental Protection and Enhancement Program (AEPEP) for CY 2020** for your **Berong Nickel Project** in in Brgy. Berong, Quezon, Palawan.

Please be informed that after a thorough evaluation by the technical personnel of this Office, the said program was found to be sufficient in form and substance except for the following minor comments/recommendations:

1. General Arrangement Map in page 5 should be enlarged (A3) for legibility.
2. Organizational chart in page 26 should be enlarged for legibility.
3. Land Use map in page 31 should be enlarged for legibility.
4. Buffer zone management was discussed in pages 46-47. However, photos with coordinates should be provided, as well.
5. A plan of Yard 7 stockpile area showing the environmental impact mitigating measures is presented in page 20. However, the plan should be enlarged (landscape) for legibility.

Nevertheless, the said program is hereby approved with Certificate of Approval denominated as **AEPEP No. 2020-05-MIMAROPA** and will be released upon submission of twelve (12) hard copies and one (1) electronic file of the amended 2020 AEPEP within fifteen (15) days upon receipt hereof with the inclusion of the above listed comments/recommendations as addendum.

Your preferential attention on the matter is highly appreciated.

Very truly yours,


ROLAND A. DE JESUS, CESO V
 Regional Director

**"MINING SHALL BE PRO-PEOPLE AND PRO-ENVIRONMENT
 IN SUSTAINING WEALTH CREATION AND IMPROVED QUALITY OF LIFE."**



MSDF-02 Rev02 12.17.2019

Certificate of Approval

AEPEP No. 2020-05-MIMAROPA

The Mine Rehabilitation Fund Committee – Technical Working Group (MRFC-TWG) having reviewed the Annual Environmental Protection and Enhancement Program (AEPEP) for CY 2020, hereby issues this Certificate of Approval to **Berong Nickel Corporation (BNC)** for its **Berong Nickel Project** located in Brgy. Berong, Quezon, Palawan subject to the following conditions, in addition to the provisions stipulated under the Department of Environment and Natural Resources Administrative Order (DAO) No. 2010 – 21, the Consolidated Implementing Rules and Regulations of Republic Act No. 7942, otherwise known as the “Philippine Mining Act of 1995:”

1. This Certificate is valid only for the activities stipulated in the approved AEPEP CY 2020 (hereto attached as Annex A and made an integral part hereof);
2. The budget allocation of this AEPEP amounts to twenty five million, five hundred fifty four thousand and five hundred pesos only (PhP25,554,500.00), which is equivalent to 9.2% of BNC’s estimated direct mining cost for 2019;
3. BNC shall allocate for its annual environment-related expenses a percentage based on the AEPEP that may approximate a minimum of three to five percent (3-5%) of its direct milling cost depending on the environmental/geologic condition, nature and scale of operations, and technology employed;
4. BNC shall strictly conform to the policy of MGB on prompt submission of AEPEP, which is thirty (30) calendar days prior to the beginning of every calendar year;
5. To ensure and check the performance of and compliance with the approved AEPEP, the Multipartite Monitoring Team (MMT) shall monitor every quarter or more frequently, as may be deemed necessary, the activities stipulated in the AEPEP;
6. The expenses for such monitoring shall be chargeable against the Monitoring Trust Fund (MTF) of the Mine Rehabilitation Fund (MRF) as provided in Section 181 of DAO No. 2010-21;
7. BNC shall submit to MGB MIMAROPA a quarterly report of its environmental expenses within ten (10) days after the end of every quarter using the prescribed format;

8. BNC shall submit a comprehensive Care and Maintenance Program (CMP) in case of suspension/stoppage of its operations;
9. Additional conditions may be imposed to effectively implement the approved AEPEP based on the results of monitoring or environmental audit by the MGB Central Office and MGB MIMAROPA Region or the MMT;
10. The recommendation/s and directive/s or instruction/s of the MRFC and MMT members should be considered and put into effect by the proponent in the implementation phase of the subject AEPEP;
11. Transfer of ownership or assignment of the project carries with it the same conditions in this Certificate for which written notification shall be made by the company to the MGB MIMAROPA Region within fifteen (15) days from such transfer; and
12. That all other necessary permits (*i.e.* discharge permit, *etc.*) from all concerned government agencies must be secured in relation to project operation.

Non-compliance with the above conditions shall be sufficient ground for the suspension, cancellation, revocation or termination of this Certificate and/or be basis for the applicability of penalty prescribed in the Penal Provisions of R.A. 7942.

Issued this JAN 15 2020 at Manila, Philippines.


ROLAND A. DE JESUS, CESO V
Regional Director



Republic of the Philippines
Department of Environmental and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Region IV-B

PENRO Compound, Brgy. Suqui, Calapan City, Oriental Mindoro,
Satellite Office, 6th Floor DENR by the Bay Bldg., 1515 Roxas Blvd.,
Ermita, Manila
Tel No: (02) 536-97-86

Annex 5

Date: Apr 06, 2021

Permit No.: DP-R4B-21-02058

New

WASTEWATER DISCHARGE PERMIT

Pursuant to Section 14, Article 2, of the RA 9275 otherwise known as the "Philippine Clean Water Act of 2004", this permit is hereby granted to **Berong Nickel Corporation** with office address at 1321 Apolinario Street, Bangkal, Makati City, Ncr, Fourth District for its establishment:

Berong Nickel Corporation	Badlisan Road Berong QUEZON
TIN No. 233-903-690-000	

- That this permit is issued to the Kokokon Siltation Pond System consisting of seven (7) units retention ponds with a total capacity of 17,795 cubic meters and the permit holder shall discharge to the final discharge point at Pond 7 with a capacity of 1,956 cubic meters.
- The permit holder shall ensure that discharge rate of the effluent from the Kokokon Siltation Pond System shall not exceed its design rate capacity and shall comply with the following standard:

Parameter	Standard	Parameter	Standard
pH	6.0 - 9.5	Total Suspended Solids	100 mg/L
Manganese	2 mg/L	Arsenic	0.04 mg/L
Cadmium	0.01 mg/L	Lead	0.1 mg/L
Nickel	1 mg/L		

** Reference for effluent parameters: DAO 2016-08; PSIC Code 07294*

- That the maximum effluent generation reused for process operation, agricultural purposes (watering of plants, trees, and other vegetation), environmental mitigation (i.e. road watering/sprinkling) and cleaning of facilities shall be submitted at this Office within thirty (30) days upon receipt hereof.
- Submit Self-Monitoring (SMR) based on the following schedule:

Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan-Mar	1-15 Apr.	Third	Jul-Sep.	1-15 Oct.
Second	Apr-Jun.	1-15 Jul.	Fourth	Oct-Dec.	1-15 Jan.

- The permit holder shall include effluent analysis on the parameters listed in condition no. 2 of this permit, conducted by Third Party Laboratory duly recognized by EMB, in every submission of the SMR.
- All water consumption shall be measured and recorded on a daily basis. An effective flow-metering device(s) shall be installed for this purpose.
- Submit Sludge Disposal Management Plan within thirty (30) days upon receipt hereof.
- The permit holder shall provide accessible sampling port for water sampling activity of the Kokokon Siltation Pond System within thirty (30) days upon receipt hereof. Thereafter, the report/proof of compliance within fifteen (15) days upon completion of the said activity shall be submitted.
- Provide flow-measuring device at influent and effluent sides of your Kokokon Siltation Pond System within thirty (30) days upon receipt of this permit. Submit report/proof of compliance within fifteen (15)



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days upon completion of the said activity.

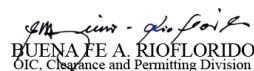
- 10. Submit certificate or any documentary proof of desilting of the Kokokon Siltation Pond System.
- 11. The permit holder shall allow entry to the said facility/establishment and provide immediate, safe and adequate access to authorized representative/s of the DENR – EMB for the purpose of environmental inspection and water sampling.
- 12. This permit, together with the corresponding Official Receipts of Payment, shall be adequately framed and posted in a conspicuous place of the plant/establishment.
- 13. This permit shall be renewed thirty (30) days prior to its expiration.

This permit is valid up to Apr 06, 2022, unless revoked or suspended by this Office in writing.

Non-compliance with the above conditions and/or any pertinent provisions of RA 9275 otherwise known as "Philippine Clean Water Act of 2004", a corresponding penalty in the amount of P10,000-P200,000 per violation shall be imposed.

Recommended by:

Approved by:


BUENA FE A. RIOFLORIDO
OIC, Clearance and Permitting Division


ATTY. MICHAEL DRAKE P. MATIAS
Regional Director

Filing Fee	: Php 55.00 O.R. No. : 5150606	Date : April 3, 2018
PD1856	: Php 10.00 O.R. No. : 5150606	Date : April 3, 2018
Documentary Stamp Tax	: Php 30.00 O.R. No. : 5150606	Date : April 3, 2018
Documentary Stamp Tax	: Php 30.00 O.R. No. : 5150606	Date : April 3, 2018
Permit Fee	: Php 3100.00 O.R. No. : 5151229	Date : July 3, 2018
Water Discharge Fee	: Php 91.25 O.R. No. : 5151229	Date : July 3, 2018



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Republic of the Philippines
Department of Environmental and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Region IV-B
PENRO Compound, Brgy. Suqui, Calapan City, Oriental Mindoro,
Satellite Office, 6th Floor DENR by the Bay Bldg., 1515 Roxas Blvd.,
Ermita, Manila
Tel No: (02) 536-97-86

Date: Apr 06, 2021

Permit No.: DP-R4B-21-02059

New

WASTEWATER DISCHARGE PERMIT

Pursuant to Section 14, Article 2, of the RA 9275 otherwise known as the "Philippine Clean Water Act of 2004", this permit is hereby granted to **Berong Nickel Corporation** with office address at 1321 Apolinario Street, Bangkal, Makati City, Ncr, Fourth District for its establishment:

Berong Nickel Corporation	Badlisan Road Berong QUEZON
TIN No. 233-903-690-000	

- That this permit is issued to the Sorex Road Km 7 Siltation Pond System consisting of seven (7) units retention ponds with a total capacity of 21,240.23 cubic meters and the permit holder shall discharge to the final discharge point at Pond 7 with a capacity of 3,231.96 cubic meters.
- The permit holder shall ensure that discharge rate of the effluent from the Sorex Road Km 7 Siltation Pond System shall not exceed its design rate capacity and shall comply with the following standard:

Parameter	Standard	Parameter	Standard
pH	6.0 - 9.5	Total Suspended Solids	100 mg/L
Manganese	2 mg/L	Arsenic	0.04 mg/L
Cadmium	0.01 mg/L	Lead	0.1 mg/L
Nickel	1 mg/L		

* Reference for effluent parameters: DAO 2016-08; PSIC Code 07294

- That the maximum effluent generation reused for process operation, agricultural purposes (watering of plants, trees, and other vegetation), environmental mitigation (i.e. road watering/sprinkling) and cleaning of facilities shall be submitted at this Office within thirty (30) days upon receipt hereof.
- Submit Self-Monitoring (SMR) based on the following schedule:

Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan-Mar	1-15 Apr.	Third	Jul-Sep.	1-15 Oct.
Second	Apr-Jun.	1-15 Jul.	Fourth	Oct-Dec.	1-15 Jan.

- The permit holder shall include effluent analysis on the parameters listed in condition no. 2 of this permit, conducted by Third Party Laboratory duly recognized by EMB, in every submission of the SMR.
- All water consumption shall be measured and recorded on a daily basis. An effective flow-metering device(s) shall be installed for this purpose.
- Submit Sludge Disposal Management Plan within thirty (30) days upon receipt hereof.
- The permit holder shall provide accessible sampling port for water sampling activity of the Sorex Road Km 7 Siltation Pond System within thirty (30) days upon receipt hereof. Thereafter, the report/proof of compliance within fifteen (15) days upon completion of the said activity shall be submitted.
- Provide flow-measuring device at influent and effluent sides of your Sorex Road Km 7 Siltation Pond System within thirty (30) days upon receipt of this permit. Submit report/proof of compliance within



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fifteen (15) days upon completion of the said activity.


- 10. Submit certificate or any documentary proof of desilting of the Sorex Road Km 7 Siltation Pond System.
- 11. The permit holder shall allow entry to the said facility/establishment and provide immediate, safe and adequate access to authorized representative/s of the DENR – EMB for the purpose of environmental inspection and water sampling.
- 12. This permit, together with the corresponding Official Receipts of Payment, shall be adequately framed and posted in a conspicuous place of the plant/establishment.
- 13. This permit shall be renewed thirty (30) days prior to its expiration.

This permit is valid up to Apr 06, 2022, unless revoked or suspended by this Office in writing.

Non-compliance with the above conditions and/or any pertinent provisions of RA 9275 otherwise known as "Philippine Clean Water Act of 2004", a corresponding penalty in the amount of P10,000-P200,000 per violation shall be imposed.

Recommended by:

Approved by:


BUENA FE A. RIOFLORIDO
OIC, Clearance and Permitting Division


ATTY. MICHAEL DRAKE P. MATIAS
Regional Director

Filing Fee	: Php 55.00	O.R. No. : 5150607	Date : April 3, 2018
PD1856	: Php 10.00	O.R. No. : 5150607	Date : April 3, 2018
Documentary Stamp Tax	: Php 30.00	O.R. No. : 5150607	Date : April 3, 2018
Documentary Stamp Tax	: Php 30.00	O.R. No. : 5150607	Date : April 3, 2018
Permit Fee	: Php 3100.00	O.R. No. : 5151228	Date : July 3, 2018
Water Discharge Fee	: Php 319.38	O.R. No. : 5151228	Date : July 3, 2018



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Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU

North Avenue, Diliman, Quezon City, Philippines
Tel. No. (+63 2) 928-8642 / 928-8937 Fax No. (+63 2) 920-1635 E-mail: central@mgb.gov.ph

CONTINGENT LIABILITY AND REHABILITATION FUND STEERING COMMITTEE

CERTIFICATE OF APPROVAL

EPEP and FMR/DP No. **087 2009 03**

The Contingent Liability and Rehabilitation Fund Steering Committee (CLRFSC), having approved the Environmental Protection and Enhancement Program (EPEP) and Final Mine Rehabilitation and/or Decommissioning Plan (FMR/DP) of **BERONG NICKEL CORPORATION (BNC)**-Berong Nickel Project located at Barangay Berong, Quezon, Palawan, hereby grants this Certificate of Approval, after substantially complying with the EPEP and FMR/DP requirements, pursuant to DENR Administrative Order No. 96-40, as amended, the revised implementing rules and regulations of Republic Act (R.A.) No. 7942.

The project is part and parcel of the Mineral Production Sharing Agreement (MPSA), denominated as **MPSA No. 235-2007-IVB** and dated **08 June 2007**, covering an area of **288.00** hectares. It is covered by an Environmental Compliance Certificate (ECC) issued by the DENR-EMB Central Office with Reference Code No. **0507-008-301**, dated **14 June 2006**.

This Certificate is being issued subject to the following conditions, in addition to the provisions as stipulated under D.A.O. No. 96-40, as amended, and ECC:

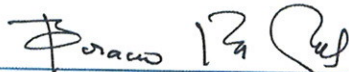
1. This Certificate is valid only for the activities stipulated in the approved EPEP and FMR/DP (hereto attached as Annex "A" and made an integral part hereof);
2. The company shall submit an **Annual EPEP** to the Mine Rehabilitation Fund Committee (MRFC) for review and approval to effectively implement the EPEP, within thirty (30) calendar days from the date of this Certificate and at least thirty (30) calendar days prior to the beginning of every calendar year thereafter. The CLRFSC shall be furnished with a copy of the approved AEPEP;
3. The company shall fully implement its approved five-year **Social Development and Management Program (SDMP)**;
4. The company shall update its **Contingent Liability and Rehabilitation Fund (CLRF)**, within fifteen (15) calendar days from the date of this Certificate, to ensure just and timely compensation for damages and progressive and sustainable rehabilitation for any adverse effect the Project may cause;
5. The first annual cash provision for Final Mine Rehabilitation and Decommissioning Fund (FMRDF) shall be made **on or before December 2010**. The schedule of the annual cash provisions is hereto attached as Annex "B";
6. Withdrawal from the FMRDF shall be based on a work and financial plan approved by the CLRFSC upon the recommendation of the MRFC;
7. After the first year of the FMR/DP implementation and thereafter, the Company shall submit a progress report containing details of fully, partially and ongoing rehabilitation activities relative to the implementation of the FMR/DP. The report shall be submitted to the MRFC for review and evaluation within thirty (30) days from the end of the term of the preceding work and financial plan. The results of the Committee's review and evaluation shall be integrated in the succeeding year's work and financial plan;

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8. The FMR/DP shall be reviewed and/or revised at a date not exceeding two (2) years after its approval and every two (2) years thereafter. The FMR/DP may also be reviewed and/or revised whenever amendments are justified by changes in mining activities; the review and/or revision may be made on the Company's initiative or at the request of the Director/Regional Director concerned. Relatively, revision on the FMRDF shall be likewise made after the revision of the FMR/DP and upon approval of the CLRFSC;
9. The Company shall prepare and submit a Final Rehabilitation Report with third party Environmental Audit (FRR with EA) for pre-evaluation by the MRFC and final approval by the CLRFSC, if, based on the assessment of the Company, that the objectives of mine closure, as contained in the approved FMR/DP, have been achieved;
10. Any remaining amount, based on the Company's total FMRDF annual provisions, shall be released back to the Company: *Provided*, that any shortfall in the amount needed to achieve the objectives of mine closure pursuant to the approved FMR/DP and to implement the Site Management Plan, shall be shouldered by the Company;
11. Additional conditions may be imposed to effectively implement the approved EPEP/AEPEP/FMR/DP should the results of monitoring or environmental audit by the MGB Central Office, *MGB Regional Office No.IV-B* or the Multipartite Monitoring Team (MMT) warrant them;
12. This Certificate shall be considered automatically revoked if the project operation is suspended, stopped and/or does not commenced for more than five (5) years;
13. Transfer of ownership or assignment of the project carries with it the same conditions in this Certificate, for which the company shall make written notification to the MGB within fifteen (15) days from such transfer.
14. The company must secure all other necessary permits from all concerned Government agencies.

Non-compliance with the above conditions shall be sufficient ground for the cancellation, revocation or termination of this Certificate or suffer the penalty prescribed in the Penal Provisions of R.A. No. 7942.

Given this APR 28 2009, at Quezon City, Philippines.



HORACIO C. RAMOS
Director, Mines and Geosciences Bureau
and Chairman, CLRFSC


Conforme:

KENNETH A. STEIN
Chief Operating Officer
BERONG NICKEL CORPORATION



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
Region 4B
PENRO Compound, Brgy. Suqui, Calapan City, Oriental
Mindoro, Satellite Office, 6th Floor DENR by the Bay
Bldg., 1515 Roxas Blvd., Ermita, Manila
Telephone Nos: (02) 536-97-86
Website: <http://mimaropa.emb.gov.ph/>

HAZARDOUS WASTE GENERATOR REGISTRATION CERTIFICATE

Pursuant to Chapter 3 of DENR Administrative Order (DAO) No. 2013-22, the Implementing Rules and Regulations of Republic Act (RA) 6969, this Certificate is issued to:

Name of Establishment : **BERONG NICKEL CORPORATION**

Facility Address : BADLISAN ROAD, BERONG, QUEZON, PALAWAN

You are hereby assigned with the new *on-line registration na*

OL-GR-R4B-53-001795

This certifies that the above-named Hazardous Wastes Generator generates the following types of wastes:

Waste Class	Waste Number
Lead compounds	D406
Mercury and mercury compounds	D407
Grease wastes	H802
Used industrial oil including sludge	I101
Vegetable oil including sludge	I102
Oil-contaminated Materials	I104
Containers previously containing toxic chemical substances	J201
Pathological or infectious wastes	M501
Pharmaceuticals and drugs	M503
Waste electrical and electronic equipment (WEEE)	M506

1. The above-named HW Generator shall comply with all the requirements of R.A 6969, its Implementing Rules and Regulation of the Republic Act R.A 6969 and the Procedural Manual for Hazardous Wastes Management.
2. Submission of the duly notarized self monitoring report shall be made within fifteen (15) days after the end of every reporting period using prescribed format.
3. Please refer to this number whenever you make transactions with EMB on matters pertaining to RA 6969.


ATTY. MICHAEL DRAKE P. MATIAS
Regional Director

August 17, 2020



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GENETRON INTERNATIONAL MARKETING

Tels. 412-7900, 372-3715, 411-7590 Fax# 374-6896

CERTIFICATE OF TREATMENT

Control No.: COT M-M-4B-53-2019-00028 [1-2]

Date Issued: March 27, 2019

Issued to the hazardous waste generator,

BERONG NICKEL CORPORATION

Sitio Badlisan, Brgy. Berong, Quezon, Palawan

GR ID Number: GR-4B-53-00013

For the STORAGE, TREATMENT, DESTRUCTION and DISPOSAL
of hazardous waste, stated below at:

GENETRON INTERNATIONAL MARKETING

425 Tubaw St., Brgy. Sulucan, Angat, Bulacan

TP-R3-14-00012 and TR-R3-14-00005



PTT No:
Valid until:

M-PTT-R3-14-2018-00788
April 10, 2019

Manifest Number:
Date Transported:

M-M-4B-53-2019-00028
February 27, 2019

HW NO. (CODE)	WASTE DESCRIPTION	QTY	UNIT	TREATMENT DATE	TREATMENT PROCESS
I101	Used Oil	22.8	metric tons	Mar 27, 2019	Oil Re-refining and Thermal Treatment
I104	Used Oil Filter (Solid)	4.2	metric tons	Mar 27, 2019	Thermal Treatment

This certification is issued in accordance to Republic Act 6969 and their respective rules and regulations.

Prepared By:


JOER D. HIZON
Laboratory-in-Charge

Approved and Checked By:


RIO R. ADRIANO
Pollution Control Officer
COA No.-18K-03BU-1135



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
MIMAROPA REGION

6th Floor DENR In-the-Box Bldg., 151st Roxas Blvd., Ermita Manila
RD's Office 536-9786 Admin/Finance Division Telefax No. 400-9960
PC Division 521-8904 EIA Division Telefax No. 400-9960
Visit us at <http://www.denr.gov.ph>

HAZARDOUS WASTE MANIFEST SYSTEM

Hazardous Waste Generator's Name: **BERONG NICKEL CORPORATION**

DENR ID No.: GR-4B-53-00013

Generator's Address: Brgy. Berong, Quezon, Palawan

Tel. No.:

Fax No.:

PTT No.: M-PTT-R3-14-2018-00788

Manifest No.: M-M-4B-53-2019-00028

Waste Class and Waste Number

HW Number: I101

Quantity (MT): ~~25.2~~ 22.8 *salinas*

Date of Transport: 02.27.2019

HW Number: I104

Quantity (MT): 4.2

Date of Transport: 02.27.2019

Packaging Information:

PROPERLY PACKED AND LABELED.

Special Handling Instructions:



Transport Type: ☒ Land ☒ Water

Land Transporter: GENETHON INTERNATIONAL MARKETING

Water Transporter: OCEANIC CONTAINER LINES, INC.

2nd Land Transporter: GENETHON INTERNATIONAL MARKETING

Treater: GENETHON INTERNATIONAL MARKETING

I hereby declare that the content are fully described above and are classified, packed, marked and labeled and in all respect in proper condition to transport to approved TSD facility in accordance with applicable national regulations.

Signed by Owner or Authorized Representative:

Signature over printed name: *Salinas* JAY PEE R. DELA CRUZ

Designation: POLLUTION CONTROL OFFICER

Date Signed: 02.27.2019


Transporter No. 1

Date of Transport: 02-27-2019

Vehicle (Plate number and Type): VVB981 TRACTOR HEAD
322461366 TRACTOR HEAD

Driver Name(s): REX KABAL
FRILAN LAGRADA

Signed by Owner or Authorized Representative:

Signature over printed name:  FRIGIDO M. HERNANDEZ
Designation: PCO
Date Signed: 2/27/2019

Transporter No. 2

Date of Transport:


Vehicle (Plate number and Type):

Driver Name(s):


Signed by Owner or Authorized Representative:

Signature over printed name:
Designation:
Date Signed:

Generator: BERONG NICKEL CORPORATION

Signature over printed name:  JAY R. PAE CMSE
Designation: PCO
Date Signed: 02-27-2019

Transporter #1: GENETRON INTERNATIONAL MARKETING

Signature over printed name:  FRIGIDO HERNANDEZ
Designation: PCO
Date Waste Received: 02/27/2019

Transporter #2: (Company Name/DENR ID No.)

Signature over printed name:
Designation:
Date Waste Received:

TSD Premise/Operator: GENETRON INTERNATIONAL MARKETING

Signature over printed name

RUSTY F. DOMINGO

Designation **Pro**

Date Waste Received: _____

MAR 20 2019

FOR DENR USE ONLY

JOC NO 773
PAGE NO 155
BOOK NO 53
SERIES OF 2019

ATTY. SEVERINO T. SANTOS
Notary Public
 Until December 31, 2019
 PTR No. 8765120 / 1-3-19
 IBP No. 1078150 / 1-3-19
 City of San Fernando (P)
 TIN - 139-044-704 Roll No. 19182

Certificate of Registration



This is to certify that the Environmental Management System of

BERONG NICKEL CORPORATION

Sitio Badlisan, Brgy. Berong, Quezon, Palawan, 5304 Philippines

applicable to

Provision of Mining of Nickel Ore

has been assessed and registered by NQA against the provisions of

BS EN ISO 14001 : 2015

This registration is subject to the company maintaining an environmental management system, to the above standard, which will be monitored by NQA.

A handwritten signature in black ink, appearing to read 'M. Combs', is written over the text 'Managing Director'.

Managing Director

Certificate No:

Issue Date:

Valid Until:

67322

28 August 2018

28 August 2021



015



Republic of the Philippines
Department of Environment and Natural Resources
MINES AND GEOSCIENCES BUREAU (MIMAROPA)
DENR by the Bay 1515 L/S Bldg. Roxas Blvd., Ermita, Manila

REGIONAL SPECIAL ORDER

No. 001
Series of 2007

JAN 05 2007

**SUBJECT : CREATION OF THE MINE REHABILITATION
FUND COMMITTEE (MRFC) FOR BERONG
NICKEL CORPORATION (BNC)**

In the interest of the service and to fully operationalize the environmental provisions of DAO-96-40, the Revised Implementing Rules and Regulations of R.A. 7942 (otherwise known as the Philippine Mining Act of 1995), the corresponding Mine Rehabilitation Fund Committee (MRFC) for Berong Nickel Corporation is hereby created in compliance to Section 182 of DAO 96-40.

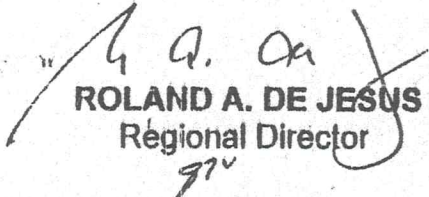
Pursuant to Section 183 of the above cited DAO and AO-2004-54, Amendment to DAO 96-40, the MRFC shall be composed of the following:

<u>Name</u>	<u>Office</u>	<u>Position</u>
1. RD Roland A. De Jesus	MGB-IVB	Chairman
2. RED Vicente S. Paragas (Represented by PENR Officer – Palawan)	DENR-IVB	Co-Chairman
3. RD Ester A. Olavides	EMB-IVB	Member
4. Dir. Romeo B. Dorado	PCSD	Member
5. Dr. Keith Halford	BNC	Member
6. Ms. Esperanza B. Caabay	LGU-Quezon, Palawan	Member
7. Representative	NGO-Palawan	Member

In the event of changes in assignment of any of the above listed official/s, the incoming official/s shall automatically assume their respective position/s in the Committee.

The Committee shall perform its duties and assume the responsibilities as stipulated under Section 182 and 184 of the above cited DAO.

This Order shall take effect immediately.


ROLAND A. DE JESUS
Regional Director

RESOLUTION No. 01

Date : APR 19 2007

**RESOLUTION CONSTITUTING/DEPUTIZING THE MULTIPARTITE
MONITORING TEAM (MMT) FOR BERONG NICKEL CORPORATION (BNC)
SITUATED IN QUEZON, PALAWAN**

WHEREAS, in lieu of the EGF, all operating mines and quarries are required to establish a CLRF pursuant to R. A. 7942 and that a MOA between MGB and EMB was entered into to effect efficient implementation of the CLRF;

WHEREAS, pursuant to Section 182 of DAO 96-40, the implementing rules and regulations of R. A. 7942, the Mine Rehabilitation Fund Committee (MRFC) was created by virtue of Regional Special Order No. 001 dated January 5, 2007 which is tasked, among others, to manage, operate, monitor and look after the safety of the Mine Rehabilitation Fund of Berong Nickel Corporation;

WHEREAS, sections 182 and 185 of DAO 96-40, provide that the MMT be deputized by the MRFC to serve as its monitoring arm;

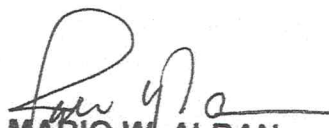
WHEREAS, during the 2nd MRFC meeting held on February 16, 2007, the MRFC resolves to constitute/deputize the MMT which is tasked to undertake the monitoring of BNC's environmental protection and enhancement activities pursuant to the pertinent provisions of R. A. 7942 and DAO 96-40;


NOW THEREFORE, premises considered, the following are hereby designated as members of the MMT for Berong Nickel Corporation.

1. Representative from MGB 4B - Emilio R. Ramos, Team Leader
Mario W. Alban and/or
Percival E. Ladub (or other
officially authorized MESD-
MGB4B personnel) as
Alternate/s
2. Representative from EMB 4B - Nunilon R. Tangulig, as
Member
Pablito Estorque, as Alternate
3. Representative from DENR 4B - current CENR officer, as
Member

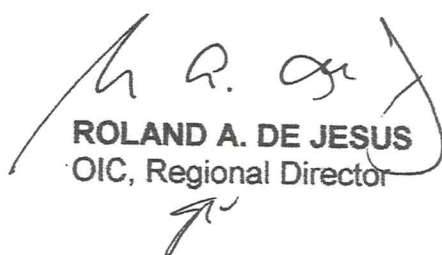
4. Representative from PCSDS - Angel Manalon, as Member
5. Representative from the Host Community - current Brgy. Chairman, as Member
- Representative from the LGU Municipality of Quezon - Esperanza B. Caabay, as Member
- Representative from the LGU Provincial Gov't. of Palawan -
6. Representative from an environmental NGO-Palawan - Roger V. Garinga, as Member
7. Representative from NCIP -
8. Representative from Contractor/ Permit Holder - Gilda B. Garibay, as Member
9. Representative from the Academe Palawan State University - Omar Teogenes A. Alfonso, as Member

We hereby certify to the correctness of the foregoing resolution as lifted from the highlights of the 2nd Mine Rehabilitation Fund Committee (MRFC) meeting held on February 16, 2007.


MARIO W. ALBAN
Member, Tech. Secretariat


JOEL V. BALQUIEDRA
Member, Tech. Secretariat

Approved:


ROLAND A. DE JESUS
OIC, Regional Director



Republic of the Philippines
 Department of Environment and Natural Resources
MINES & GEOSCIENCES BUREAU
 Regional Office No. IV-B (MIMAROPA)
 7/F DENR By the Bay Bldg., 1515 Roxas Blvd., Ermita, Manila
 Tel. # (632) 536-0214, Telefax (632) 302-1369, E-mail: mines_4b@yahoo.com

MAR 06 2015

Date

Regional Special Order

No. 09
 Series of 2015

SUBJECT: REORGANIZATION OF THE MULTIPARTITE MONITORING TEAMS (MMT) FOR THE OPERATING MINES AND PROCESSING PLANT IN SOUTHERN PALAWAN

In the interest of the service and as discussed in the series of Mine Rehabilitation Fund Committee (MRFC) meetings held last 27, 28 and 29 January 2015 at the Asturias Hotel, Puerto Princesa City, Palawan, there was a consensus on the necessity to reorganize the Multipartite Monitoring Teams (MMTs) for operating mines and mineral processing plant in Southern Palawan in view of some vacancies and addition to its membership.

Relative thereto, pursuant to Section 185 of the Consolidated DENR Administration Order No. 2010-21, the Implementing Rules and Regulations of RA 7942, otherwise known as the Philippine Mining Act of 1995, the following individuals are reaffirmed/appointed as designated regular and alternate members to the MMT of the following companies:

A. RIO TUBA NICKEL MINING CORPORATION/CORAL BAY NICKEL CORP. (RTNMC/CBNC)

REGULAR MEMBER	ALTERNATE MEMBER	AGENCY/ORGANIZATION
1. Nunilon R. Tanguilig		EMB-Region IV MIMAROPA
2. Sandy P. Padilla	Rafael Abaa	NCIP
3. Felomino O. Racuya		PCSDS
4. Beda Ponce De Leon		PEZA
5. Samuel B. Caligdong		BFAR
6. Juan Dela Cruz	Leonard T. Caluya	PENRO – Palawan
7. Florencio Diaz	Bernardo Castillo	CENRO-Brooke's Point
8. Dr. Eduardo P. Cruz	William Saragcon	PHO
9. Inocencio C. Magallanes		NGO-Haribon

10. Roger Montaña		AVPP
11. Atty. Noel B. Aquino		LGU-Provincial
12. Arman T. Gamo	Reynaldo C. Rivera	LGU-Bataraza
13. Hon. Gomer Miano	Cristy L. Dagupan	LGU-Rio Tuba
14. Nonoy Siplan	Anido R. Acat or Rodolfo M. Tingcatan	IPDO
15. Boyet Patio		IPs
16. Crisanto D. Gamponia		RTNMC
17. Briccio T. Abela		CBNC

B. CITINICKEL MINES AND DEVELOPMENT CORP. (CMDC)

REGULAR MEMBER	ALTERNATE MEMBER	AGENCY/ORGANIZATION
1. Pacifico G. Crisologo		EMB – Region IV B
2. Atty. Josefina R. Agusti	Atty. Telesforo Paredes	NCIP – Region IV
3. Felomino O. Racuya		PCS DS
4. Dr. Eduardo P. Cruz	William P. Saragcon	PHO – Palawan
5. Juan C. Dela Cruz	Leonard T. Caluya	PENRO-Palawan
6. Engr. Rosita F. Castulo	For. Pablo L. Castulo	CENRO, Narra
7. Florencio Diaz	Bernardo Castillo or Alfonso Javier	CENRO-Brooke's Pt.
8. Teofilo Tredez	Danny Cabiguen	NGO-PNNI
9. Rev. Fr. Dennis F. Braganza	Rev. Fr. Jasper Tabangay	AVPP
10. Emerico G. Cabanday, Jr.		LGU-Provincial
11. Ernesto B. Ferrer		LGU-Brgy. San Isidro
12. Rolando Tagyab		MENRO-Narra
13. Antonio Gammad	Rhante B. Sarmiento	MAO
14. Roberto Aquino		NGO-People's Forest Org.
15. Rodelio Vicente		IP/ICC
16. Jessica N. Denzon	Rolet Sangue	LGU-Sofronio Espanola
17. Aristotle S. Supe		MAO-Sofronio Espanola
18. Zacarias Abid		Brgy. Punang
19. Romy A. Vicencio		LGU-Brgy. Labog
20. Wilfredo G. Arendain		Brgy. Pulot Interior
21. Cecilia Castro		PO-Irrigator's Assn.
22. Jonathan Ong		IP/ICC
23. CMDC-Representative		Pulot Operation-S. Espanola
24. CMDC-Representative		Toronto Operation-Narra

C. BERONG NICKEL CORPORATION

REGULAR MEMBER	ALTERNATE MEMBER	AGENCY/ORGANIZATION
1. Edna Quindoza		EMB-Region IV B
2. Roldan V. Parangue	Ma. Celeste R. Santos	NCIP
3. Felomino O. Racuya		PCS DS
4. Fernando T. Tactay	Zosima Jampit or Cesar Santos	CENRO-Quezon
5. Don Jose R. Valencia		LGU-Provincial

6. Esperanza P. Caabay	Samuel A. Tatoy	LGU-Quezon
7. Roger V. Garinga	Sunny Bacar	NGO-Palawan
8. Fr. Joseph Arvi. I Hernandez		AVPP
9. Dr. Eduardo P. Cruz	William Saragcon	PHO
10. Rodrigo Hablado		LGU-Brgy. Berong
11. Pablo Danglong		IP (BATA)
12. Gershon Gacote		BNC

The MMTs shall be headed by the representative from the Mines and Geosciences Regional Office No. IVB and, as the monitoring arm of the MRFC, it shall perform duties and responsibilities pursuant to Section 174 and 185 of the CDAO 2010-21 and other pertinent laws, rules and regulations.

In addition, it was agreed during the said meetings that, upon recommendation of EMB – IVB, there will be a simultaneous regular MMT validation and Air, Water and Noise Sampling activity. In connection therewith, the sampling team for each operations shall be composed of the following:

1. EMB-IVB Representative as Team Leader;
2. PCSDS Representative as Member;
3. MGB-IVB Representative as Member;
4. Representative of the affected community as Member; and
5. Company Representative as Member.

This Order shall take effect immediately, supercedes/cancels previously issued Special Order on the matter and shall remain in force unless otherwise revoke by the undersigned or DENR/MGB higher authorities.

SO ORDERED


ROLAND A. DE JESUS
Regional Director and
Chairman, MRFC



2017-POA-D-0453-334

Permit No

Date 09-Nov-17

**Additional
PERMIT TO OPERATE**

Air Pollution Source and Control Installations

Pursuant to Part VI of the Rules and Regulations of R.A. 8749, authority is hereby granted to:

BERONG NICKEL CORPORATION

Brgy. Berong, Quezon Palawan

(Name of Firm, Individual, Owner etc.)

(Address.)

to operate the following:

One (1) unit 225 KVA "KOMATSU" Diesel Electric Generator; One (1) unit 360 KVA "KOMATSU" Diesel Electric Generator; One (1) unit 303 KVA "KOMATSU" Diesel Electric Generator set; One (1) unit 63 KVA "PERKINS" Diesel Electric Generator; One (1) unit 75 KVA "PERKINS" Diesel Electric Generator; Twelve (12) units 6 KVA "DOOSAN" Diesel Engine Tower Light; One (1) unit 6 KVA "TEREX" Diesel Engine Tower Light.

Recommended by:

Approved by:

ENGR. BUENA FE A. RIOFLORIDO

OIC, Clearance and Permitting Division

ENGR. MARIA SOCORRO A. ABU

OIC, Regional Director

Permit Conditions:

1. Must conform to National Ambient Air Quality Standards for Air Pollutants pursuant to Section 1, Rule XXV, Part VII of RA 8749.
2. Must submit notarized Quarterly Self-Monitoring Report (SMR) based on DAO-27, Series of 2003 on or before the filing dates:

1st Quarter SMR (January to March) -15th Day of April
2nd Quarter SMR (April to June) -15th Day of July
3rd Quarter SMR (July to September) -15th Day of October
4th Quarter SMR (October to December) -15th Day of January

3. Subject to revocation if found violating the said permit conditions and other provisions of the Philippine Clean Air Act of 1999 (RA 8749) and its Implementing Rules and Regulations.

This operating Permit shall be posted in a conspicuous location near the equipment and shall be adequately framed or otherwise protected against damage. Application for the renewal of Permit to Operate must be filed thirty (30) days before the expiration date.

Unless sooner revoked,
this permit is valid up to:
08-Nov-22



Department of Environment and Natural Resources
Environmental Management Bureau
Regional Office No. IV - B MIMAROPA



OICRDABU0011062

O.R. No.	Fee		Date
5150149	Permit Fee	45,000.00	10/23/2017
5150149	Filing Fee	600.00	10/23/2017
5150308	Legal Research Fee	20.00	10/23/2017

Berong Nickel Corporation

7th Floor, Quad Alpha Centrum, 125 Pioneer Street, Mandaluyong City, 1554

Telephone: (02) 6388352 or 6352387 Telefax: (02) 6354495

E-mail: berongnickel@hotmail.com

February 23, 2006

THE DIRECTOR

Mines and Geosciences Bureau
North Avenue, Diliman
Quezon City



SUBJECT: SEP CLEARANCE FOR AMA-IVB-047

Dear Director,

Respectfully submitted herewith is the original copy of **SEP Clearance No. MEP-022306-003** dated November 25, 2005 issued for our MPSA application AMA-IVB-047. We hope that with this submission, all mandatory requirements have been complied with that will facilitate the processing and eventual approval of our AMA-IVB-047.

Very truly yours,

FRANK N. LUBBOCK
President



Republic of the Philippines
OFFICE OF THE PRESIDENT
PALAWAN COUNCIL FOR SUSTAINABLE DEVELOPMENT



SEP CLEARANCE

No. MEP-022306-003

Pursuant to the mandate of the Palawan Council for Sustainable Development (PCSD) under Republic Act 7611 and concurred by the Department of Environment and Natural Resources (DENR) as provided in its Memorandum of Agreement with PCSD dated 29, December 1994, this PCSD Clearance is issued to:

BERONG NICKEL PROJECT

Name of Project

Bgy. Berong, Quezon, Palawan

Project Location (Street, Sitio, Barangay, Municipality)

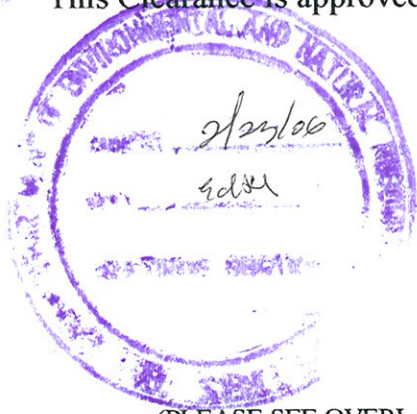
Berong Nickel Corporation

Name of Proponent

7th Flr., Quad Alpha Centrum, 125 Pioneer St.,
Mandaluyong City

Address of Proponent

This Clearance is approved this 25 th day of November 2005, Palawan.



FOR THE COUNCIL:


ABRAHAM KAHLIL B. MITRA
Chairman, PCSD

Not Valid Without PCSD Official Seal
(PLEASE SEE OVERLAPP FOR THE TERMS AND CONDITIONS OF THIS CLEARANCE)

"PCSDS: Working together towards sustaining the future."

TERMS AND CONDITIONS

This Clearance is issued subject to the following terms and conditions:

- 1.) Mining activities shall be regulated and confined within the approved area of 288 has., which is bounded with the following geographical coordinates.

Vertex ID	Long-DMS	Lat-DMS
1	118° 14' 00.455"	9° 24' 09.604"
2	118° 13' 30.958"	9° 24' 09.539"
3	118° 13' 30.936"	9° 24' 19.304"
4	118° 13' 21.103"	9° 24' 19.282"
5	118° 13' 21.060"	9° 24' 38.81"
6	118° 12' 22.063"	9° 24' 38.680"
7	118° 12' 22.086"	9° 24' 28.916"
8	118° 12' 02.420"	9° 24' 28.871"
9	118° 12' 02.398"	9° 24' 38.635"
10	118° 12' 22.063"	9° 24' 38.680"
11	118° 13' 21.060"	9° 24' 38.81"
12	118° 13' 21.038"	9° 24' 48.576"
13	118° 13' 30.871"	9° 24' 48.598"
14	118° 13' 30.871"	9° 24' 58.363"
15	118° 13' 40.660"	9° 24' 58.385"
16	118° 13' 40.660"	9° 25' 08.149"
17	118° 14' 00.326"	9° 25' 08.192"
18	118° 14' 00.369"	9° 24' 48.662"
19	118° 14' 20.035"	9° 24' 48.705"
20	118° 14' 20.142"	9° 23' 59.881"
21	118° 14' 00.477"	9° 23' 59.839"

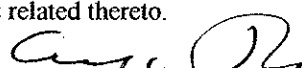
Please see attached map for exact area and location

- 2.) Strictly comply with the stipulated mitigating measures in the Environmental Impact Statement (EIS).
- 3.) Waste water shall pass through the settling pond before final disposal to the river and see to it that it conforms with the standard effluent of the DENR Admin Order No.35.
- 4.) Generator and other equipment shall be maintained well to emit less smoke and produce less noise. Anti-pollution and noise regulating devices shall be installed.
- 5.) Institute all measures to ensure the protection and safety of the workers as well as general public.
- 6.) Ensure that waste materials during operation shall be properly disposed to municipal dumpsite. No burning of such shall be done as this may cause forest and grass fire on the adjacent areas.
- 7.) Provide garbage receptacle in strategic areas for proper waste disposal, cleanliness and maintenance area.
- 8.) Install warning signs at strategic location in the facility.
- 9.) Secure permits/clearances from other concerned agencies prior to implementation
- 10.) That any expansion shall be subjected to separate SEP clearance.
- 11.) That should the implementation of the project cause adverse environmental impact and pose nuisance to public health and safety as determined by PCSDS shall be sufficient cause for the cancellation or suspension of this clearance.
- 12.) That the proponent shall assume full responsibility and be liable for damages to private and public properties caused by the project.
- 13.) In case there is a need for additional conditions in this clearance after monitoring/inspection, the same shall be imposed by PCSDS.
- 14.) PCSDS officials/personnel shall regularly conduct monitoring/inspection.

Non-compliance with any of the above conditions shall be ground for the suspension or cancellation of the clearance and or penalty of fine in an amount not to exceed Fifty Thousand Pesos (Php 50,000.00) for every violation thereof pursuant to Section 19 of Admin Order No. 06, series 2000.

AFFIDAVIT of CONFORMITY

I, ALFREDO C. RAMOS, proponent/grantee of the foregoing Clearance, hereby certify that I have read and understood the Terms and Conditions for which this PCSD Clearance was issued and I hereby express my conformity thereto and my commitment to abide by the provisions of Republic Act 7611, PCSD Administrative Order No.06, Series of 2000, as amended, and other PCSD policies related thereto.





Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas, Boulevard
Ermita, Manila

Annex 12a

SPECIAL TREE CUTTING AND BALLING PERMIT
NO. DENR IV-B MIMAROPA-2014-0007

Pursuant to P.D. 705, as amended, and existing forest laws, rules and regulations, a Special Tree Cutting and Balling Permit is hereby granted to:

BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

to cut trees within the area of their Mineral Production and Sharing Agreement (MPSA) in Barangay Berong, Quezon, Palawan, subject to the following terms and conditions:

1. The permittee shall conduct meetings or public consultations with LGUs concerned, NGOs and other stakeholders in the area to discuss the importance of the project, replacement of trees to be harvested, environmental and social issues and other related concerns for their information and appreciation;
2. The cutting/earth-balling shall be confined only within Blocks A-D of the mining area covering 60.68 hectares within the MPSA area which, per the Revised Extraction Plan of BNC are scheduled for removal in year 2014;
3. Prior to tree cutting and earth-balling operations, placards or signboards with dimension of 4 feet by 8 feet should be installed at conspicuous places to inform the public that the tree cutting and earth-balling operations are authorized by the DENR. Such notice of particulars should indicate the name of the permittee, the purpose of the activities to be undertaken and the number of trees to be cut and earth-balled;
4. Prior to tree cutting/earth-balling operations, the permittee shall conduct assessment of the trees in terms of their biodiversity, carbon sequestration potential and water storage capacity and identify mitigation measures to address the negative impacts of the tree cutting;
5. Only the 5,114 standing trees of various species within Blocks A-D with diameters ranging from 16 cm and larger shall be allowed to be cut;
6. The permittee is required that each tree to be cut shall be replaced with 300 seedlings preferably of indigenous species to be planted within the non-minable areas of the company (such as on the 20 meters wide strip on both sides of creeks or rivers bordering or traversing the subject area for stream bank protection), mined out areas and other areas identified jointly by the CENR Officer concerned and the permittee for integration into the National Greening Program (NGP) and Climate Change initiatives of the Government. Replanting shall be initiated even prior to the tree cutting operation. The planted seedlings shall be maintained by the permittee for a period of three (3) years with a survival rate of at least 80%;
7. The 7,461 trees of various species having diameters of 15 cm and below shall be earth-balled whenever feasible and transplanted to the area identified jointly by the permittee and DENR Region IV-B free from further development. The transplanting of the earth-balled trees shall be the obligation of the permittee who shall maintain and protect the transplanted trees for a period of one (1) year to ensure survival. For every transplanted tree that did not survive after six (6) months, the permittee shall conduct replacement planting preferably saplings of indigenous species with a ratio of 300 seedlings/saplings for every dead tree;



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas, Boulevard
Ermita, Manila

SPECIAL TREE CUTTING AND BALLING PERMIT
NO. DENR IV-B MIMAROPA-2014-0007

BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

8. In the event that there will be no more available space for planting within the MPSA area, the CENRO with jurisdiction over the area shall identify an appropriate planting site in support to the NGP of the government;
9. Cutting of trees on strip twenty (20) meters wide (buffer zone for stream bank protection) on both sides of creeks or rivers bordering or traversing subject area is prohibited. In case said twenty (20) meters strip is bereft of trees, same shall be reforested by the permittee;
10. The tree cutting/earth-balling operations shall at all times be under the direct supervision of the CENRO concerned and shall be responsible for the proper monitoring of compliance of the permittee with the terms and conditions of the permit;
11. All the timber cut/harvested shall be immediately turned-over to the nearest CENRO at the expense of the company to be donated to the Department of Education (DepEd) school desk program. No commercial disposition is allowed;
12. The permittee is required to pay the forest charges for the naturally grown trees cut, pursuant to Republic Act No. 7161;
13. The DENR shall not be held liable or responsible for any untoward incident that might occur during the harvesting and earth-balling operations;
14. Issues that will arise from the cutting and earth-balling should be addressed directly by the proponent;
15. The permittee is hereby requested to create a Forestry Unit and to hire Foresters. The Unit to be created shall be headed by a Registered Forester to implement and oversee forest restoration/rehabilitation and development within the MPSA area;
16. The OIC-RED, DENR Region IVB and the FMB Director shall be involved in the review of the approved Environmental protection and Enhancement Program (EPEP) and the Final Mine Rehabilitation and/or Decommissioning Plan (FMR/DP);



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas, Boulevard
Ermita, Manila

SPECIAL TREE CUTTING AND BALLING PERMIT
NO. DENR IV-B MIMAROPA-2014-0007


BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

17. The terms and conditions stipulated in the approved Environmental Compliance Certificate (ECC) shall be strictly followed;
18. A terminal report with photographs and accomplishments shall be submitted to the Office of the Secretary, copy furnished the Director, Forest Management Bureau after the expiration of the permit, for record purposes;
19. Violation of any of the terms and conditions of the permit shall be sufficient ground for the termination/cancellation of the permit, subject to due process without prejudice to the imposition of appropriate penalties pursuant to existing regulations and one strike policy to concerned DENR official(s) and/or personnel;
20. The permit shall expire 120 days from the date of issuance of the permit or as soon as the trees authorized have been cut and earth-balled, whichever comes first and in accordance with the approved Environmental Protection and Enhancement Program (EPEP).
21. This permit excludes the area 12 (12 hectares kaingin area) as reported – please see attached map) which is outside the 60.68 hectares earmarked for tree cutting for CY-2014 and that no cutting of trees whatsoever shall be conducted thereat unless authorized.

This permit is effective on the date of issue and expires **120 days** from issuance hereof or as soon as the authorized number and volume of trees had already been cut/earth-balled, whichever comes first.

Issued this **MAR 27 2014**, at DENR Region 4B-MIMAROPA, Roxas Boulevard, Ermita, Manila.

By the Authority of the Secretary:


OSCAR C. DOMINGUEZ
OIC Regional Executive Director





Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA - REGION
1515 L & S Building, Roxas Boulevard, Ermita, Manila

MEMORANDUM

TO : **The PENRO**
Puerto Princesa City, Palawan

FROM : **The Regional Director**

SUBJECT : **SPECIAL TREE CUTTING AND EARTH-BALLING PERMIT NO. DENR IV-B MIMAROPA-2016-001 ISSUED TO BERONG NICKEL CORPORATION OF BRGY. BERONG, QUEZON, PUERTO PRINCESA CITY, PALAWAN**

DOCUMENTS
ATTACHED : Copy of Special Tree Cutting and Earth-balling Permit No. DENR IV-MIMAROPA-2016-001 with enclosures

DATE : **08 JAN 2016**

In compliance with the Memorandum dated 29 December 2015 of the DENR Undersecretary for Field Operations, forwarded herewith is the **SPECIAL TREE CUTTING AND EARTH-BALLING PERMIT NO. DENR IV-B MIMAROPA-2016-001** issued by this Office to **Berong Nickel Corporation** of Brgy. Berong, Quezon, Palawan.

Submit compliance report of the permittee relative thereto for reference and record purposes.

FOR YOUR GUIDANCE AND COMPLIANCE.

OSCAR C. DOMINGUEZ



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas Boulevard, Ermita, Manila

SPECIAL TREE CUTTING AND EARTH-BALLING PERMIT
NO. DENR IV-B MIMAROPA-2016-001

Pursuant to P.D. 705, as amended, and existing forest laws, rules and regulations, a Special Tree Cutting and Earth-Balling Permit is hereby granted to:

BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

to cut trees within the area of their Mineral Production and Sharing Agreement (MPSA) for the continuation of their operations within the remaining area of about 62.76 hectares located at Barangay Berong, Quezon, Palawan subject to the following terms and conditions:

1. The cutting/earth-balling shall be confined only within the 62.76 remaining mining area within the MPSA area which are scheduled for removal starting in year 2015;
2. The permittee shall conduct meetings or public consultations with LGUs concerned, NGOs and other stakeholders in the area to discuss the importance of the project, replacement of trees to be removed/cut, environmental and social issues, and other related concerns for their information and appreciation;
3. Prior to tree cutting/earth-balling operations, a placard or signboard measuring 4 feet by 8 feet should be installed in a conspicuous places to inform the public that the tree cutting and earth-balling operations are authorized by the DENR. Such notice of particulars should indicate the name of the permittee, the purpose of the activities to be undertaken and the number of trees to be cut and earth-balled;
4. Prior to tree cutting/earth-balling operations, the permittee shall conduct assessment of the trees in terms of their biodiversity, carbon sequestration potential and water storage capacity and identify mitigation measures to address the negative impacts of the tree cutting;
5. Only 5,560 standing trees of various species with diameters ranging from 16 cm. and larger shall be allowed to be cut;
6. The permittee is required that each tree to be cut shall be replaced with 100 seedlings preferably of indigenous species to be planted within the non-minable areas of the company (such as on the 20 meters wide strip on both sides of creeks or rivers bordering or traversing the subject area for stream bank protection), mined out areas and other areas identified jointly by the CENR Officer concerned and the permittee for integration into the National Greening Program (NGP) and Climate Change initiatives of the Government. Replanting shall be initiated even prior to the tree cutting operation.



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas, Boulevard, Ermita, Manila

SPECIAL TREE CUTTING AND EARTH-BALLING PERMIT
NO. DENR IV-B MIMAROPA-2016-001

BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

The planted seedlings shall be maintained by the permittee for a period of three (3) years with a survival rate of at least 80%;

7. The 9,455 trees of various species with diameters of 15 cm and below shall be earth-balled whenever feasible and transplanted to the area identified jointly by the permittee and the DENR Region IVB free from further development. The Transplanting of the earth-balled trees shall be the obligation of the permittee who shall maintain and protect the transplanted trees for a period of three (3) years to ensure survival. For every transplanted tree that did not survive after six (6) months, the permittee shall conduct replacement planting preferably saplings of indigenous species with a ratio of 300 seedlings/saplings for every dead tree;
8. In the event that there will be no more available space for planting within the MPSA area, the CENRO with jurisdiction over the area shall identify an appropriate planting site in support to the NGP of the government;
9. Cutting of trees on strip twenty (20) meters wide (buffer zone for stream bank protection) on both sides of creeks or rivers bordering or traversing subject area is prohibited in case said twenty (20) meters strip is benefit of trees, same shall be reforested by the permittee;
10. The tree cutting/earth-balling operations shall at all times be under the direct supervision of the RED, DENR, Region IVB and/or authorized representative(s). The CENRO concerned shall be responsible for the proper monitoring of compliance of permittee with the terms and condition of the permit;
11. All the timber cut/harvested shall be immediately turned-over to the nearest CENRO at the expense of the company to be donated to the Department of Education (DepEd) school desk program. No commercial disposition is allowed;
12. The permittee is required to pay the forest charges for the naturally grown trees cut, pursuant to republic Act No. 7161;
13. The DENR shall not be held liable pr responsible for any untoward incident that might occur during the harvesting and earth-balling operations;



Republic of the Philippines
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MIMAROPA REGION
1515 L & S Building Roxas Boulevard, Ermita, Manila

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NO. DENR IV-B MIMAROPA-2016-001

BERONG NICKEL CORPORATION
Barangay Berong, Quezon, Palawan

14. Issues that will arise from the cutting and earth-balling should be addressed directly by the proponent;
15. The permittee is hereby requested to create a Forestry Unit and to hire Foresters. The Unit to be created shall be headed by a Registered Forester to implement and oversee forest restoration/rehabilitation and development within the MPSA area;
16. The RD, DENR Region IV-B and the FMB Director shall be involved in the review of the approved Environmental Protection and Enhancement program (EPEP) and the Final Mine Rehabilitation and/or Decommissioning Plan (FMR/DP);
17. The terms and conditions stipulated in the approved Environmental Compliance Certificate (ECC) shall be strictly followed;
18. A terminal report with photographs and accomplishments shall be submitted to the office of the Secretary copy furnished the Director, Forest Management Bureau after the expiration of the permit, for record purposes.
19. Violation of any of the terms and conditions of the permit shall be sufficient ground for the termination/cancellation of the permit, subject to due process without prejudice to the imposition of appropriate penalties pursuant to existing regulations and one strike policy to concerned DENR official(s) and/or personnel(s);

This permit is effective on the date issued and expires as soon as the authorized number of trees had already been cut and earth-balled.

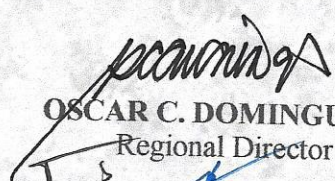
Issued this _____ at DENR Region 4B-MIMAROPA, Roxas Boulevard, Ermita, Manila.



Department of Environment
and Natural Resources
REGION 4B



By the Authority of the Secretary:


OSCAR C. DOMINGUEZ
Regional Director



Republic of the Philippines
NATIONAL WATER RESOURCES BOARD

5 October 2006

Berong Nickel Corporation
7/F Quad Alpha Centrum
125 Pioneer Street, Mandaluyong City

Sir/Madam:

We are pleased to transmit herewith your approved Water Permit. We hope that this privilege to use water will be for continued beneficial use.

Please be informed that failure on your part to submit the required plans and specifications as well as non-compliance with other conditions imposed in your permit will constitute grounds for cancellation of your Water Permit.

Your cooperation hereon will be appreciated.

Very truly yours,



RAMON B. ALIKPALA
Executive Director

Encl.: **Water Permit No. 20884**
 Liabungan River
 Lat.: 9° 27' 45"
 Long.: 118° 12' 16.2"
 1.47 LPS

Cc:

The OIC-District Engineer
DPWH, Narra, Palawan



REPUBLIC OF THE PHILIPPINES
NATIONAL WATER RESOURCES BOARD
8th Floor NIA Building, E. Delos Santos Avenue, Quezon City


WATER PERMIT

No. 020884

Pursuant to the provisions of Presidential Decree Nos. 424 and 1067 promulgated on March 28, 1974 and December 31, 1976 respectively; and their Implementing Rules and Regulations.

1. the Permittee, with indicated mailing address Berong Nickel Corporationn 7/F Quad Alpha Centrum, 125 Pioneer Street, Mandaluyong City	2. is hereby granted permit to use water from the source known as Llabungan River by diverting the water by means of Pump
3. with the diversion point located at Place: Berong, Quezon, Palawan Latitude: Longitude: 09° 27' 45" 118° 12' 16.2"	4. in an amount, in liters per second, not exceeding 1.47 liters per second during the month of January to December
5. for the purpose of Industrial	
6. subject to Existing Rights and to the conditions indicated at the back hereof, as well as to the following additional terms and conditions:	

1. The Permittee shall submit a Summary Record of Quarterly Groundwater/Surfacewater withdrawal (form attached) to the National Water Resources Board for monitoring.
2. The Permittee is hereby required to install and maintain water control and measuring devices such as dipping tube to monitor the water level and water meter duly inspected and calibrated by the Monitoring and Enforcement Division and to keep records of water withdrawal and other information on water use pursuant to Art. 21 of P.D. 1067.

7. the Permittee shall pay an annual water charge in the amount of Five hundred four & 04/100 pesos (P504.04) which shall be payable and remitted by Philippine Postal Money Order or Check to the NATIONAL WATER RESOURCES BOARD starting on this date: 19 July 2006 and every year thereafter.	Given on this date: 19 July 2006 By authority of the Board per Res. No. 014-1004  RAMON B. ALIKPALA Executive Director
---	--

CONDITIONS OF THE WATER PERMIT

1. That within one (1) year from the receipt of the permit the applicant shall submit to the Board for approval, the plans and specifications for the diversion works, pump structure, water measuring device, and other required structures and in addition for private sector projects the implementing schedules of construction. No construction work or private sector projects shall commence until the plans, specifications and implementing schedules are duly approved. When the diversion dam is temporary and less than two (2) meters high, the submission of plans for the dam may not be required.
2. The construction of the necessary structures and diversion work shall begin within ninety (90) days from the date of receipt of the approved plans, specifications and implementing schedules and shall be completed within the approved schedule unless extended by the Board for valid or justifiable reasons. Provided, that water shall not be diverted, pumped or withdrawn until after such structures and works shall have been inspected and approved by the Board, unless otherwise allowed. Except in cases of emergency to save life or property or repairs in accordance with plans originally approved, the alteration or repair of these structures shall not be undertaken without the approval of the Board.
3. The Permittee shall inform the Board or its deputy concerned, that the necessary structures and diversion works required have been completed in accordance with approved plans and specifications.

In addition, in cases of appropriation of ground water, the Permittee shall inform the Board as to the depth and diameter of the well, the drilling log, the specifications and location of casings, cementing, screens and perforations, and the results of tests of capacity, flow, drawdown, and shut-in pressure.

4. The right of a Permittee to the amount of water allowed in the permit is only to the portion or extent that he can use beneficially for the purpose stated in the permit. The diversion of the water shall be from the source and for the purpose indicated in the permit and in no case should said use exceed the quantity and period indicated therein. In gravity diversions, regulating gates of the canal shall be closed when water is not needed.
5. The Board may, after due notice and hearing, reduce at anytime the quantity of water or adopt a system of apportionment, distribution, or rotation thereof when the facts and circumstances in any situation would warrant the same in the interest of the public and/or legal appropriations.
6. The Board may, after due notice and hearing, revoke the permit in favor of projects for greater beneficial use for multi-purpose development, subject to compensation in proper cases.
7. The Board shall revoke or suspend the permit if the Permittee violates effluent/water quality standards as determined by the Environmental Management Bureau (EMB).
8. At any time after completion of diversion works and necessary structures, non-use of the water for the purpose stipulated in the permit for a period of three consecutive years shall render said permit null and void, except as the Board may otherwise allow for reasons beyond the control of the Permittee.
9. Any person in control of a well shall prevent the waste of water therefrom, and shall prevent water from flowing unto the surface of the land or into any surface water without being beneficially used, or into any porous stratum underneath the surface.
10. Any person in control of a well shall prevent water containing mineral or other substances injurious to the health of humans or animals or to agriculture and vegetation from flowing into the surface of the land or into any surface or into any other aquifer or porous stratum.
11. The water permit shall continue to be valid as long as water is beneficially used; however, it maybe suspended on the ground of non-compliance with approved plans and specifications or schedule of water distribution; use of water for a purpose other than that for which it was granted; non-payment of water charges; wastage; failure to keep records of water diversion when required; and violation of any term or condition or condition of any permit or of rules and regulations promulgated by the Board.
12. The water permit maybe revoked after due notice and hearing on ground of non-use; gross violation of the condition imposed in the permit; unauthorized sale of water; willfull failure or refusal to comply with rules and regulations or any lawful order; pollution; public nuisance or act detrimental to public health and safety; when the appropriator is found to be disqualified under the law to exploit and develop natural resources of the Philippines; when, in the case of irrigation, the land is converted to non-agricultural purposes; and other similar grounds.
13. The Permittee shall allow the Board inspectors/investigators access to the source at any time upon notice to monitor compliance with the terms and conditions imposed in the permit. Failure to allow said inspectors/investigators access to the source shall cause the cancellation/revocation of the water permit issued to Permittee.
14. The Permittee shall submit to the Board quarterly records of water withdrawal from the source. Non-compliance hereof shall be ground for the cancellation/revocation of the water permit issued.

NOTE: The above terms and conditions are subject to change/amendment by the Board at any time without prior notice.

NATIONAL WATER RESOURCES BOARD

8th Floor NIA Bldg., EDSA, Quezon City

Telephone No.: 920-26-54

Fax Nos.: 920-2834/920-2634

WATER PERMIT NO. _____

**SUMMARY RECORD OF QUARTERLY GROUNDWATER /
SURFACEWATER WITHDRAWAL**

PERIOD : _____ TO : _____
(month) (year) (month) (year)

Permittee/Grantee : _____

Mailing Address : _____

Tel. No/s. : _____ Fax No/s. : _____

E-Mail Address : _____

Location of Sources : _____

Coordinates : _____ Latitude : _____ Longitude : _____

Source I.D. No.: _____ Name of Source : _____

Flow/Water meter Serial No.: _____

Brand : _____ Size : _____

MONTH	Amount of Water Diverted/Withdrawn (CUBIC METER)
TOTAL	

Prepared by :

Submitted by :

Signature

Signature

Name

Name

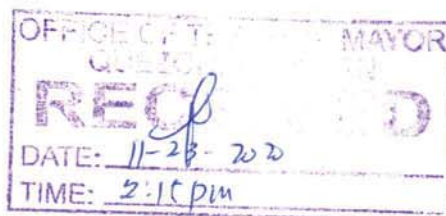
Note : To be submitted every 3 months
to : The Chief, Monitoring & Enforcement Division
National Water Resources Board

This form maybe reproduced by the permittee. Keep this record on file.

Annex 14

21 November 2020

HON. JOSELITO O. AYALA
Municipal Mayor
Quezon, Palawan



Dear Honorable Mayor Ayala:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

In this regard, we are hereby requesting your presence or a representative on your behalf on November 26, 2020. The said activity will start at 9:00 o'clock in the morning at BNC Camp, Bgy. Berong, Quezon, Palawan.

As we continue our partnership in performing our social and environmental responsibility to the betterment and progress of the community, we look forward on your optimistic response to this. Maraming salamat po.

For further information and details regarding this activity, kindly contact us at mobile no.: 0921-613-4091 or at bncenvi.dmcimining@gmail.com.

Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

21 November 2020

FOR. LEONARD C. CALUYA

CENR Officer
Community Environment and Natural Resources Office
Quezon, Palawan



Dear CENRO Caluya,

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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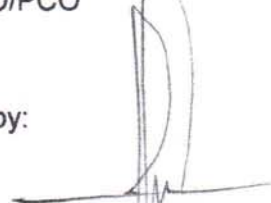
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

21 November 2020

MR. ROGER GARINGA
NGO-PNNI
Quezon, Palawan

Dear Sir Garinga:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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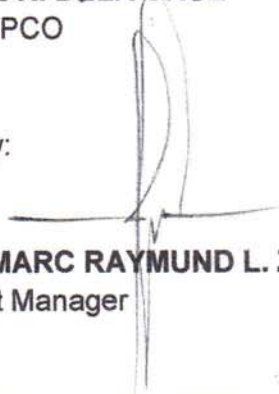
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager



21 November 2020

NINFA F. MONSALE

President, Farmers Association
Berong, Quezon, Palawan

Dear Ms. Monsale:

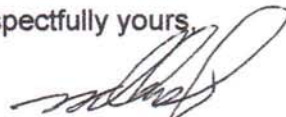
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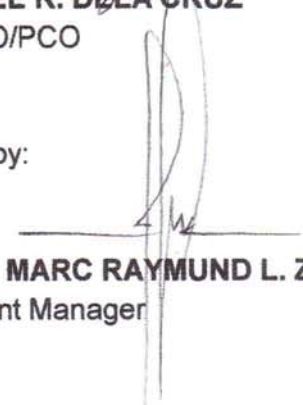
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

Ninfa Monsale - 11-24-2020

21 November 2020

JOSE EDWIN F. CRUZ

School Head
Berong National High School
Berong, Quezon, Palawan

Dear Sir Cruz:

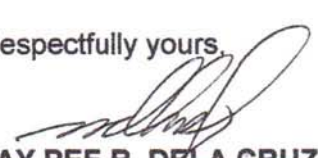
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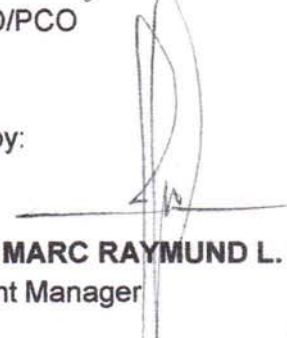
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

received:  11/23/20

21 November 2020

JOENALYN VILLINO

ALS Facilitators

Berong, Quezon, Palawan

Dear Ms. Villino:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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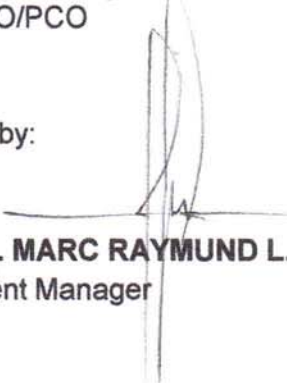
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Respectfully yours,




JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager



JOENALYN P. VILLINO

21 November 2020

GENALYN D. JABAGAT

President, Women Organization
Berong, Quezon, Palawan

Dear Ms. Jabagat:

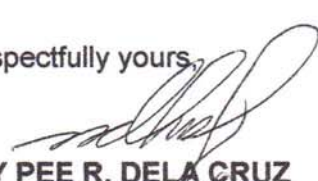
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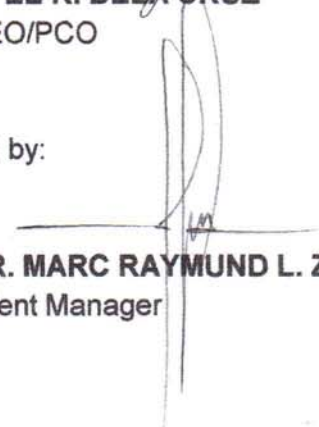
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO


Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

11-23-20
Integrit

21 November 2020


ROSELLER FERMARAN
Fisherfolks President
Berong, Quezon, Palawan

Dear Sir Fermanan:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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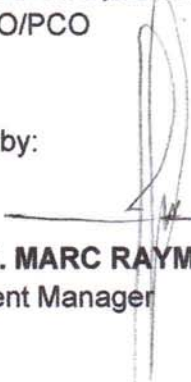
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Respectfully yours,


JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:


ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

23/11/20

RECEIVED


Roseller Fermanan

21 November 2020

HON. RECEDILLO R. INDAP JR.

Barangay Chairman
Local Government Unit
Berong, Quezon, Palawan

Dear Honorable Chairman Indap:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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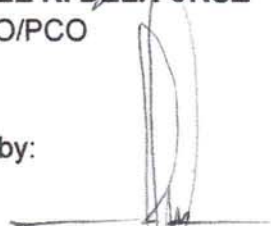
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

*Revised by
J. Zamora
11-23-20
2:00 pm*

21 November 2020

DRA. JOSIEVELINE M. ABIOG - DAMALERIO

Municipal Health Officer
Quezon, Palawan

Dear Dra. Damalerio:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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Respectfully yours,




JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

recd by: 
11-23-2020

21 November 2020

HON. HERMINIO N. CATIAO
BATA Chairman
Berong, Quezon, Palawan

Dear Honorable Catiao:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

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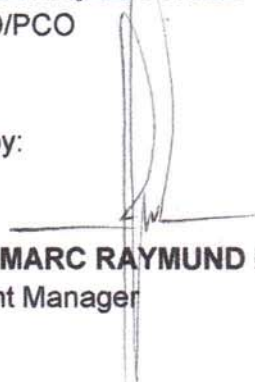
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

11/23/20
ECatiao

21 November 2020

FR. PIUS ALFONS TNESI, SVD
AVPP-Parish Priest
Aramaywan, Quezon, Palawan

Dear Fr. Pius:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

In this regard, we are hereby requesting your presence or a representative on your behalf on November 26, 2020. The said activity will start at 9:00 o'clock in the morning at BNC Camp, Bgy. Berong, Quezon, Palawan.

As we continue our partnership in performing our social and environmental responsibility to the betterment and progress of the community, we look forward on your optimistic response to this. Maraming salamat po.

For further information and details regarding this activity, kindly contact us at mobile no.: 0921-613-4091 or at bncenvi.dmcimining@gmail.com.

Respectfully yours,

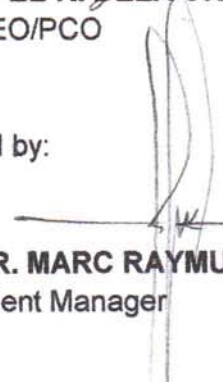


JAY PEE R. DELA CRUZ
MEPEO/PCO



Received

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

21 November 2020

PRESCILLA M. SELGA

Community Midwife
Aramaywan, Quezon, Palawan

Dear Midwife Selga:

Berong Nickel Corporation (BNC) will be conducting a public consultation and planning workshop with the company's stakeholder related to our Final Mine Rehabilitation and Decommissioning Plan (FMRDP).

In this regard, we are hereby requesting your presence or a representative on your behalf on November 26, 2020. The said activity will start at 9:00 o'clock in the morning at BNC Camp, Bgy. Berong, Quezon, Palawan.

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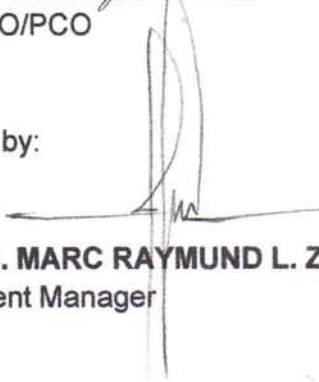
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Respectfully yours,



JAY PEE R. DELA CRUZ
MEPEO/PCO

Noted by:



ENGR. MARC RAYMUND L. ZAMORA
Resident Manager

ATTENDANCE SHEET/CERTIFICATION OF UNDERSTANDING

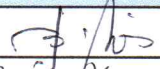
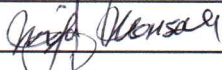

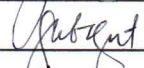
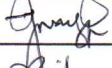










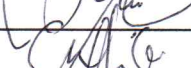

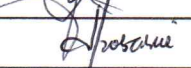
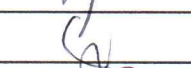
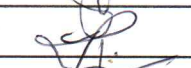



Name of Program: STAKEHOLDERS CONSULTATIONS AND PLANNING WORKSHOP FOR FINAL MINE REHABILITATION AND DECOMMISSIONING PLAN

Date: Nov. 26, 2020

Type of Program: ☐ Learning & Development ☒ Workshop ☐ Lecture ☐ Internal Updates
☐ Company Orientation ☐ Others (Pls. specify) PUBLIC CONSULTATION FOR AMRAP

Facilitator: _____

Coordinator: _____

NO.	NAME	DEPARTMENT	POSITION	SIGNATURE	TIME
1	MADELYN B. SUELTO	DEPED - BERONG NIS	SST-III / OIC		8:48
2	NINFA F. MONSALG	Farmer's Reg.	President		8:48
3	FR. PIUS A. TRASI, SVD	AVPP Representative	Parish Priest		9:00 AM
4	GINALYN D. JABAGAT	Womens Asst.	Pres.		9:25 AM
5	Phascila M. Selga	Health & Community Planning	Community manager		9:25 AM
6	Joanelyn P. Villano	Education	ALS facilitator		9:30 AM
7	Rodel L. Arellano	LGU - Barangay	Bar. Kagawad		9:30 AM
8	Roseller F. Fernandez	"	Bar. Kagawad		9:30 AM
9	FORTUNATO C. ABELLADA JR	LGU QUEZON	CSO		9:30 AM
10	MICHAEL V. JOVEN	CENRO QUEZON	ECOMS II		9:30 AM
11	CARL O. FERNANDEZ	LGU - QUEZON	EA (Extant)		9:30 AM
12	CHITO MAYA	LGU - QUEZON	EA		9:30 AM
13	REEDILLO R. IWDAP	LGU - BERRIO	PP		9:35 AM
14	ALYSIS K. DOUGLIN	ENVI	JS		9:00 AM
15	WINSTON G. QUINTA	ENVI	SUPERVISOR		9 AM
16	SIMBAJON, MARIA GAY G.	AP Stat	Eng'g		9:30 am
17	FABIAN, RAFAELIN	Statistician	ENG'G		9:30 am
18	BLOMO, MIRASOL D.	Statistician	Eng'g		9:30 am
19	Christian (name)	Receiver	mine		9:30 am
20	Shantene Quares	Asst. Secretary	Mine		9:30 am
21	Jabagat Nephth R.	Dir. Controller	Environment		9:30 AM
22	Renato Y. Sabat Jr.	ENVI	PLANNING		9:30 AM
23	Rolando L. Sajot	SAFETY HEADQUARTER	SAFETY OFFICER		9:30 AM
24					
25					

**STAKEHOLDERS
CONSULTATION ON THE
PROPOSED FINAL MINE REHABILITATION
AND DECOMMISSIONING PLAN (FMRDP) OF BNC**

Date/Time : Thursday, November 26, 2020 @ 9:30 AM
Venue : Recreation Room

Attendees : **Local Government Officials of Quezon:**

- Carl O. Fernandez
- Anecito Ayala
- Fortunato C. Abellano

DENR-CENRO

- Michael V. Joven

AVPP Representative

FR. Pius Alfons Tnesi,SVD

Brgy. Berong Officials:

- Recedillo R. Indap
- Rodel L. Arellano

Dep-Ed Representative

- Madelyn R. Suelto

Fisherfolks Representative

- Roseller F. Fermacion

Womens Assosiation Representative

- Ginalyn M. Jabagat

Womens Assosiation Representative

- Ginalyn M. Jabagat

Health Representative

- Prescila M. Selga

Minutes of the meeting:

- The stakeholder's consultation commenced at 9:30 in the morning with an opening prayer led by Fr. Pius Alfons Tnesi, SVD and around 21 stakeholders from the LGU of Quezon, Brgy. Council, women association, farmers' association, fisher folks, health sector and the academe sector.
- **JP Dela Cruz**, on his opening remarks stated that the objective of the activity is to lay down the Final Mine Rehabilitation Decommissioning Plan (FMRDP) of BNC and consult stakeholders on their proposed final land use activity on the area.
- **Inspector Rolando L. Sajot** gave an overview about FMRDP and the discussed the safety and conducted risk assessment on implementing final mine rehab. Explained the identified hazard associated during the activities of the FMRDP. Explained to the attendees that mining has its end life to be discussed by the respective person.
- **JP Dela Cruz**, explained the contents of Final Mine Rehabilitation Decommissioning Plan FMRDP, the Environment Protection Enhance Program (EPEP), the Contingent Liability and Rehabilitation (CLRF) and the role of the Multipartite Monitoring Team (MMT) on the implementation.
- **Engr. Renato Sabat Jr**, showed and explained the mine life of the project and the stages, from exploration to closure. He then presented the current land use map of the project and the proposed closure plan.
- **JP Dela Cruz**, presented pictures of the ongoing progressive mining rehab of the company since 2010 up to present. To show case and provide example of target result. He then showed the computation of the estimated 6 years' duration budget of the project.

Open Forum

- **Brgy. Captain Recedellio Indap**,
 - Asked the company on the partnership with the council and Berong Aramaywan Tagbanua Association (BATA).
 - JP Dela Cruz, replied that the both council and BATA's recommendation will be taken into consideration.
- **Carl O. Fernandez**,
 - Commented that the hardest effect is losing a job. Asked if any recommendation to minimize it. He also commented that the 50M budget is not enough for the remaining rehab area. Asked how to add the budget that if BNC have few shipments left.
 - JP Dela Cruz, replied the company is willing to spend an additional budget to complete the FMRDP. He also emphasized that the plan will continuously be reviewed during the implementation of the project and if found insufficient the monitoring body has the full authority.

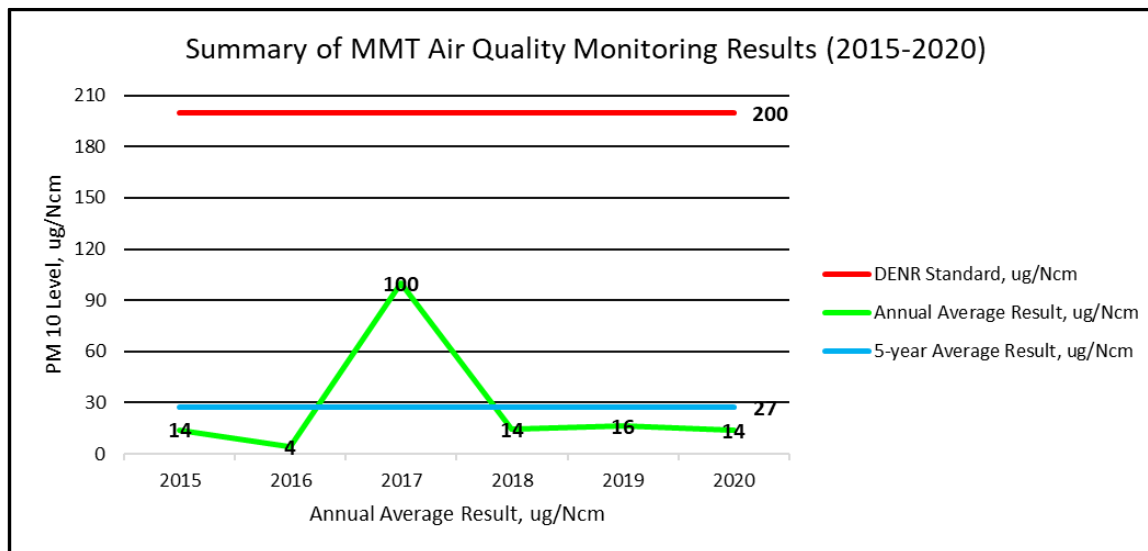
- **Chito Ayala ,**
 - Asked if what are the basis of the FMRDP and the depletion of ore reserve.
 - JP Dela Cruz, replied the FMRDP is required under the Philippine Mining Act to ensure rehabilitation of the mining areas. BNC's reserved depletion is estimated until end of 2021.
- **Joel Balquedra,**
 - Suggested to carry over previous mining rehab experience in the area specially the planting indigenous trees species, fruits trees and or agro-forestry prospects. Also includes the stabilization of slope on mine out areas, planting of bamboo on the perimeter of settling ponds and rattan.
 - JP Dela Cruz, replied that BNC has already incorporated its previous mining rehab experience to the FMRDP. Also included the potential for tourism and agro-forestry in the plan.
- **PCO JP Dela Cruz,** distributed forms to be filled up of stakeholders and then closed the consultation at 2:10 in the afternoon.



Berong Nickel Corporation (BNC)

Trends in Air and Water Quality and Noise Level Monitoring Results (2015-2020)

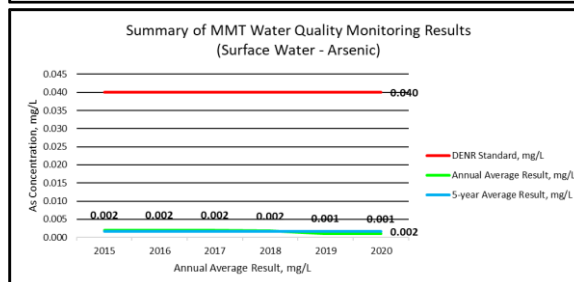
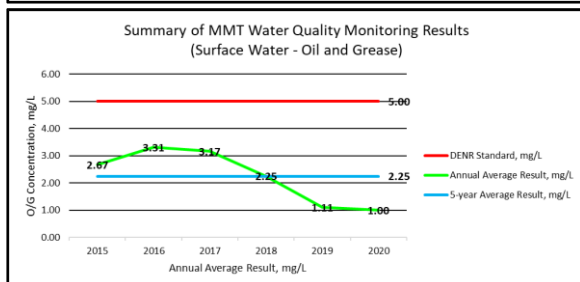
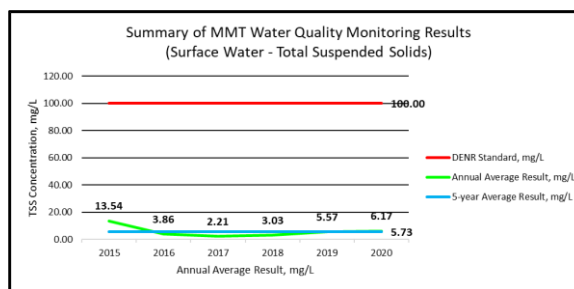
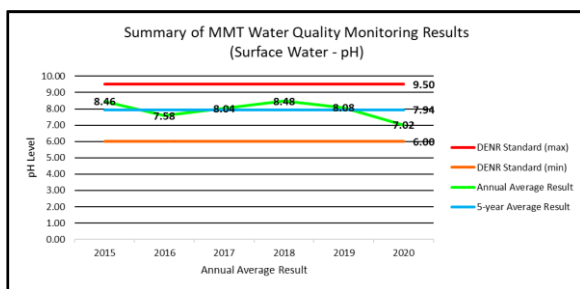
Air Quality Monitoring Results

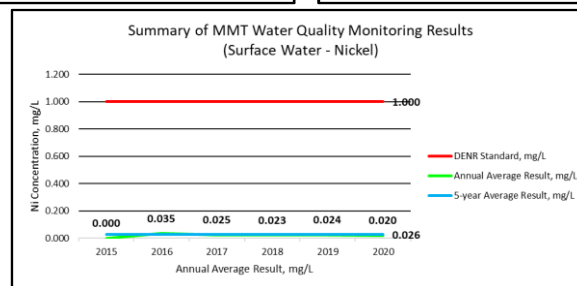
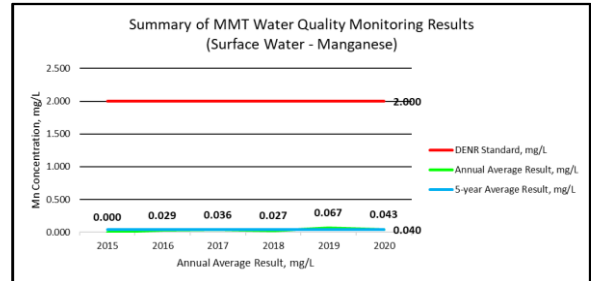
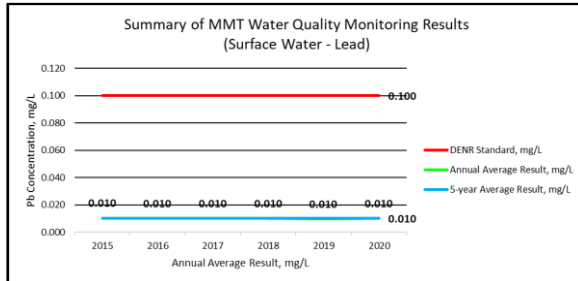
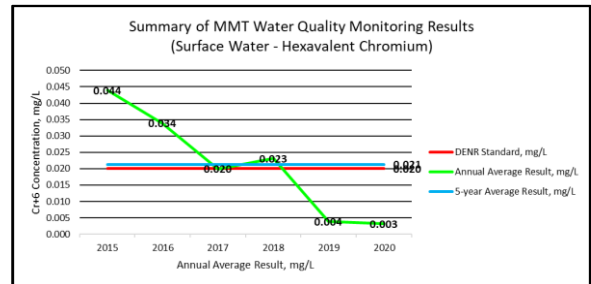
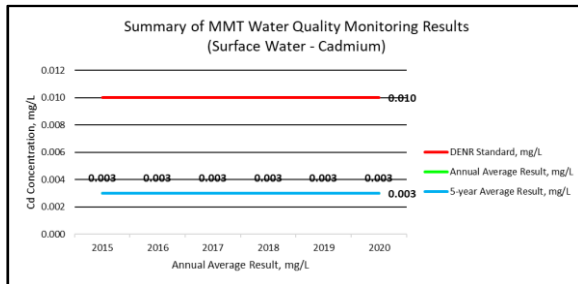


Particulate Matter (PM) 10 monitoring results during the last five (5) years show average values that were within the prescribed DENR standard. The highest and lowest PM 10 average concentrations were recorded in 2017 and 2016, respectively. The 5-year average concentration of 27 $\mu\text{g}/\text{Ncm}$ is seven times lower than the 200 $\mu\text{g}/\text{Ncm}$ limit of the DENR.

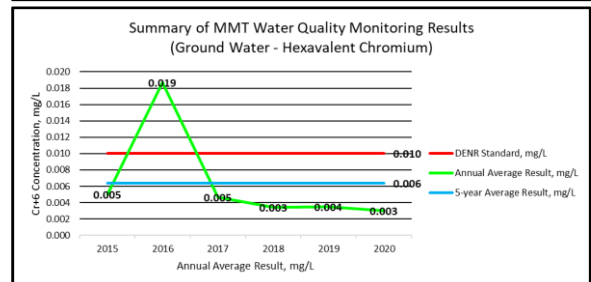
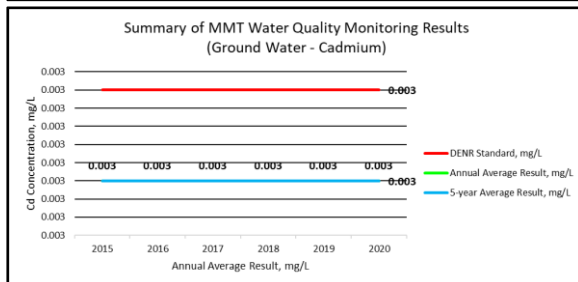
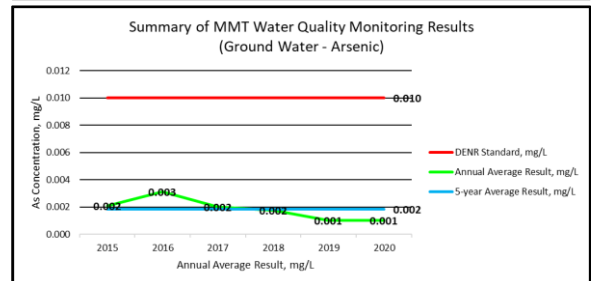
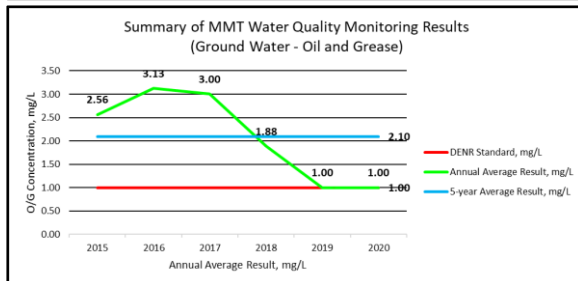
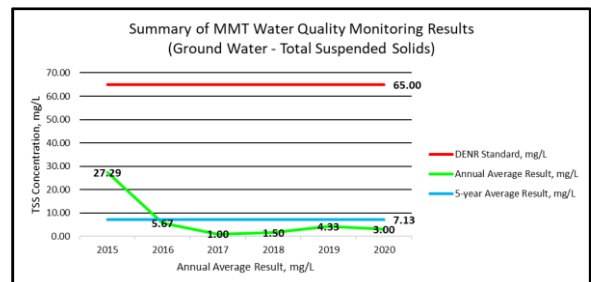
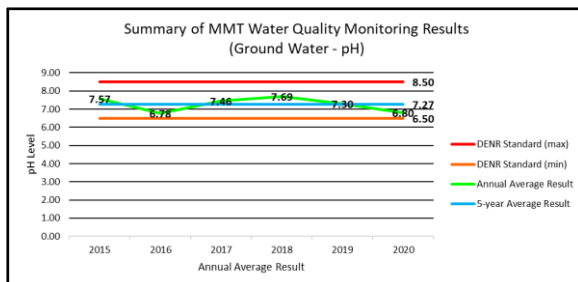
Water Quality Monitoring Results

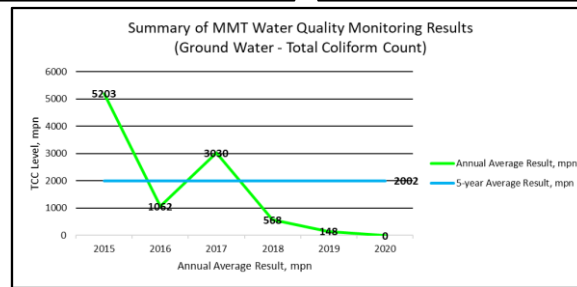
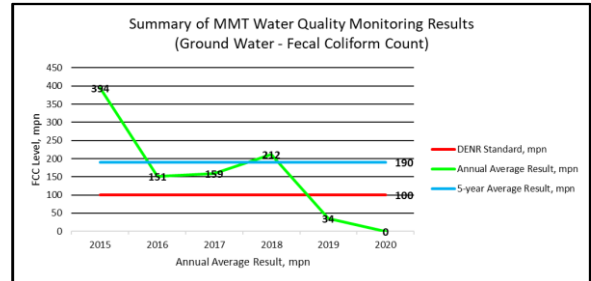
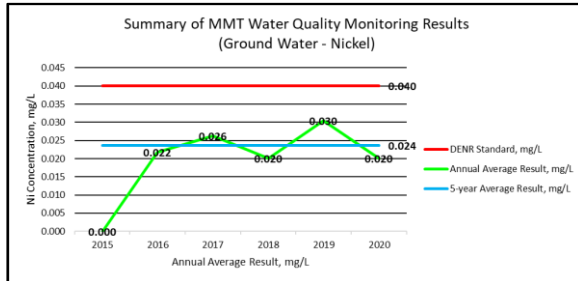
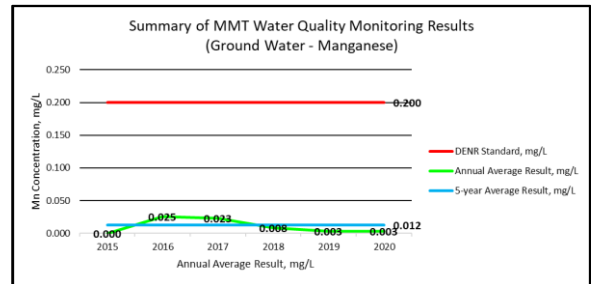
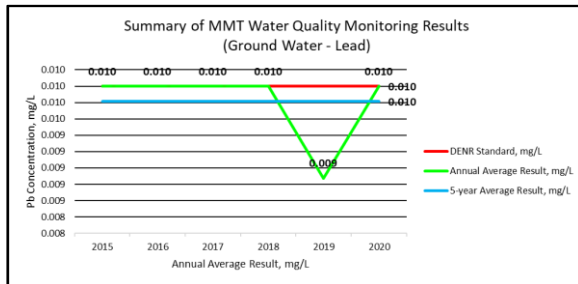
a. Surface Water Quality Monitoring



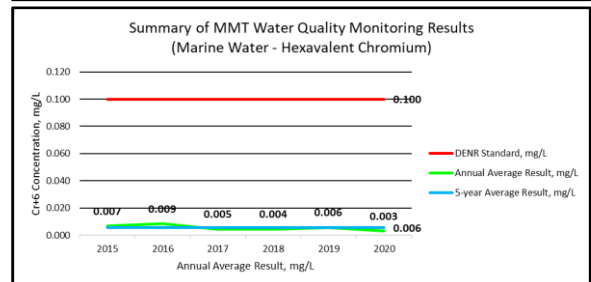
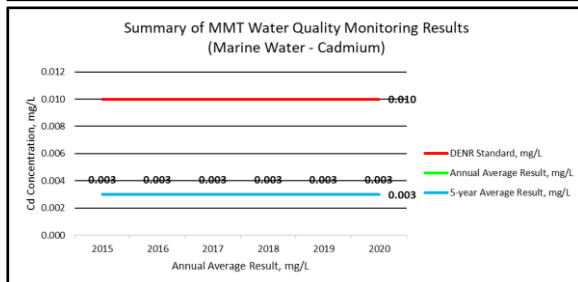
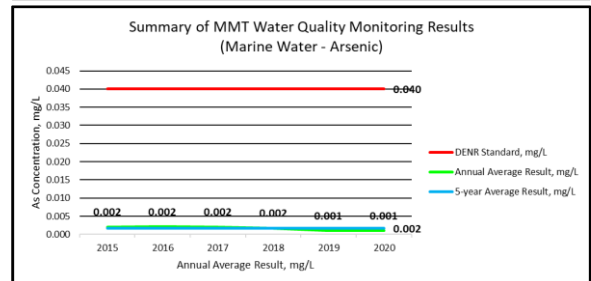
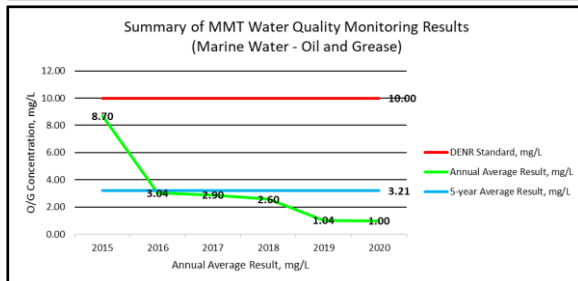
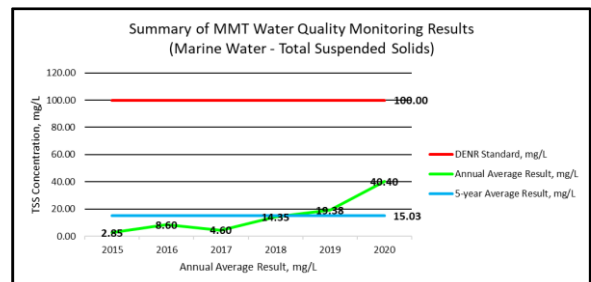
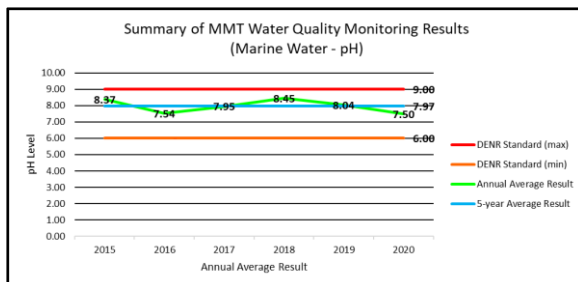


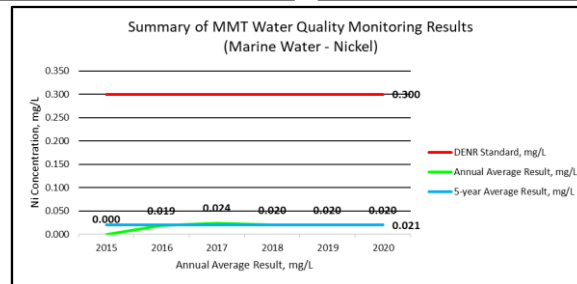
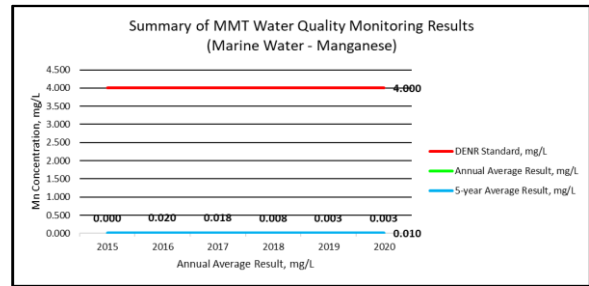
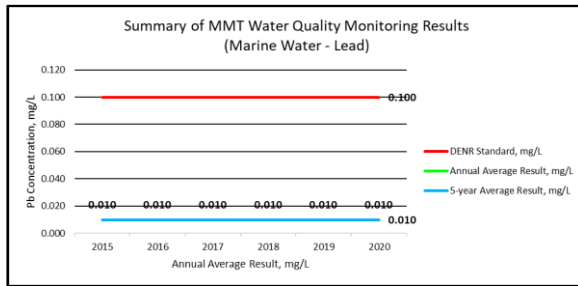
b. Ground Water Quality Monitoring





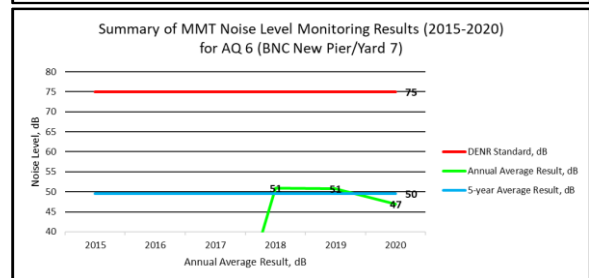
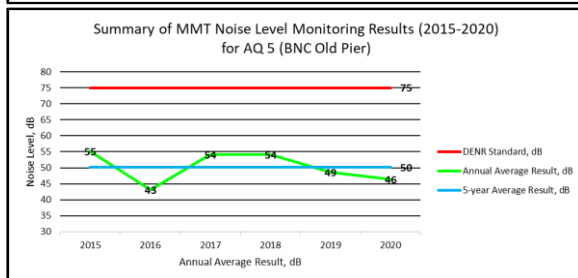
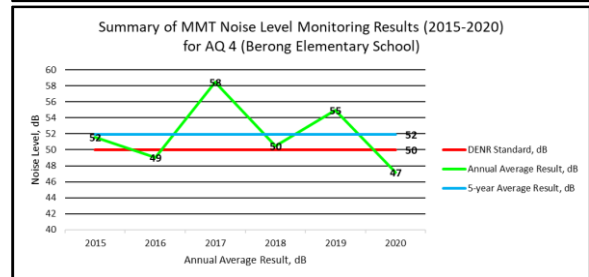
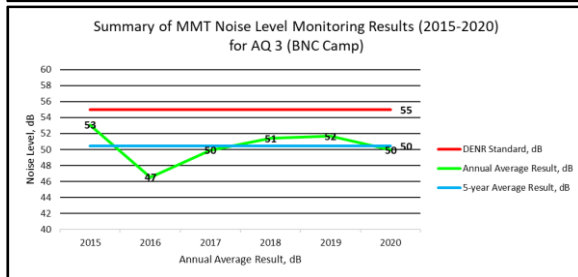
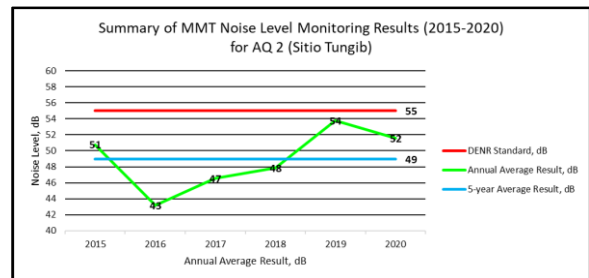
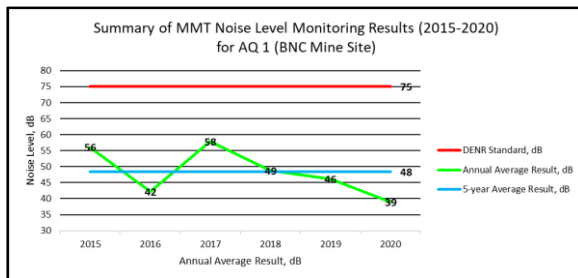
c. Marine Water Quality Monitoring

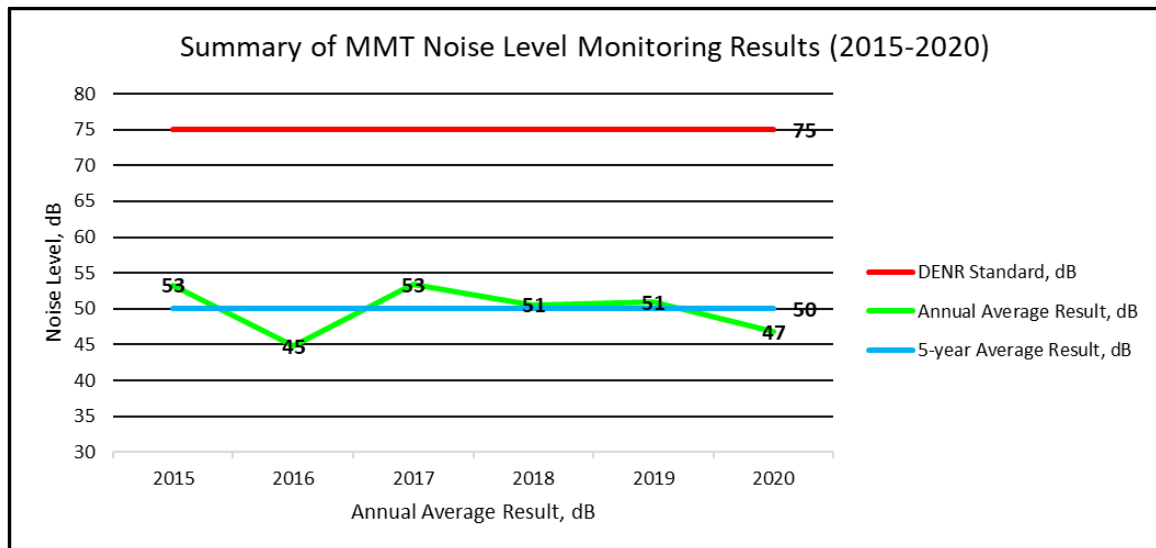




Average water quality monitoring results for the parameters required for a mining project per DAO 2016-08 were generally within the prescribed DENR standards. Exceedances noted during past monitoring activities on some stations for the parameters oil and grease and fecal coliform were attributed to activities that are beyond the control of the company since those stations (i.e. ground water pumps) are located in community areas that are outside the operational areas of the company. These pumps are utilized and maintained by the community and are not used for BNC's mining activities.

Noise Level Monitoring Results





Annual average noise levels recorded in all monitoring stations were generally within the DENR standards. Few instances of exceedances noted particularly in Station 4 (Berong Elementary School) were attributed mainly to school activities which were beyond the control of the company. Standards for each monitoring station vary depending on the general classification of the area (i.e. residential, commercial, industrial).



Republic of the Philippines
Department of Environment and Natural Resources
MIMAROPA Region
COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE
National Highway, Bgy. Alfonso XIII, Quezon, Palawan
Contact No.: 0917-160-4920
Email: cenroquezon@denr.gov.ph

CERTIFICATION

TO WHOM IT MAY CONCERN:


This is to CERTIFY that as per record kept in this Office, Berong Nickel Corporation covered by Mineral Production Sharing Agreement –MPSA No. 235-2007-IVB with an area of 288 hectares, situated at Barangay Berong, Quezon, Palawan is within **TIMBERLAND/FORESTLAND**, as per Project No. 13-A, Block No. A of Land Classification Map No. 2414 certified on November 15, 1960.

This CERTIFICATION is issued upon request of Jay Pee R. Dela Cruz to support their updating of Final Mine Rehabilitation and Decommissioning Plan (FMRDP), this 14th day of December, 2020.

PREPARED AND VERIFIED BY:


KEITH R. CASTILLO
Forest Technician I

NOTED BY:


ROSALYN S. JASMIN
LMO II/ In-charge, RPS



ATTESTED BY:


LEONARD T. CALUYA
CENRO

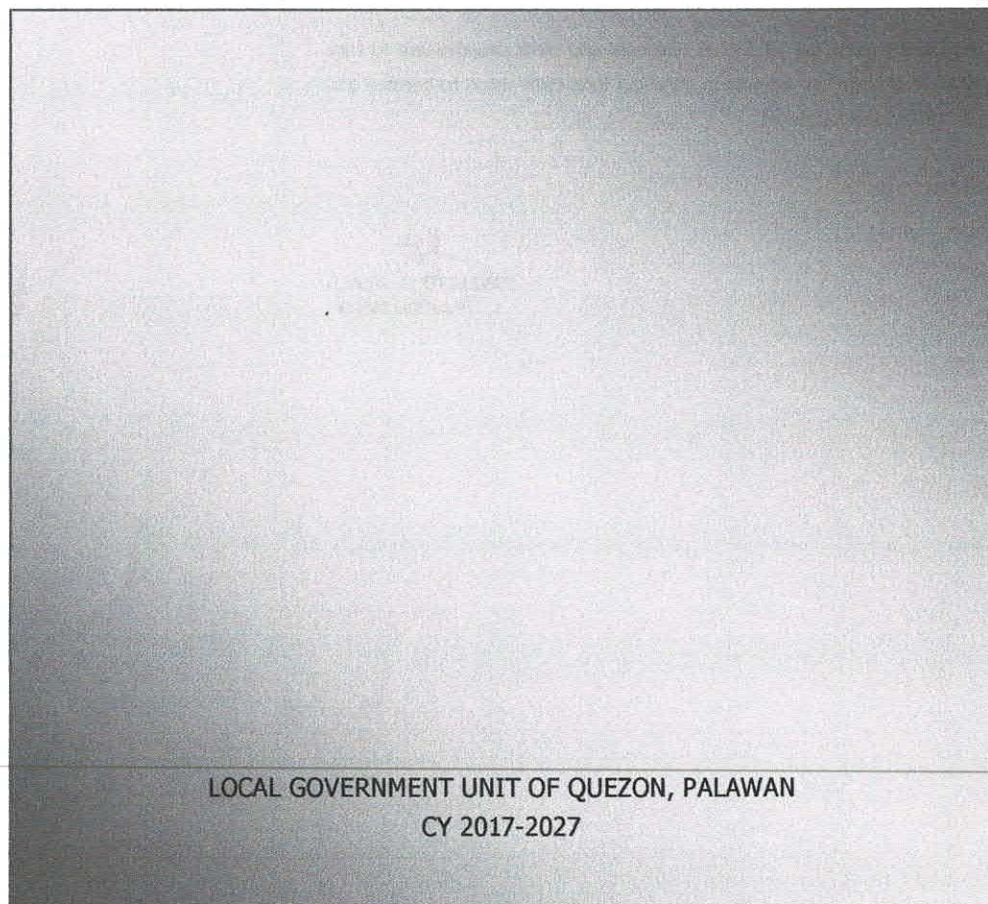
Certification Fee : P50.00
O.R. No. : 0271903 V
Date Issued : 12-14-20
Issued at : CENRO, Quezon, Palawan

VOLUME II: LAND USE PLAN QUEZON, PALAWAN



VOLUME II:



COMPREHENSIVE LAND USE PLAN



LOCAL GOVERNMENT UNIT OF QUEZON, PALAWAN
CY 2017-2027

ACCOUNTABLE FORM NO. 51-C
Revised January, 1992

(ORIGINAL)

	Official Receipt of the Republic of the Philippines		
	Nº 2398078 F		
	Date <u>3-11-20</u>		
Agency <u>CGO - Quezon, Phil.</u>		Fund	
Payor <u>Benny Hinkel Corp.</u>			
Nature of Collection	Account Code	Amount	
<u>Gen. Fee</u>		<u>P 1,000.-</u>	
<u>(Bonded Documents)</u>		}	
<u>Materials (CLUP)</u>			
TOTAL		<u>P 1,000.-</u>	
Amount in Words <u>One Thousand Pesos</u>			
<input checked="" type="checkbox"/> Cash <input type="checkbox"/> Check <input type="checkbox"/> Money Order	Drawee Bank _____	Number _____	Date _____
Received the amount stated above.			
<div style="text-align: center;">  Collecting Officer </div>			
NOTE: Write the number and date of this receipt on the back of check or money order received.			

MESSAGE OF THE MAYOR

This Comprehensive Land Use Plan (CLUP) is one of the mandated plans that the Local Government Code (RA 7160) has directed local governments to "continue to prepare and enact into a zoning ordinance" (Sec. 20, c). The present version succeeds the previous one which expired in 2010.

More than a mere revision of its predecessor, this successor CLUP is reflective of the changing socio-economic and geophysical environment of Quezon, Palawan as well as addresses the challenges that such changes pose upon the future governance of the municipality.

This CLUP addresses particular challenge by adopting spatial strategy that seeks to enable the rural barangays to catch up with the traditional urban area in terms of level of development. This is done by establishing secondary growth area in the northern and southern part of the municipality. Over time, these growth centers will radiate growth impulses to far-flung communities within their respective areas of influence thereby spreading the benefits of growth more or less evenly across the territory.

I therefore urge every municipal official, all residents and other stakeholders to rally behind the implementation of this Plan, keeping in mind our long-term vision to become and remain the model in sustainable development.

Mabuhay, QUEZONIANS!


JOSELITO O. AYALA
Municipal Mayor

FOREWORD

The Local Government Code of 1991 otherwise known as the Republic Act No. 7160 has developed and strengthened the planning and decision powers of the country's local government units. The devolution of significant function is a means of empowering the LGUs to chair our new blueprint for development – one of which is the preparation of our respective development framework as outlined in our CLUP, LDIP and other development plans.

Municipality of Quezon has been in the limelight of determined and even greater potential transformation. Its movement toward positive evolution and devolution will not be an easy talk in as much as the path is difficult and uncertain. This boils down to the fact that the pursuit for the development a blueprint and decisive intervention and course of action to take has to be made to provide a road map in achieving the desired end for the future.

Ultimately, development and better quality of life of the people are twin goals of the government. However, it has always been the greatest task of the local government units that every possible means is being exhausted for that end. Perhaps, as what is being pushed through in the good governance principle, the efforts towards the attainment of development and better quality of life of the people must be anchored on people's participation and involving as well as the whole community at large.

This Comprehensive Land Use Plan (CLUP) serves as the action plan to develop and implement Program, Projects and Activities, it is also known as a general plan, master plan or land-use plan, is a document designed to guide the future actions of a community. It presents a vision for the future, with long-range goals and objectives for all activities that affect the local government. This includes guidance on how to make decisions on public and private land development proposals, the expenditure of public funds, availability of tax policy (tax incentives), cooperative efforts and issues of pressing concern, such as farmland preservation or the rehabilitation of older neighborhoods areas. Nonetheless, this is more than just a document that provides reliable data but a powerful tool that can transform and effect change for the people of Quezon and harbor interested partners in Quezon's quest for development.


JOSEKITO D. AYALA
Municipal Mayor

ACKNOWLEDGEMENT

The COMPREHENSIVE LAND USE PLAN (CLUP) of the MUNICIPALITY OF QUEZON, PALAWAN, through mandated by the DEPARTMENT OF INTERIOR AND LOCAL GOVERNMENT (DILG) will not be made possible, if not for the full support of various development oriented individuals and groups. Therefore, let me express my earnest gratitude to the MEMBERS OF THE SANGGUNIANG BAYAN who readily approved the appropriation for this kind of undertaking. I convey my appreciation and thanks to all the DEPARTMENT HEADS OF THE MUNICIPAL GOVERNMENT, particularly the MUNICIPAL PLANNING AND DEVELOPMENT OFFICE and to the members of Technical Working Group (TWG) for providing us the factual data that serve as the basic inputs in this multi-sectoral development plan. Special thanks to the HOUSING AND LAND USE REGULATORY BOARD (HLURB) headed by **ATTY. RICHARD L. MANILA** and their able staff, **ENP. ELIZABETH C. BANDOJO**, **MS. MA. LOURDES MEDINA** and **ENP. JENNALYN A. BUISING**, for their administrative and technical support to this project.

Likewise, we are grateful to those who assisted in accomplishing this task in various forms; to the employees of MUNICIPAL PLANNING AND DEVELOPMENT OFFICE for their skillful execution of the graphic presentations of the plans. Finally, my profound appreciation extends to all those authors and individuals, whose works have been consulted from time to time and from which we may have unconsciously lifted wisdom and ideas. To all these fine people, my heartfelt gratitude and May God Bless us ALL!


JOSELITO O. AYALA
Municipal Mayor

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MUNICIPAL ORDINANCE



Republic of the Philippines
PROVINCE OF PALAWAN
Municipality of Quezon

-o00-



OFFICE OF THE SANGGUNIANG BAYAN

=====

EXCERPTS FROM THE MINUTES OF THE 119TH REGULAR (OUT OF TOWN/FLYING)
SESSION OF THE 20TH MUNICIPAL COUNCIL OF QUEZON, HELD ON JANUARY 22, 2019
HELD AT THE BARANGAY HALL, BGY. BERONG, QUEZON, PALAWAN

PRESENT:

Hon. Edwin F. Caabay
Hon. Eunes C. Ayod-Musngi
Hon. Pinky C. Bayabao
Hon. Elson T. Rayoso
Hon. Maria Rochill B. Lolo
Hon. Victor Emmanuel L. Catingub
Hon. Wilfredo P. De Leon
Hon. Rolando L. Mozo
Hon. Joselito D. Pader

- Mun. Vice Mayor - Presiding Officer
- S.B. Member - Asst. Floor Leader
- S.B. Member
- S.B. Member
- S.B. Member
- S.B. Member - Floor Leader
- S.B. Member -
- S.B. Member
- S.B. Member - Liga President

OFFICIAL BUSINESS:

Hon. Teodoro C. Medina
Hon. Ariel P. Pagayon

- S.B. Member - PPC
- S.B. Member - SK Fed. President

ABSENT: none

XXX

XXX

XXX

ORDINANCE NO. 2019-165

"AN ORDINANCE ADOPTING AND APPROVING THE COMPREHENSIVE LAND USE PLAN (CLUP) OF THE MUNICIPALITY OF QUEZON, PROVINCE OF PALAWAN FOR 2017-2027"

Sponsored by: Committee on Environment
Chaired by Hon. Victor Emmanuel Linga-Catingub

WHEREAS, the Local Government of Quezon, to put the entire territory of the Municipality in a proper perspective; an integrated physical plan was designed to guide the future development within the urban centers as well as the rural areas, the Comprehensive Land Use Plans (CLUP) was carefully crafted;

WHEREAS, to enact the regulatory measures incorporated herein and to translate the planning goals and objectives into reality, an Integrated Zoning Ordinance was likewise approved and adopted;

WHEREAS, the Local Government Code authorizes local government units to enact ZONING ORDINANCES subject to and in accordance with existing laws, particularly Article VIII, Section 447, (2) (vii) Adopt a COMPREHENSIVE LAND USE PLAN for the municipality: Provided, That the formulation, adoption, or modification of said plan shall be in coordination with the approved provincial comprehensive land use plan;

WHEREAS, the Local General Perspective of the LGU lied on the foundation of its Vision Statement, where potentials and future development challenges are anchored;

ORD. NO. 2019-165

CLUP

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WHEREAS, the CLUP also adhere to the provisions of Book I, Title I, Chapter I, Section 16. General Welfare of the Local Government Code, stating that *"Every local government unit shall exercise the powers expressly granted, those necessarily implied therefrom, as well as powers necessary, appropriate, or incidental for its efficient and effective governance, and those which are essential to the promotion of the general welfare. Within their respective territorial jurisdictions, local government units shall ensure and support, among other things, the preservation and enrichment of culture, promote health and safety, enhance the right of the people to a balanced ecology, encourage and support the development of appropriate and self-reliant scientific and technological capabilities, improve public morals, enhance economic prosperity and social justice, promote full employment among their residents, maintain peace and order, and preserve the comfort and convenience of their inhabitants"*.

NOW, BE IT ORDAINED/ ENACTED by the Sangguniang Bayan of Quezon, Palawan, to adopt the foregoing COMPREHENSIVE LAND USE PLAN (CLUP), that

SECTION I. CLUP PLAN

(CLUP is herein attached as pertinent part and parcel of this measure):

SECTION II. SEPARABILITY CLAUSE. Should any provision or part of this Ordinance is declared invalid or unconstitutional by proper authority, the other parts or provisions which are not affected shall continue to be in full force and effect.

SECTION III. REPEALING CLAUSE. All ordinances, local issuances or rules inconsistent with any provision of this Ordinance are hereby amended, modified, and repealed accordingly.

SECTION IV. EFFECTIVITY CLAUSE. This COMPREHENSIVE LAND USE PLAN (CLUP), takes effect upon review and approval by the Sangguniang Panlalawigan (SP) and after compliance with the publication requirements of posting in three (3) conspicuous places within the Municipality or in any local publication.

RESOLVED FINALLY, that copies of this Ordinance be forwarded to the PROVINCIAL PLANNING AND DEVELOPMENT OFFICE (PPDO), Puerto Princesa City; same are likewise forwarded to the Office of the Vice Governor of Palawan, HON. VICTORINO DENNIS M. SOCRATES, thru the Sangguniang Panlalawigan Secretary, MS. ANGELA RODRIGUEZ-PEÑA, Legislative Building, Puerto Princesa City, for appropriate action and be furnished the offices of the MPDO and all other Offices concerned this Municipality, for proper action and reference;

SO ORDAINED.

ADOPTED: This 22nd day of January 2019.

xxx

xxx

xxx

ORD. NO. 2019-165

CLUP

2 | Page



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I CERTIFY to the correctness of the forgoing ORDINANCE.


MA. GINA C. LINGA-ABI OG
Secretary to the Sanggunian

ATTESTED:


EDWIN F. CAABAY
Municipal Vice Mayor - Regular Presiding Officer

APPROVED:


JOSE L. O. AYALA
Municipal Mayor

2/4/2019
Date Approved

EXECUTIVE SUMMARY

COMPREHENSIVE DEVELOPMENT AND LAND USE PLAN OF THE MUNICIPALITY OF QUEZON PROVINCE OF PALAWAN 2017 – 2027

HIGHLIGHTS OF THE TOWN PLAN AND BRIEF HISTORY

This COMPREHENSIVE DEVELOPMENT AND LAND USE PLAN OF THE MUNICIPALITY OF QUEZON was prepared with the end in view of achieving a well-balanced and ecologically sustainable development that will improve the living condition of the residents while protecting and enhancing the very place that they live in.

The town of Quezon was formerly called Alfonso XIII in honor of King Alfonso XIII of Spain. It became a new municipality on May 15, 1951, from the barrios of Berong and Alfonso XIII from Aborlan and the barrios of Iraan, Candawaga and Canipaan from Brooke's Point by virtue of Republic Act No. 617 authored by the late Congressman of Palawan, Hon. Gaudencio Abordo. The name Alfonso XIII was changed to Quezon to give tribute to the late President Manuel L. Quezon visited the town during his presidency.

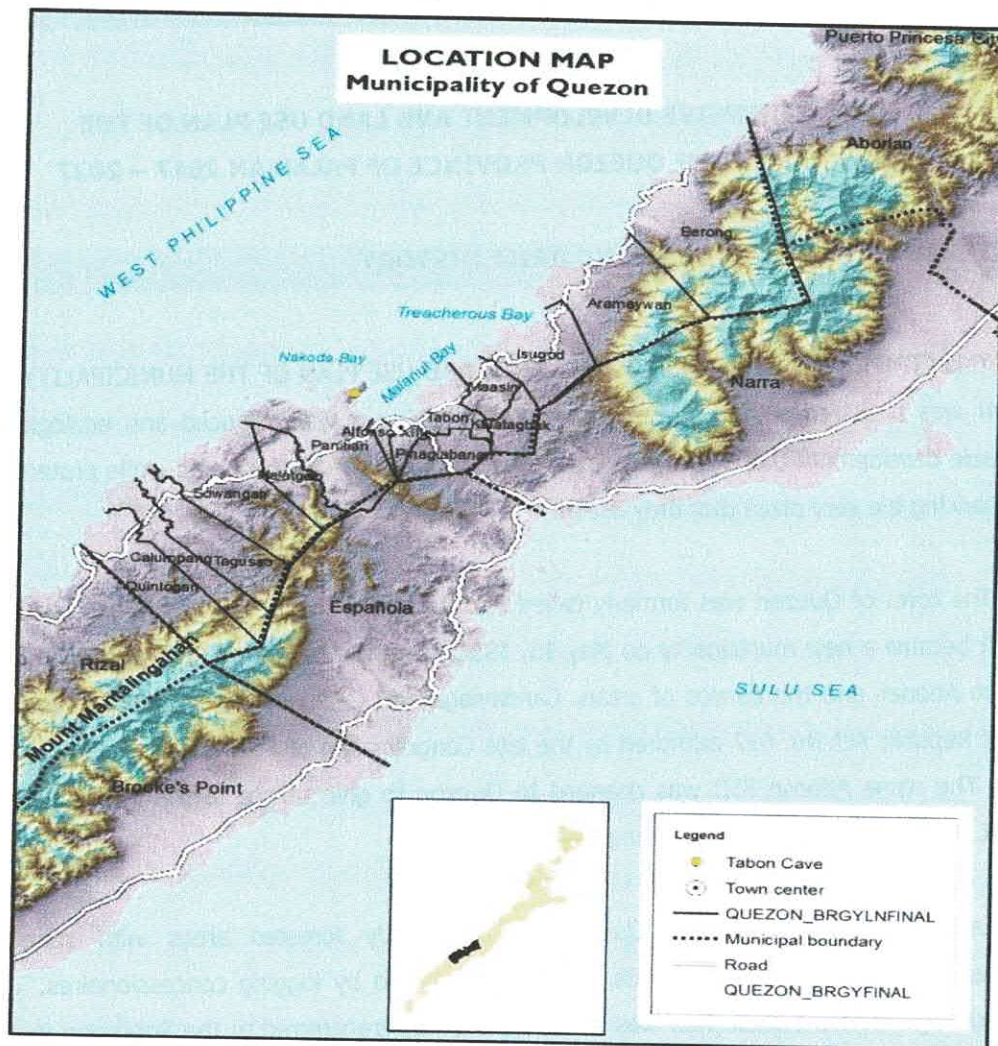
Early inhabitants described Quezon as dominantly forested areas with sparsely distributed dwellings in the early 1950s. Forest was utilized by logging concessionaires. The seat of local government back then was in Tabon but was transferred to the Poblacion in the same era. Sea transport was primarily used as mode of transport until 1970s when road networks started to develop in Poblacion. The streets at the town proper evolved as a place for trading and commercial activities.

PHYSICAL CHARACTERISTICS

GEOGRAPHICAL LOCATION

The Municipality of Quezon can be found in the Southwestern portion of Palawan Island which lies between 117° 45' 00" - 118° 15' 30" longitude and 8° 45' 4" - 9° 30' 15" latitude. It is bounded on the northeast by the town of Aborlan, on the east by Narra and on the south and southeast by Brooke's Point and the Municipality of Española, respectively. The western coastline is bounded by Treacherous bay, Malanut Bay, Nakoda Bay and West Philippine Sea. It is approximately 148 kilometers from Puerto Princesa City, the Provincial Capital, via National Highway.

Figure 0.1 Location Map of Quezon Palawan



LAND AREA

Quezon occupies a total land area of 94, 921 hectares. One of the largest Municipalities in the Province of Palawan (5th). It accounts for 6.37 percent of the province's total land area. The Municipality is comprised of fourteen (14) barangays. Berong is the largest barangay in terms of land area with 16, 827 hectares, while Alfonso XIII is the smallest, with 2, 242 hectares.

Figure 0.2 Location Map of Municipality of Quezon Relative to the Country, Region, and Province

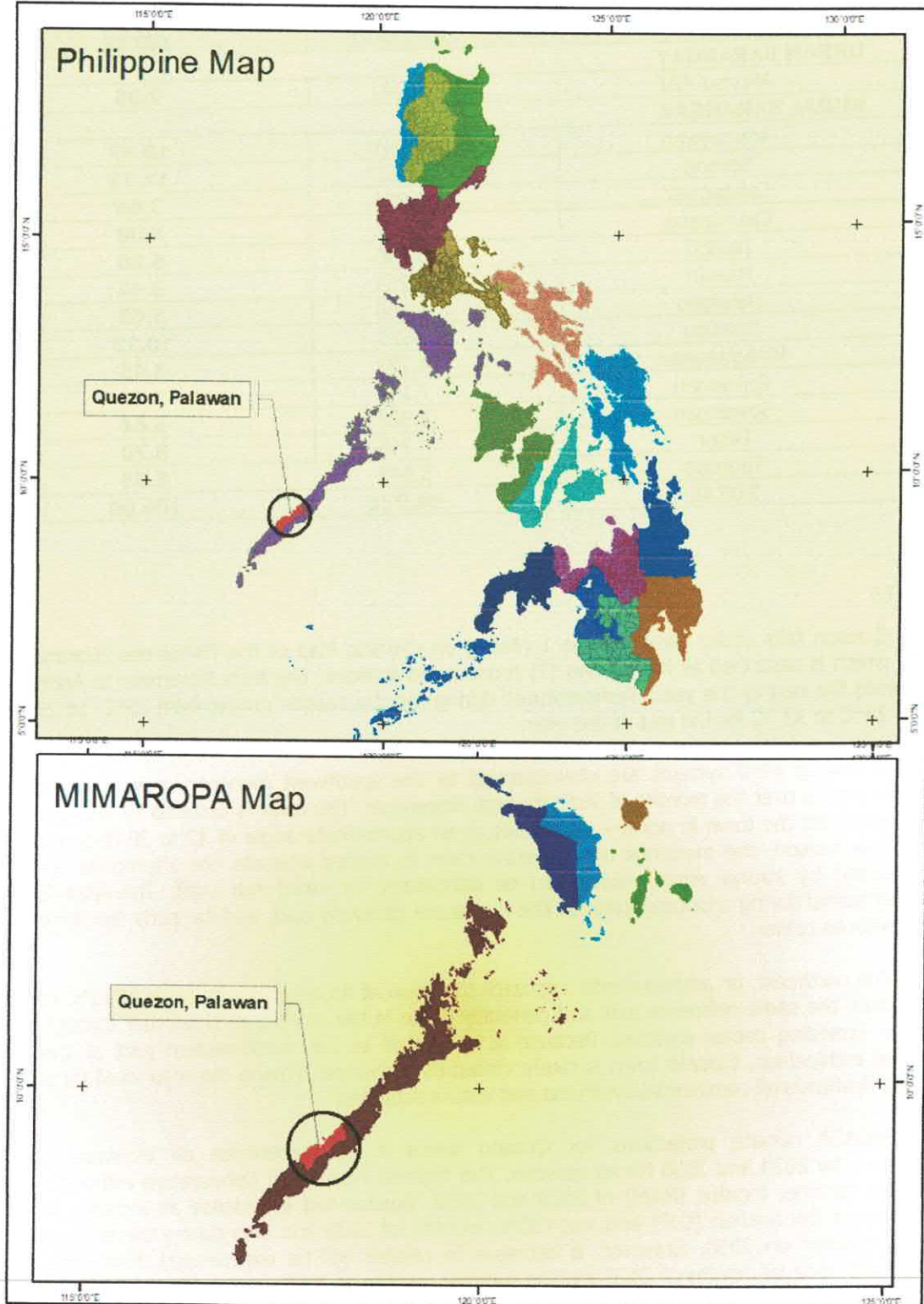


Table 0.1 Land Area by Barangay

BARANGAY	AREA IN HECTARE	PERCENT TO TOTAL
URBAN BARANGAY		
Alfonso XIII	2,242	2.36
RURAL BARANGAY		
Aramaywan	9,941	10.47
Berong	16,827	17.73
Calatagbak	2,886	3.04
Calumpang	7,672	8.08
Isugod	5,696	6.00
Maasin	3,264	3.44
Malatgao	5,150	5.43
Panitian	9613	10.13
Pinaglabanan	4,227	4.45
Quinlogan	7,195	7.58
Sowangan	6,307	6.64
Tabon	8,256	8.70
Tagusao	5,645	5.95
TOTAL	94,921	100.00

CLIMATE

Quezon falls under Climate Type 1 (Based on Climatic Map of the Philippines (Corona Type), which is described as having two (2) pronounced seasons; dry from November to April; wet during the rest of the year. Temperatures during the dry season ranges from 25°C to 29 °C and 24°C to 33 °C for the rest of the year.

Prevailing wind systems are characterized by the southwest monsoon season, which generally occurs over the months of June through November. The town is buffeted by *habagat* winds, which hit the town in north – south axis at an approximate angle of 12 to 20 degrees. During this season, the mornings are generally calm to breezy whereas the afternoons are characterized by strong winds, which can be dangerous for small sea craft. The area is generally humid during a cloudy daytime. The nights are generally cold, and the early mornings are sometimes colder.

The northeast, or *amihan* winds, approach the town at an approximate angle of 12°C to 20 °C from the same reference axis and generally come in the months of November through February providing cooler weather. Because it is located in the south-eastern part of the Philippine archipelago, Quezon town is rarely visited by typhoons, making the area ideal for a variety of institutional commercial/livelihood and leisure activities.

PAGASA climate projections for Quezon states it will experience an increase in temperature by 2020 and 2050 for all seasons. The highest increase in temperature will occur during the summer months (MAM) of 2020 and 2050. Quezon will experience an increase in rainfall during the amihan (DJF) and wet (SON) months of 2020 and also during the amihan and wet months on 2050. However, a decrease in rainfall will be experienced during the summer and *habagat* months of 2020 and the summer months of 2050.

For frequency of extreme events, the number of hot days is expected to decrease in 2020 and will have a significant increase during 2050. On the other hand, the number of dry days will decrease in 2020 and 2050. An increase in the number of days with extreme rainfall is projected during 2020 and will remain the same in 2050.

TOPOGRAPHY

The topography in the land of Quezon town varies from undulating terraces to low undulating to rolling sedimentary hills and ridges with narrow alluvial valleys and from high sedimentary hills and mountains to high basic volcano mountains.

The shorelines are generally laced with swamps and marshland being covered by fishponds and coral reefs.

SLOPES

About 10% or 9,500 hectares of the municipal land is a coastal plain located on the western section and bounded by Malanut Bay. Flatlands make up about 33% or 31,650 hectares, while 31% is hilly and the remaining 26% is mountainous.

SOILS

Soils are characterized as into a two (2) groups namely, *Entisols* or soils without pedogenic horizons, and *Mountain soils* or soil with various moisture and temperature regimes which are found in steep slopes where relief and total elevation vary greatly from place to place.

Palawan has many types of soil varying from clay loam to rough mountain land. Soil type of Quezon is oxisol generally under cogon, talahib, second growth blushes and shrubs and tree species (BSWM).

Table 0.2 DISTRIBUTION OF SOIL TEXTURE CLASSES

Land cover	Forestlands	Protected area	Ancestral domain	Total
Strong brown clay	2,383	7,686	977	11,046
Clay	4,555	672	172	5,399
Clay loam	472	215		687
Clay loam to clay	5,457	4,187	4,735	14,379
Clay loam, fine/clay	55	0	152	208
Clay with gravel	3	46		49
Light clay	124	0		124
Sand, silt, clay	101	73		174
Sandy clay loam, cl	7,304	8,116	8,031	23,451
Silt loam	2,098	233		2,331
Not identified	159	148	0	307
Total	22,711	21,375	14,068	58,154

LAND CAPABILITY

Classification as indicated are "Be", "M" and "De".

EXISTING LAND USES

Existing land uses are built-up areas, tourists spots, agricultural land, roads, a planned unit development, swamps, fishponds, bodies of water and open grasslands.

SOCIO-ECONOMIC PARAMETERS

SOCIAL SECTORS

DEMOGRAPHY

2015 population:	60,980
Rural area population:	45,899
Urban area population:	15,081
Projected population at the end of the planning period:	76,872
Number of Household by 2015:	13,827

EDUCATION

The municipality of Quezon, Palawan has a total of 48 public schools and 4 private schools, 38 of which are for primary/elementary education, 12 for secondary and two (2) university/state colleges.

HEALTH

Crude birth rate is 27% and crude death rate is 3.33% as of 2015.

Acute Respiratory Tract Infection with 7,336 cases or 112 percent topped the leading causes of morbidity for the year 2015 followed by Systemic Viral Infection with 4,026 cases or 61 percent and HPN with 2,858 cases or 43 percent.

Health manpower facilities and its development needs are discussed.

SOCIAL WELFARE

LGU Quezon, Palawan has transparent social welfare services to Quezonians which include but not limited to senior citizens through issuance of Senior Identification Cards, Social Pension and home service; sixty (60) Day Care Centers serving 1,600 Day Care Children enrolled for SY 2015 – 2016 with 60 Day Care Workers.

Government agencies assisting Municipal Social Welfare and Development include POPCOM, DOH, DA, PNP, DILG, PACD and Medicare Hospital.

HOUSING

Traditional pattern of linear type development along roads are prevalent.

In 2010, the total number of household population is 55,142 and the number of households is 12,334. The number of households increased by 1,493 from 2010 to 2015. On the other hand, household population also increased from 55,142 in 2010 to 60,980 in 2015

SPORTS AND RECREATION

Ball game would be the favorite sports in the municipality with 51 basketball courts.

Local athletic meets are sponsored by the Department of Education involving elementary and secondary athletes.

PROTECTIVE SERVICES

The Philippine National Police plays a key role in the development of the municipality.

Quezon Municipal Police Station (QMPS) with twenty one (21) Police Non – Commission Officers (PNCOs), and three (3) Non – Uniformed Personnel's (NUPs). Force – population ratio is 1:2,439.

Facilities include the local Philippine National Police office.

Fire services include 2 administrative officer.

ECONOMIC SECTORS

AGRICULTURE

- Total agricultural area is 47,630.60 or 50.18% of the total land area.

- Crop production: Top 5

Coconut	8,072	Hectares
Rice	3,041	Hectares
Banana	411	Hectares
Rubber	115	Hectares
Corn	53	Hectares

- Inventory of livestock and poultry is estimated at 19,972 heads, composed of cattle, hogs, chicken, goats, ducks, and carabaos.
- There has been a noticeable decrease in animal population due to closing of some ranches.
- Swamp areas have been developed into fish and prawn farms.
- Marine resources include coral resources and its distribution.
- The participation of the residents in fishery activities through associations and cooperatives has significance in the development of fishery and livelihood program.

COMMERCE AND INDUSTRY

- The different commercial establishments are classified according to the type of service they render.
- The industrial establishments are also present in the Municipality such as Ice Plants, Rice Mills, and Rubber Processing Center.

TOURISM

- The list of the well-known and developed tourist spots in Quezon, Palawan is established.

- Features of the Tabon Caves Complex and other resorts in the municipality are major attractions not only to the local but also the foreign tourists.

INFRASTRUCTURE AND UTILITIES

TRANSPORTATION

- Linear and circumferential types of roads from the existing internal circulation system.
- Total length of roads is estimated at 476.81 kilometers.

- Existing road system:

National Road:	114.97 kilometers
Provincial Road:	186.50 kilometers
Municipal Road:	31.33 kilometers
Barangay Road:	86.57 kilometers
Tourism Road:	45.88 kilometers
Mining Road:	31.33 kilometers

- There are 31 bridges connecting different barangays with a total of 616 lineal meters. Concrete bridges have a total of 225 LM while wooden and bailey has a total of 271 LM and 120 LM, respectively
- Roro and Cherry Bus Liner are the two (2) bus company serving Quezon-Puerto Princesa Route and the rest are all shuttle vans, jeepneys and tricycles.
- For utilities, Quezon has Municipal Terminal, Wharf and Fishport.

WATER

- There are six (6) water refilling stations within the Poblacion area. The DIP, Fortune Drops, Aqua Refilling station and others. Level III Water System distributed by Alfonso XIII Water Users Association (AWUA) and Pilipinas Water (Mactan) serve seven hundred twenty (720) consumer households and 423 households respectively within the Poblacion area, prevalent use of hand pump and deep wells in the rural barangay serve the daily consumption.

POWER

- PALECO is the sole company who supplies electricity in Quezon.
- All Barangays are energized; out of 8,201 households, 67% of which numbering 5,514 are energized.

COMMUNICATION

- All kind of mass media are present in the locality.
- Postal office in the town hall is managed by four (2) personnel.

- Two cell site in the municipality built by SMART and GLOBE.

ENVIRONMENTAL MANAGEMENT

- There is an intensified implementation of Clean and Green Projects.
- Drainage present a minor problem due to the natural topography of the municipality.

DEVELOPMENT PLAN

DEVELOPMENT GOALS AND OBJECTIVES

- The municipality of Quezon shall grow and give its residents the benefits of a balanced agricultural and industrial development with a sustainable development for human settlement framework where economic, social and cultural objectives are freely pursued.

SECTORAL GOALS AND OBJECTIVES

PHYSICAL CHARACTERISTICS

- To achieve a sustainable economic development and pursue the improvement of quality life of the community while preserving and maintaining the integrity of the environment by objectives.

SOCIAL SECTORS

- To ensure upgrading of the quality of life of the citizenry by providing economic livelihood opportunities that are viable and long lasting.

ECONOMIC SECTORS

- To attain the ultimate economic growth, thereby, uplifting the quality of life of the population through sustainable development of agriculture, poultry and livestock, fishing, commerce, industry and tourism.

LOCAL ADMINISTRATION AND FISCAL MANAGEMENT

The utilization of the plans and programs embodied in the Comprehensive Development Plan and Zoning Ordinance depends upon the political will and determination of the local officials of the municipality supported by the different government agencies and constituents to achieve its end goal of national land use management.

ADMINISTRATIVE MACHINERY

Local Chief Executive	Joselito O. Ayala
Vice Mayor	Edwin F. Caabay
Councilors	Eunes C. Ayod-Musngi
	Teodoro C. Medina
	Elson T. Rayoso
	Ma. Rochill B. Lolo
	Wilfredo P. de Leon
	Pinky C. Bayabao
	Victor Emmanuel L. Catingub
	Rolondo L. Mozo
Joselito D. Pader	- ABC President
Ariel P. Pagayon	- SK President

- Assisting the municipal officials are the one hundred sixty-three (163) regular employees with their respective functions as mandated by R.A. 7160.
- Salaries of the officials and employees are based on the approved position classification plan.
- Net income of 2018 is Php 29,252,506.86.
- Recommendations and proposals are intended to raise revenue of the municipality.
- Organizational flow chart per Department illustrates the functions of personnel framework.

LAND USE

Land Use Planning is the proper management of environmental and land resources to achieve sustainable economic development in order to promote and safeguard general welfare of the people.

- Planning considerations are based on population, natural and physical characteristics, social requirements, trend of developments, land use planning policies and functional role of the area.
- Existing land uses, general land uses and the general land use plan are prepared for the entire planning period.

ZONE CLASSIFICATION

GENERAL RESIDENTIAL ZONE (GRZ)

Zone used principally for dwelling/housing purposes so as to maintain peace and quiet of the area within the zone.

SOCIALIZED HOUSING ZONE (SHZ)

Zone used principally for socialized housing/dwelling purposes for the under privileged and homeless as defined in RA 7279.

COMMERCIAL GENERAL COMMERCIAL ZONE (GCZ)

An area within a municipality for trading / services / business purposes.

INSTITUTIONAL GENERAL INSTITUTIONAL ZONE (GIZ)

An area within the municipality principally for general types of institutional establishments e.g. government offices, schools, hospitals, clinics, academic / research, convention centers.

INDUSTRIAL

Covers those industries that are classified as NP/NH, NP/H, NP/EH.

MEDIUM INDUSTRIAL ZONE

Covers those industries classified as P/NH, P/H, P/EH.

AGRICULTURAL

AGRICULTURAL ZONE (AGZ) An area within the municipality intended for cultivation / fishing and pastoral activities e.g. fishing, farming, cultivation of crops, livestock raising, etc.

PARKS AND RECREATION ZONE (PRZ)

Spaces designed for recreational pursuit and for the maintenance of ecological balance of the community which consist of parks and playgrounds, zoos, botanical gardens, golf links and community plazas. It is an area designed for diversion / amusements of the community.

TOURISM ZONE (TZ)

Areas for preservation and development characterized by scenic environmental qualities, either natural or manmade; and areas of cultural and historical values that are conducive to recreation, leisure and other wholesome activities.

CRITICAL AREAS

Areas classified as risk areas and areas of restraint but require special management and conservation practices, such as typhoon belts, flood areas, earthquake prone areas,

geological unstable areas and areas where uncontrollable development could result in irreparable damage to the environment and its attributes.

INDUSTRIAL

Industry classification is only up to 4 digits. A more detailed classification of industry may result in appropriate inclusion or exclusion of an industry from a zone.

INDUSTRIAL CLASSIFICATION

- P - Populative
- NP - Non-populative
- HP - Highly Populativ
- H - Hazardous
- NH - Non-hazardous and
- EH - Extremely hazardous

FOREST ZONE (FZ)

Areas within the municipality intended primarily for forest purposes.

PLANNED UNIT DEVELOPMENT (PUD)

An area within the municipality wherein land development is comprehensively planned as an entity via unitary site plan which permits flexibility in planning / design, building siting, complementary of building types and land uses, usable open spaces and the preservation of significant natural land feature.

SWAMPS, FISHPONDS, BODIES OF WATER / WATER ZONE (WZ)

An area within the municipality which include swamps, rivers, streams and seas except those included in other zone classification.

1.0 NATIONAL AND REGIONAL DEVELOPMENT FRAMEWORK

Linkage with the higher plans is important in crafting the local plans in order to have unified agenda. The national and regional development framework cascaded to the local plans creates more development focus consolidating government efforts and resources.

1.1 Sustainable Development Goals

In 25 September 2015, at the United Nations Sustainable Development Summit, the world leaders including the Philippines adopted the 2030 Sustainable Development Agenda. This includes the set of 17 Sustainable Development Goals (SDGs) as the new universal agenda which the Philippines pledge to adhere.

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

1.2 Philippine Development Plan –Accelerating Infrastructure Development (2011-2016), Transport sub-sector

One of the major development agenda manifested in the national development plan for infrastructure is directed towards attaining interconnectivity not only within the archipelago but among ASEAN nation. It was stated therein that the nation will explore ASEAN connectivity thru establishing the ASEAN RORO Network.

The Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) initiative was launched in 1994 as a cooperation initiative by the four BIMP-EAGA nations to accelerate economic development in areas that are geographically distant from their national capitals, yet in strategic proximity to each other, in one of the world's most resource-rich regions that includes the Heart of Borneo and Sulu-Sulawesi Marine Ecoregion.

BIMP-EAGA covers the entire sultanate of Brunei Darussalam; the provinces of Kalimantan, Sulawesi, Maluku and West Papua of Indonesia; the states of Sabah and Sarawak and the federal territory of Labuan in Malaysia; and Mindanao and the Province of Palawan in the Philippines. (<https://www.adb.org/countries/subregional-programs/bimp-eaga>)

On October 11, 2016, President Rodrigo R. Duterte signed Executive Order No. 5, s. 2016 approving and adopting the 25- year long-term vision entitled *AmBisyon Natin 2040* as a guide for development planning. According to EO 5, the Philippine Development Plan 2017-2022 (PDP 2017- 2022) and the succeeding PDPs until 2040 shall be anchored on *AmBisyon Natin 2040*. In its preamble, EO 5 recognizes the need for a “bold vision and effective development planning” based on a “forward-looking approach that goes beyond a single administration”. It also emphasized the centrality of people in development planning and their aspirations as requisite for the design of government interventions to achieve development outcomes. *AmBisyon Natin 2040* is the result of a longterm visioning process that began under the previous administration in 2015. More than 300 citizens participated in focus group discussions (FGDs) and close to 10,000 responded to the national survey designed to gather information about the kind of life Filipinos want for themselves and their children and what they hope the country would be like in 2040. Technical studies were commissioned to identify strategic options for realizing the vision articulated by citizens. The exercise benefitted from the guidance of an advisory committee composed of select representatives from government, academe, civil society, and the private sector. *AmBisyon Natin 2040* represents the collective long-term vision and aspirations of the Filipino people for themselves and for the country in the next 25 years. It is a vision, not a plan. A vision presents a picture of the future, a set of personal life goals as well as ideals for the country; a plan, on the other hand, consists of a set of strategies to achieve the goals. Plans are contingent on various factors and circumstances, just as routes to a given destination can vary depending on weather or road conditions. A vision, like a goal or a destination, remains fixed, at least for the given time horizon. *Ambisyon Natin 2040* provides the anchor for the country’s development plans until 2040.

The Filipinos’ vision for the Philippines in 2040 is a prosperous, predominantly middle-class society where there is equality of opportunities and poverty has been eradicated. It will be a society where people live long and healthy lives with a higher life expectancy at birth of 80 years. Longevity will be enhanced by the ability of individuals and communities to withstand natural as well as man-made shocks and disasters. With smarter and more innovative people, the country in 2040 is also envisioned to be a major player in the global knowledge economy, producing innovative products and processes that are used to make highquality goods and services at competitive prices. The Philippines will be a high trust, more caring, and peaceful society where human security is assured and government enjoys the people’s trust because it is clean, efficient, and service-oriented. High trust will also prevail between the private sector and the government, as well as between and among peoples. Overall, a high trust society will facilitate official and business transactions, and smooth interpersonal relations.

On the kind of life they want for themselves, Filipinos want a life that is stronglyrooted, comfortable, and secure: *matatag*, *maginhawa*, at *panatag*. The terms “strongly-rooted, comfortable, and secure” used to describe the life envisioned by Filipinos by 2040 reveal middle-class aspirations. They include home ownership, a steady source of income to support family and self, college education for the children, a motor vehicle, stable finances to cover daily needs and contingencies, savings for retirement, and time for vacation and travel. There is

also a strong family orientation that underlies the preferences as reflected in the choice of living and working in the same locality, the desire for adequate spaces that allow for activities with family and friends, and the desire for access to convenient and affordable transportation for occasional visits to family and friends, among other reasons. The same value is reflected in the 4 Other assumptions include: Php 5,000 for monthly maintenance and other operating expenses (MOOE) per vehicle; Php 40,000 for food, utilities and other expenses (Php 10,000 per capita monthly food, utilities other expenses x 4 family members); Php 30,000 for monthly housing amortization (Php 25,000 monthly amortization for a Php 4 million housing loan for 25 years + Php 5,000 MOOE); Php 10,000 for education expenses of 60,000 per annum x 2 kids / 12 months; Php 25,000 based on 21 percent effective income tax rate; Php 4,000 for entertainment expenses (Php 1,000 per capita monthly entertainment expenses x 4); and Php 6,000 for vacation budget (annual vacation budget of Php 18,000 per capita x 4). 5 Clarete, Ramon. Economic Growth and Poverty Reduction in the Philippines. Unpublished manuscript importance attached to education. Nearly every Filipino family considers college education a requisite to a decent job and so aspires to have the children complete a college degree. The desired lifestyle requires a monthly family income of at least Php 120,000 for a family of four (4) valued in 2015 prices in the National Capital Region.

With the right policies, improvements in productivity and efficiency can more than triple the gross national income per capita of the country in 25 years. To sustain the Vision over the next 25 years, it is necessary to build a broad constituency behind the reforms needed to attain it. An effective communications strategy is critical to disseminate the Vision to all stakeholders. The Vision also needs to be translated into specific goals, measurable targets, and intermediate milestones while allowing for flexibility in strategies. Preferences and needs may change over time so the Vision will need revisiting and review. The strategies needed to achieve the targets will then be the subject of four PDPs until 2040.

1.3 Philippine Agriculture (PA) 2020. A Strategic Plan for Poverty Reduction, Food Security, Competitiveness, Sustainability, Justice and Peace

PA 2020 is the medium term strategic plan crafted by the science community for the modernization and development of the agriculture and natural resources sector aided by the various experts from relevant fields. The PA vision is to become a "Robust and vibrant agricultural and natural resources production systems and ecosystems services that improve and sustain human well-being in the Philippines". PA 2020 builds upon 14 agro-industry clusters: Rice and white corn, Ornamentals, Sugarcane, Herbal crops, Coconut and palm oil, Pasture-ruminants, Export fruits, Feed corn, livestock and poultry, Coffee, Abaca, Capture fisheries, Vegetables legumes and root crops, Culture fisheries and Forestry (9 sub-clusters). For Banana (*Lakatan*) PA 2020's target is to increase yield of 12 t/ha by 25%-100%, increase export by 4%-8% and reduce postharvest losses from 25% to 10%. For coconut, targets include increase yield to an average of 2mt/ha/year, planting of HYVs in 100,000 hectares and establishment of seed farms and nurseries (24,600 seednuts / nursery) together with other targets.

1.4 Philippine Tourism Trends

An increasing tourist arrival was observed in the Philippines. In 2010, international tourist arrivals in the country reach 3.52 million. Visitors from Asia Pacific Region contributed 61.5%. Data also shows that tourist arrivals increased by 5.9 percent annually between CY 2000-2010. It was expected that by 2020, there will be about 5.71 million tourist arrivals in the Philippines. It has been also noted that among the topmost visited tourist destination include: Metro Manila, Cebu, Boracay Island, Camarines Sur, Bohol, Zambales, Davao City, Negros Oriental, Cagayan Valley, Puerto Princesa, Baguio City, Ilocos Norte, and Camiguin Island.

In March 2011, discussion paper presented by the Department of Tourism DOT for the formulation of the Philippine National Tourism Plan 2011-2016 stated that the tourism sector is estimated to have contributed \$2.96 billion in foreign exchange and 6.2% to GDP in 2007, 43.5% of total Philippine service exports in 2009, and 3.3 million jobs in the economy in 2008. Average investment in tourist facilities and services between 2005 and 2009 was PhP36 billion.

1.5 Regional Physical Framework Plan, REGION IVB-MIMAROPA: 2004-2030

The Regional Physical Framework Plan (RPFP) for MIMAROPA Region envisions that by 2030, it shall be a new gateway to the Southern Philippines, the food basket of Metro Manila and the CALABARZON Region, globally competitive agri-industrial region, with a sustainably managed natural resources and eco-system, and integrated internally and externally through modern infrastructure facilities. In pursuing the 2030 regional vision, two component spatial strategies have been adopted, Integrated Resource-Based Development Cum Environmental Management Strategy and the Network of Service Center Strategy.

The medium-term development plan was crafted to provide the blueprint for transforming MIMAROPA to the shared vision of the Region's stakeholders: "MIMAROPA: The destination of choice". The Region's stakeholders envision MIMAROPA as the destination of investments, livelihood, residence, employment, adventure, rest and recreation, even retirement. The term destination, as used in the vision statement, carries the context of destination as a place; destination as an experience; and, destination as a state of being.

Destination as a place denotes that by 2040, MIMAROPA will be the preferred place of residence, especially for the immediate family and other dependents of government employees whose official work stations have been moved to the designated regional government center in Calapan City. The other growth centers of the Region will also attract returning emigrants and new immigrants who will have found an improved business and investment climate in the islands, particularly in agriculture and tourism. The uptrend in domestic and international tourist arrivals in the Region will be sustained as the global economy recovers. With the growing interest on the emerging diverse destinations in the Region, including the retirement villages that are in various stages of development in the island provinces, its tourism industry continues to boom and has the potential to drive growth in agriculture and agri-industrialization.

In the context of MIMAROPA as a destination for enriching experience of nature, biodiversity, adventure, health and wellness, rest and recreation, the Region's natural land and

seascapes offer world class attractions of ecological, cultural and historical significance. In the context of destination as a state of being, improved local governance and management for development results have been steadily progressing at all levels. With the national administration's reforms towards five key result areas under the President's social contract, the Region stands to benefit from improvements along transparent, accountable and participatory governance; poverty reduction and empowerment of the poor and vulnerable; rapid, inclusive and sustained economic growth; just and lasting peace and the rule of law, and; integrity of the environment and climate change adaptation and mitigation. MIMAROPA's development vision articulates the same aspirations contained in the President's social contract as expressed by the stakeholders' in the four pillars of the vision.

Among the major areas of concern is the establishment of inter-island connectivity to strengthen urban dynamics that include: Gasan-Pinamalayan, Roxas-Odiongan, Coron-San Jose-Sablayan-Batangas, and Lubang-Calatagan, Batangas.

Palawan will be later connected to Strong Republic National Highway via Bulalacao-Coron.

1.6 Provincial Development and Physical Framework Plan, Palawan

The Provincial Development and Physical Framework Plan (PDPFP) is formulated at the provincial level and merges the traditionally separate provincial physical framework plan and provincial development plan to address the disconnect between spatial and sectoral factors and between medium and long-term concerns. It contains the long-term vision of the province, and identifies development goals, strategies, objectives/targets and corresponding PPAs which serve as primary inputs to provincial investment programming and subsequent budgeting and plan implementation. (JMC No. 1 s. 2007) The Provincial Government of Palawan in the leadership of Governor Jose C. Alvarez pushes through programs and projects that would alleviate poverty in the whole province. With its five areas of development known as IHELP which stands for Infrastructure, Health, Education, Livelihood and Protection of Environment, the Provincial Government anchors all its programs and projects in these five areas to better serve the Palawenos. Consistent with the mission and vision of the Province, the Municipality of Kalayaan takes cooperation in the fulfillment of these developments in the specified areas.

2.0 LOCAL GENERAL DEVELOPMENT PERSPECTIVE

This section translates the local aspirations into a concrete development agenda which will be considered for purposes of spatial planning. The local development perspective lay down the conceptual foundation for future development.

2.1 Municipal Vision

During the 1st consultation-workshop for CLUP preparation, the TWG decided to revisit its existing vision. It has been agreed that the vision be enhanced since it will serve as a guide to the municipal 10 year Comprehensive Land Use Plan.

VISION STATEMENT

" Quezon as one of the Eco-tourist destinations in Palawan with empowered, productive, multi-culturally responsive and God-loving citizens, enjoying progressive and dynamic economy in a sustainable environment with appropriate infrastructure facilities, sufficient social services, motivated by leaders with political will adhering to good governance"

Specific descriptors and success indicators were subsequently formulated in order to easily quantify or measure the realization of the desired vision (see annex 2 for the success indicators for each descriptor) and in support in attaining the 17 Sustainable Development Goals.

2.2 DEVELOPMENT POTENTIALS AND CHALLENGES

2.2.1 DEVELOPMENT POTENTIALS

- *HOME OF THOUSAND CAVES*

According to the National Museum caves within the vicinity of Tabon Caves Complex alone was accounted at 240. Numerous caves exist in other barangays like Taraw Cave in Barangay Aramaywan, Mudlom and Sangaran Cave in Barangay Isugod, Panandanan Cave in Barangay Tabon, Morosoon Cave in Barangay Kalatagbak and many are still left unaccounted based from the Municipal Tourism Council. The existence of abundant caves is unique in Quezon.

- *RICH IN CULTURE AND TRADITIONS*

The culture of Quezon, Palawan can be seen in its rich history. Tabon Cave was the first among the earliest known sites of human habitation in Southeast Asia. Here archaeologists have unearthed evidence of indigenous cultures stretching back over 50,000 years.

Pala'wan Tribe although few in numbers today, preserved a very traditional way of life and culture. One of the rich culture of our first people inherit by Pala'wan is the traditional wood carving. They have a simple way of life, shifting cultivators; they grow most of their foods on small plots of land in the forest. Before clearing an area for planting, they consult and appease

various spirits and interpret omens in their dreams accompanied by a "*Kendar Dance*". After harvest they move on and allowing the forest to regenerate. They also move further inland when there is new settlers came and live beside them.

Today the culture of Quezon, Palawan is a combination of cultures of Luzon, Visayas and Mindanao with influence from Asia, Spain and Africa. These groups of peoples with different cultural backgrounds arrived to build a new life in this town and brought to the people especially to the Pala'wan their knowledge which includes agriculture intensification. Besides, these migrants also took new habits. Because marriages took place between existing tribes and immigrants, there was a cross – fertilization between different cultures. This has led to many cultures living together in harmony.

To converged this different cultures, the municipality has its "*Manunggul Festival*" celebrated during its Annual Founding Anniversary every 15th day of May.

- *LOW RISK TO COMBINED NATIONAL CLIMATE AND GEOLOGIC HAZARD*

Based from the overlay analysis of combined climate and geologic hazard of the Philippines, Palawan is the only province in the country with low risk. In fact, Palawan is the only place in the Philippines free from earthquake. Especially Southern Palawan, where Municipality of Quezon is located.

- *RICH IN BIODIVERSITY*

The municipality has diverse species of flora and fauna both in marine and terrestrial ecosystems. Marine life forms include approximately 8 species of seagrasses, 17 species of seaweeds, 10 coral species and 11 reef fish species while 9 species of mangroves also dispersed in the area. There are also numerous species of terrestrial flora and fauna. The municipality is known for talking mynah or commonly known as "*kiyaw*".

- *HUGE AVAILABLE AREAS FOR FUTURE DEVELOPMENT*

Actual survey within the municipality shows that huge area remained unutilized. These areas are suitable either for urban development or food production. More than enough land supply to satisfy future demand is expected to facilitate good investment.

- *EXCELLENT CARBON SINK*

Foreign funded project called Advance REDD+ conducted a study and identified Palawan as the last standing excellent carbon sink nationwide. Approximately 56.5 percent of the total land area is forestlands with forest vegetation cover of 46.91 percent.

- *JUMP-OFF POINT TO KALAYAAN*

Kalayaan is 2-3 days away from Puerto Princesa by boat. Travelling from either Rizal or Quezon will shorten time travel by almost two days. However, the municipality of Kalayaan

preferred Quezon as jump-off point. They already established satellite support facility in Sitio Katuwayan, Barangay Berong. Kalayaan's investment in Barangay Berong may initiate future development in the area.

- *PRESENCE OF CATEGORY I SANITARY LANDFILL*

In the entire Palawan, only Puerto Princesa City and Quezon manage to construct sanitary landfill since RA 9003 was enacted into law. The development site has a total land area of 9.2 hectares located in So. Metropal, Barangay Malatgao. The facility occupied a total land area of 1.5 hectares. The presence of sanitary landfill is considered development edge over other municipalities in the province.

- *HOME OF TABON CAVE*

Tabon cave is an archaeological site which makes Quezon previously earned the title as the cradle of Philippine civilization. Though the municipality already lost the title with the discovery of earlier artifacts in Caliao Cave of Cagayan, Tabon cave already marked the first discovery that proved ancient civilization in the Philippines. It is part of the history and Quezon will never loss that identity.

Quezon as cultural heritage destination – entitled as 50,000 years of Philippine pre-history in South East Asia.

- *PRESENCE OF AIRSTRIP AND SEAPORT*

Two airstrips exist in the municipality located in Barangay Isugod and Berong while a seaport is found in So. Balintang, Barangay Isugod. Airstrips benefited private aircraft that fly-out fish products and facilitate exchange of other goods and services. It provides easy and fast direct connection in Metro Manila and other areas whenever necessary especially during emergency situation. Whereas, existing seaport serves as emergency shelter.

- *ABUNDANT WATER SOURCE*

Numerous river systems traverse the municipality. Some of these underwent initial assessment by a private investor and found to be suitable for hydro power plant namely Lamikan River in Tagusao and Panitian River. Others were tapped to irrigate 1,249 hectares of farmlands in different barangays. There are also six water sources identified suitable for Level II and Level III development in different barangays.

- *RELATIVELY PRESERVED NATURAL RESOURCE WITH LEGAL PROCLAMATION*

Palawan is covered by a special law, RA 7611, that protects selected marine and terrestrial ecosystems thru Environmental Critical Areas Network (ECAN). It declares core zone

for strict protection. Quezon has a total land area of 22,976 hectares declared as core zone. Presidential Proclamation No. 2152 declares all mangroves in Palawan as Mangrove reserve except Bugsok in Balabac. NIPAS act covers Mt. Mantalingahan Protected Landscape with 13,676.21 hectares found in Quezon. Local zoning declared protection of two watersheds namely Baik and Malanut. Five marine protected areas are locally managed.

Marked as the Philippine's last frontier, collective effort to preserve natural resources put each municipality of Palawan in advantage position in terms of tourism development particularly eco-tourism including agriculture and fishery resource stability. For three consecutive years (2015-2017), Palawan was recognized by Travel+Leisure Magazine as one of the world's best island.

- *SUITABLE AREAS FOR AGRICULTURAL PRODUCTION*

The municipality has a total area of 130,238.64 hectares of marine waters suitable for fishing and mariculture. Few of the fish catch include Grouper (lapu-lapu/suno), Snapper (Maya-maya), Mackerel (Tangigue), Tuna, Blue Marlin and Pampano Anchovy (Dilis). Major crops produced such as banana, coconut, rice and corn approximately occupied 1,577 hectares based from 2016 MAO data. Province wide, the locality belongs to the top ten coconut and banana producing municipality. This means that the municipality is self-sufficient in terms of food production and has the potential to export agricultural products.

- *RELATIVELY PEACEFULL AREA*

2.2.2 DEVELOPMENT CHALLENGES

- *CULTURAL DIFFERENCES*

Indigenous Population is approximately 38.33 percent of the total municipal population with unique culture and traditions and way of life, which does not fit-in in various national standards that measures human development index. Hence, survey manifest increasing poverty threshold. In fact, Quezon ranks 2nd in high poverty threshold in the province. It also blow-up survey on malnutrition and number of households with no sanitary toilet. In 2016, data shows that 49.20 percent of the total households are either using sanitary toilet of no toilet.

Adherence to cultural traditions and practices likewise brought hardships in environmental management specially slash and burn or "*Kaingin*" for food production. This has multiple adverse effects cutting across ridge to reef ecosystems. Deforestation, loss of wildlife habitat, erosion and flooding are few of the identified impact to immediate environment. Lack of water supply for irrigation and domestic purposes and damage to marine life are expected impacts downstream.

- *NATIONAL POLICY ON RICE IMPORTATION COUPLED WITH INADEQUATE POST HARVEST FACILITIES*

During harvest season, rice importation caused unfavorable market value for local producers. Availability of imported rice in the local market with competitive value, affect supply and demand curve. Local farmers bear economic losses either by reducing the price or just letting it rot. If posts harvest facilities, however, is available particularly combined harvester, solar dryer and warehouse, surplus may be processed and stored until the supply and demand curve changes in favor of the local suppliers.

- *INADEQUATE FARM TO MARKET ROADS*

Out of the total land area, 11,692 hectares are devoted to agriculture distributed in all barangays. Actual field inspection revealed that interior production areas need farm to market roads. Transportation system contributed to quality and market cost of farm products. Based on standard rural road, 1.5km/100 hectares, Quezon's road network is deficit by 69 percent.

- *COMPLACENT IMPLEMENTATION OF ENVIRONMENTAL LAWS*

The municipality is struggling to prevent local populace from conveniently burning of waste on a regular basis and practice segregation at source. This means damage to the natural environment specially air and water. Burning produces CO₂, a greenhouse gas that primarily causes increase in temperature.

Cutting of mangroves, water pollution, illegal fishing, cave destruction and other similar activities in violation of environmental laws are some of the manifestation of complacency in

implementation. Not to mention the unregulated mining in Barangay Berong and on-going lowlanders-IP partnership "*kaingin*" system.

- *LAND CONVERSION*

Despite lack of statistical data to prove land conversion both in lowland and upland areas, common knowledge based from anecdotal accounts combined with actual changes in land uses indicate that land conversion is occurring. Forestlands are now open for industrial plantations like rubber tree plantation. Mangroves are utilized for fishpond and agricultural areas are converted for non-agricultural uses.

While conversion is sometimes inevitable, uncontrolled, immature and unnecessary conversion in exchange of economic gain will significantly hamper the function of the ecosystems which will definitely influence local development. Ecosystems are natural assets that need to be protected. As land conversions persist, natural ecosystems are damaged.

- *BOUNDARY DISPUTE*

In the previous implementation of national funded projects like KALAH I projects, boundary dispute caused cancellation of projects. Clear boundary delineation is important to establish barangay beneficiary to a development projects. This is essential for implementation and operational management.

Barangay boundary conflict remains an issue though local legislation provides legal basis to support resolution of boundary conflict among barangays. Until resolved it will deter implementation of development projects.

- *IN-MIGRATION AND INFORMAL SETTLERS*

Common observation determined that informal settlers are becoming an issue particularly professional squatting. Accordingly, approximately 30 percent of informal settlers are migrants from other municipalities. They came-in and settled in available lands which are more often prone to hazards. The LGU needs to keep them safe during hazard occurrences and provides emergency assistance. The growing number of informal settler entails government resource allocation for housing in compliance to RA 7279 (UDHA) and other basic services needed.

- *LIMITED AREA WITHIN THE MAJOR URBAN CENTER*

Barangay Alfonso XIII the center of urban growth is roughly 612 hectares. Due to limited space, developments with spatial requirements are not-feasible at times within the Poblacion. In some instances, Quezon loss the opportunity to benefit from national development funded projects when location is required within the urban center.

- *LAND OWNERSHIP*

LGU previously owned lands that may be developed for providing basic facilities and services. By way of donation, the LGU gradually disposed properties legally in possession. Similar with limited urban area, this contributed to loss of development opportunity. When required for a spatial counterpart to benefit from outside source development projects, the LGU failed to comply and therefore dropped from the list of potential beneficiaries.

- *INADEQUATE INFRASTRUCTURE SUPPORT FACILITIES/UTILITIES*

It is ironic that with Malampaya in Palawan, Quezon is suffering from frequent and regular power interruptions. However, it is not an isolated case in the province. In terms of communication system, many of interior communities are deprived from telecommunications system. Drainage and sewerage system that facilitates good water flow coming from surface run-off and clean domestic waste water is not a priority action.

Potable water system is available in some barangays only. Water system in other barangays remained unsafe for drinking and sometimes even for domestic consumption.

Good infrastructure is a development catalyst. Potable water supply is a vital component to support life forms and development processes as well. Whereas good power supply is a basic requirement to sustain economic growth. Telecommunications, drainage and sewerage system are component of safety standards for disaster management.

- *ABSENCE IF NOT INADEQUATE BASIC SOCIAL FACILITIES AND SERVICES*

The municipality has a total land area of 94,921 hectares with approximately 60,980 population based from PSA in 2015. Rural barangays are accessible via the national highway with a travel distance of about 15 min. – 1 hr. by public transport. Only 1 physician is serving the entire municipality with inadequate facility.

With regards to recreation area for public use, there is an existing open gymnasium. However, the municipality lacks a functional parks and open spaces including sports complex to encourage public wellness and fitness activities. These are important to keep human capital in good shape.

- *LOW EMPLOYMENT OPPORTUNITY*

Employment opportunities are largely agricultural-based. Government institutions and few commercial establishments are other sources of non-agricultural employment. Due to limited employment opportunity high dependents on government assistance prevails. Today, the LGU is maintaining a long list of 4Ps beneficiaries recorded at 4,906 individuals.

2.3 Overall Development Goals and Objectives

Adherence to the sustainable development goals and general welfare goals stated in section 16 of RA 7160, municipality of Quezon hereby adopts the nine general welfare goals as the general development goals of the municipality. To wit:

1. Preservation and enrichment of culture
2. Promotion of health and safety
3. Enhancement of the right of the people to a balanced ecology
4. Encouraging and supporting the development of appropriate and self – reliant scientific and technological capabilities
5. Improvement of public morals
6. Enhancement of economic prosperity and social justice
7. Promotion of full employment
8. Maintenance of peace and order
9. Preservation of comfort and convenience

The nine general development goals shall be supported by specific sectoral development objectives herein attached as annex 2.

2.4 General Development Thrust and Strategies

Various national proclamations provide legal basis for the protection of Palawan's natural environment. SEP, a special protection law in Palawan is the most prominent creating PCSDS as special body to implement protection policy. This means that development will always be biased on protecting the natural ecosystems. Hence, development thrusts and strategies advocating controlled resource utilization should be considered as an overarching policy in selecting the best option. In all areas in the province, the challenge is creating ecosystem-based business atmosphere. Utilization of ecosystems goods and services for economic gain without jeopardizing the natural condition as it is now.

During the 2nd consultation workshop attended by the technical working group, the group is one heart in putting environmental concerns the utmost consideration in crafting the Development Thrusts and strategies. They were able to recognize however that little trade-off is expected in some areas.

Local knowledge and statistical data shows that the local economy is largely agriculture-based with huge potential for nature-based tourism. The group likewise took cognizant of two important considerations: (1) The increasing indigenous people comprising 37.73 percent of the total population with unique cultures and traditions; and (2) The development trend that demands timber resource. Considering these areas, SUSTAINABLE AND RESILIENT AGRICULTURE AND ECO-TOURISM DEVELOPMENT (SRAEDS) will be adopted as the preferred development options with agro-forestry as a support strategy.

SRAEDS in agriculture shall mean strengthening the major local economic based by increasing production thru expansion and agro-forestry. This strategy primarily aims to convert idle lands into production areas and utilize open forestlands. Diversification and integrated farming system shall apply to agro-forestry area but will be limited to low impact farming activities only. As a component of agro-forestry, some areas may be utilized for production of forest timber products for local consumption. This idea is to ease illegal cutting of trees for construction purposes.

The decision to go for sustainable and resilient agriculture is not only locally significant, it is a support to the national development agenda and Philippine's commitment to the international community on attaining food security.

Common orientation is that economic profit is equated with resource extraction or destructive resource utilization. Eco-tourism development in SRAEDS means putting economic value into tangible and intangible environmental assets while protecting the natural state at the same time. This will provide alternative source of income at the grassroots level, open doors for new investments and broaden local economic base. Since eco-tourism capitalize on natural environment, protection and conservation will be reinforced by the local stakeholders. Long term benefit expected is increased in community participation in protecting the natural environment. Thus, maintaining excellent carbon sink and optimizing other ecosystems' vital functions and services.

Eco-tourism development is a development vision expected to prosper within the next ten years. It is in fact supported by a strong political will. The LGU now created tourism development task force and municipal tourism council to ensure balance tourism development.

2.5 STRUCTURE PLAN

In order to visualize the municipal territory, in preparation to determining the development concept of the municipality series of workshop sessions were conducted to analyze the existing situations. These workshops aimed to identify development potentials and challenges, sectoral issues and concerns, ecosystems dynamic interaction, development patterns and resource inventory and utilization. Since CDRA was already conducted, high risk areas were presented for significant consideration.

The structure plan depicts four land use policy areas: protection, production, settlement growth and infrastructure development. This serves as spatial framework to guide the municipality to formulate detailed land use proposal.

Adherence to the protection policy for Palawan and other local issuances, the spatial development framework of Quezon identified various areas intended as a life support system, hence, maintain status or improve as may be necessary. These include the following:

Table 2.5.1 AREAS COVERED BY PROTECTION POLICY

Legal Issuance	Location	Area Coverage (ha)
RA 7611 otherwise known as Strategic Environmental Plan for Palawan Act (Core Zone for Strict Protection)	Selected areas in all barangays	26,323 (Adopted ECAN Zones – PCSD Resolution No. 04-239 – September 2004)
Presidential Proclamation No. 2152 (All Mangrove Areas in Palawan for Mangrove Reserve)	Selected Areas	1,693.83
RA 7586: NIPAS Act (MMPL)	Quinlogon, Tagusao, Calumpang, Sowangan and	13,676.21

	Malatgao	
Local Zoning Ordinances (Declaring five MPAs)	Berong, Alfonso XIII, Tabon, Panitian, Isugod, Aramaywan, Maasin, Tagusao, Sowangan, Calumpang and Quinlogan	61,642.47
Presidential Proclamation No. 966 dated April 11, 1977 (Declaring Tabon Cave as Museum Site Reservation)	Lipuon Point Reservation, Barangay Alfonso XIII	138
RA 8435: AFMA (Declaring Prime Agricultural Areas as protected area)	Distributed in all barangays	
Local Ordinance (Declaring Baik and Malanut as watershed)		
PD 1067: Philippine Water Code (Establishing Protection Buffer along riverbanks)	All Rivers traversing the entire municipality	
Tagbunsaing Lake	Berong	83

Sustainable local economy entails balance utilization of resources. Utmost consideration is due for environment sector but production is an essential component of self-sustaining community. Thus, production areas are designated as follows:

Table 2.5.2 Distribution of Production Area

Production Area/Location	Produce/Economic Activity
Kalatagbak, Pinaglabanan, Maasin	Rubber Tree
Isugod, Aramaywan, Berong, Panitian	Cashew
All Barangay except Alfonso XIII/Quinlogan	Palm Oil
All Barangays	Eco-tourism
All Barangays	Rice
All Barangays	Coconut

Pinaglabanan, Tabon, Kalatagbak, Isugod, Maasin, Alfonso XIII	Banana
Berong, Aramaywan, Isugod, Sowangan	Nickle Mining
All coastal barangays	Fish products

With regards to spatial urban development framework, it was perceived that the major urban center (Alfonso XIII) can no longer accommodate future urban development. Outward expansion is the most possible option, moving towards Panitian, Pinaglabanan and Tabon. However, based from CDRA, Panitian is largely flood prone areas making large portion of which unsuitable for urban development. Pinaglabanan on the other hand, have high slope that naturally restricts building of necessary structures. Among the three adjacent barangays, Tabon is most qualified for urban expansion. However, even if sufficient area will be allocated in Tabon for future urban development, southern and northern barangays can barely access functions and services rendered by the growth center due to travel distance. In order to improve the delivery of basic goods and services, developing secondary growth center in the southern and northern part is necessary.

Tagusao manifests potential to become secondary growth center of southern Quezon. As such it will serve barangays, Malatgao, Sowangan, Calumpang and Quinlogon. Whereas, Isugod is at best position to serve as secondary growth having Aramaywan as a service area. As a jump-off point to tourism areas it will tend to develop tourism related commercial area.

With the development of west coast road, Berong will be directly connected to Puerto Princesa at a shorter travel distance. This will significantly influence urban development in the area. Other factors that is expected to promote urban development in Berong is the presence of mining activities and the establishment of Kalayaan's support facility in Berong which are utilize as a jump-off point. However, since it is located at the northernmost part of Quezon, it will develop as a self-sufficient urban community or a separate growth node.

Multi-nodal growth node is the preferred spatial strategy of Quezon generally describes as follows:

1. A major urban growth center that will strengthen its position as a commercial and trading hub while maintaining higher functions.
2. Two secondary growth center duplicating the functions and services of the urban center at a smaller scale servicing distant rural barangays;
3. A growth node that will essentially develop due to distance from the Poblacion.
4. Interconnected nodal functions facilitated by the national highway

Hydro power plant is considered flagship project to boost development within the locality.

3.0 LAND USE PLAN

3.1 DEVELOPMENT HISTORY

Early inhabitants describe Quezon as dominantly forested areas with sparsely distributed dwellings in the early 1950's. Forest were utilized by Logging concessionaires. The seat of local government back then was in Tabon but was transferred to the Poblacion in the same era. Sea transport was dominantly used until 1970s though road network started to develop in Poblacion. Quezon Street evolved as a place for trading and commercial activities. Ringing of Bell (Batingting) was used to announce that goods and commodities are available. This was also utilized as rest area for commuters and travelers. Forestlands were opened for food production through kaingin. Logging activities still exist but slowed-down already.

Systematic road system started to developed in 1980s when Palawan Integrated Area Development Program was implemented (PIADP). Quezon-Rizal road network provides an opportunity for better linkage. Pockets of farmlands evolve and a more distinct urban settlement was formed. Mining was introduced as another major economic activity. At that time, Berong was already known for black sand and chromite mining. From being a center of logging activities, Berong shifted to mining.

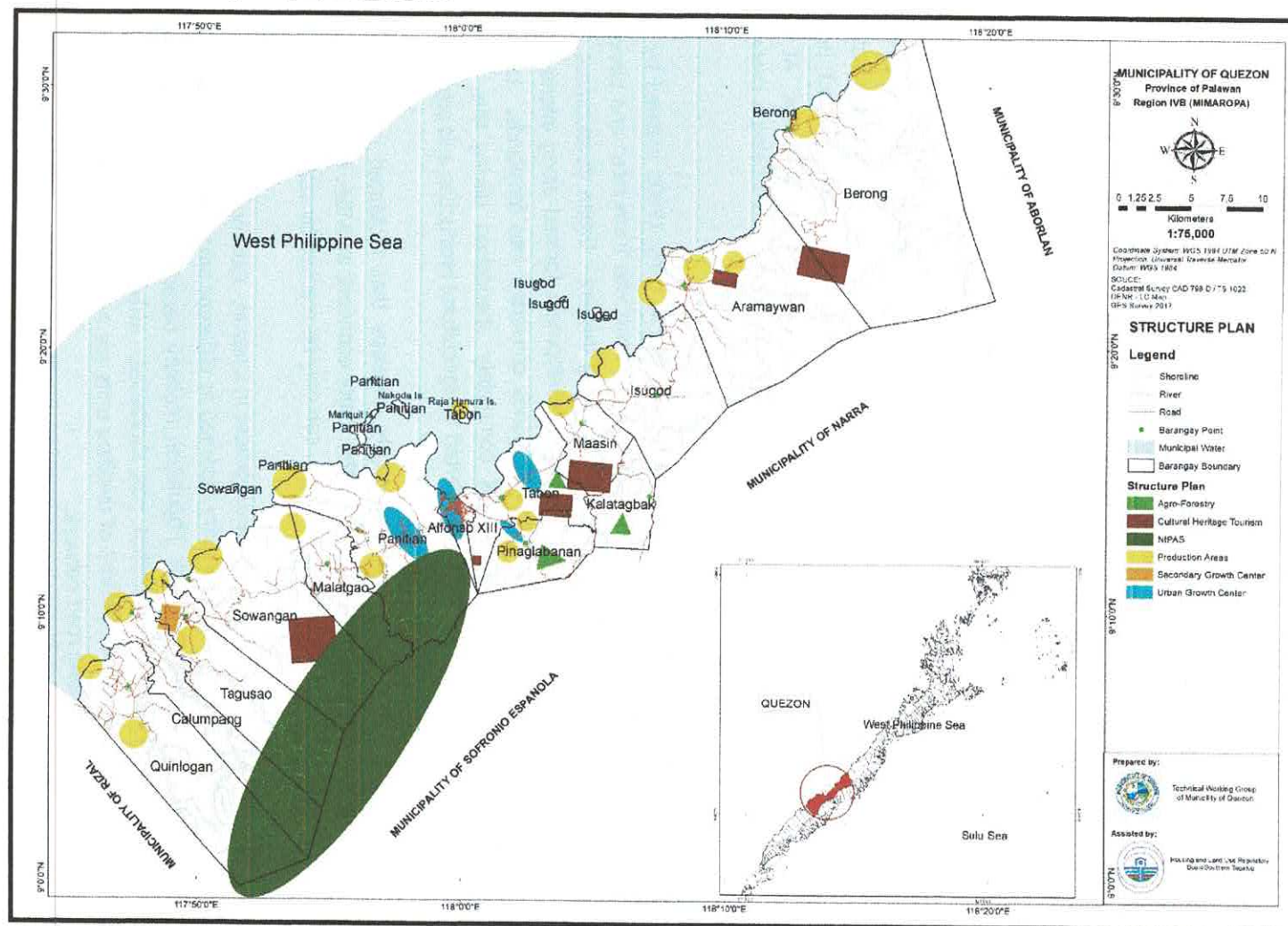
Land use planning in the municipality was formalized in early 1980s initiated by the Ministry of Human Settlements. The first blueprint of the town was formulated and planning office became operationalized at the provincial level during this era. Urban development was shaped following grid type road system while rural development formed along interior road system. Pocket of settlements scattered to forestlands converted into farmlands. Logging industry slowed-down before 1980s and was completely abandoned during this period. Completely logged areas were permanently converted to agricultural production and urban use.

In 1990s, road network system significantly develops that facilitated more vibrant economic activities. Agriculture industry became the major economic activities while forest use remained as a dominant land use. Berong, however, can only be reached by sea transport.

The 2000 period marked the era of development in Quezon. Quezon-Rizal road network are completely passable. Agricultural industry bloomed in different areas and anchor facilities like education facilities became available. Population mobility becomes more convenient and time travel going to adjacent municipalities was shortened. Urban settlement continuously grows in a more concentric form. Clusters of dwelling units are becoming visible in rural areas but development remained along road network.

VOLUME II: LAND USE PLAN QUEZON, PALAWAN

Figure 2.5.2 STRUCTURE PLAN OF QUEZON, PALAWAN



3.2 INVENTORY OF EXISTING LAND USES

The existing land uses in Quezon falls under five general categories, namely Urban Use, Agricultural Use, Forest and Use, Water Use, and Other Land Uses. Table LU-03 shows the respective sub-categories, area utilization, and percent share. The urban uses have a total allocation of 1,639.93 hectares or 1.71 percent of the total municipal land area. Urban land uses are evidently seen in Poblacion and within the barangay centers. The inventory of existing land uses are shown in Table 3.2.1.

Table 3.2.1 Existing General Land Use

Land Use Category	Area (hectares)	% to Total Land Area
URBAN USE	1,639.93	1.71
Recreational		-
Parks and Open Space	12.56	0.01
Institutional	114.32	0.12
Residential	118.22	0.12
Commercial	47.76	0.05
Tourism	1,278.68	1.33
Industrial	66.96	0.07
Infrastructure	1.43	0.00
AGRICULTURAL USE	40,087.41	41.78
Agriculture/Mixed Crops/Scattered Trees	31,134.00	32.45
Irrigated Riceland	4,791.91	4.99
Rain-fed Riceland	4,161.50	4.34
FOREST AND FOREST USE CATEGORY	50,169.12	52.29
Production Forest	3,995.54	4.16
Protection Forest	46,173.58	48.12
WATER USE	3,573.85	3.72
Mangrove	1,878.27	1.96
Fish Pond	451.76	0.47
Quarrying	1.50	0.00
Rivers/Creeks	1,242.32	1.29
OTHER LAND USES	479.96	0.50
Cemetery	8.54	0.01
Controlled Waste Disposal	9.00	0.01
Roads	358.67	0.37
Open Beach	103.75	0.11
TOTAL	95,950.28	100.00

Source:MPDO, Satellite Image Validated on Ground, 2017

Figure 3.2.1 General Existing Land Use Map

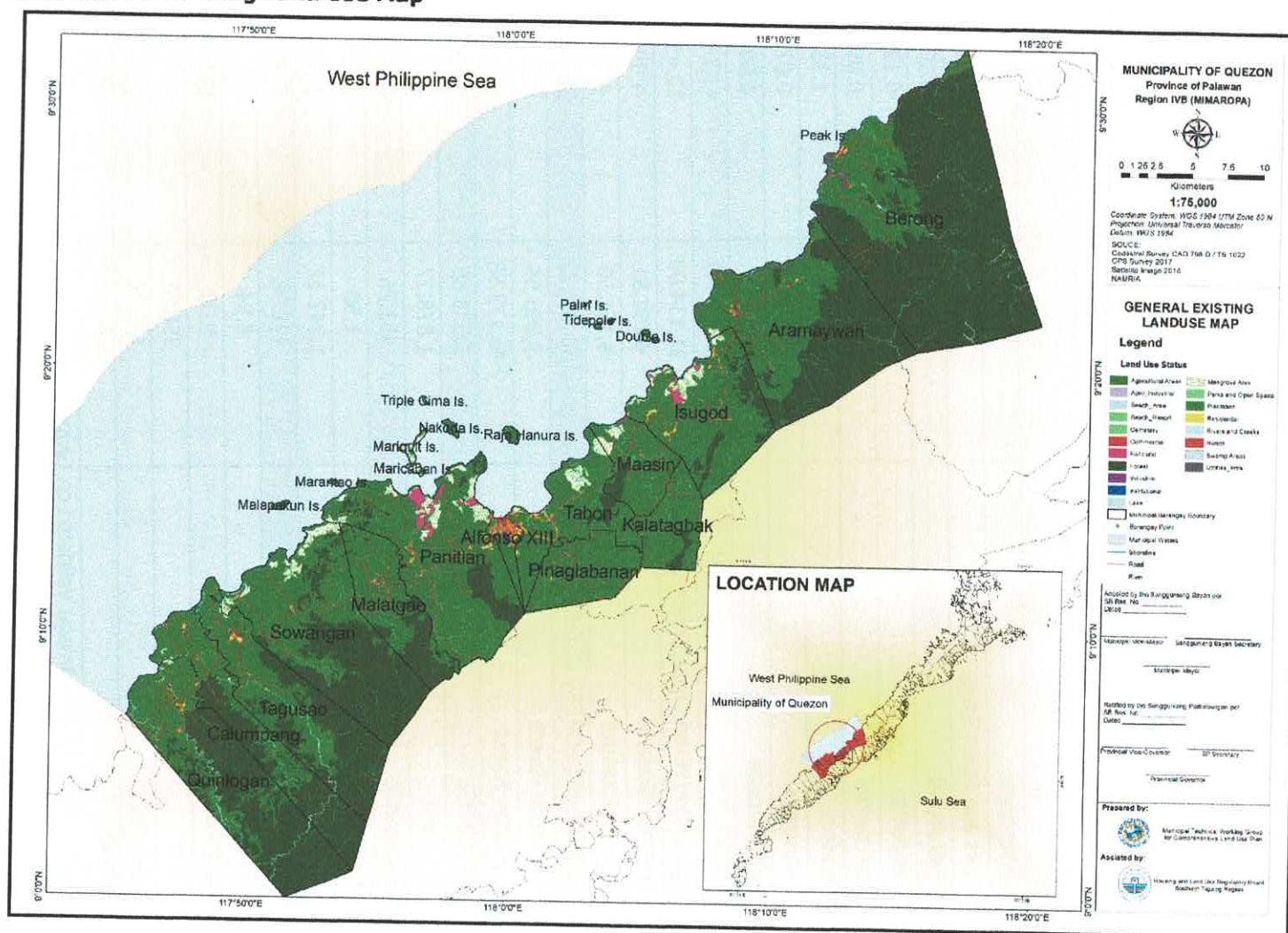
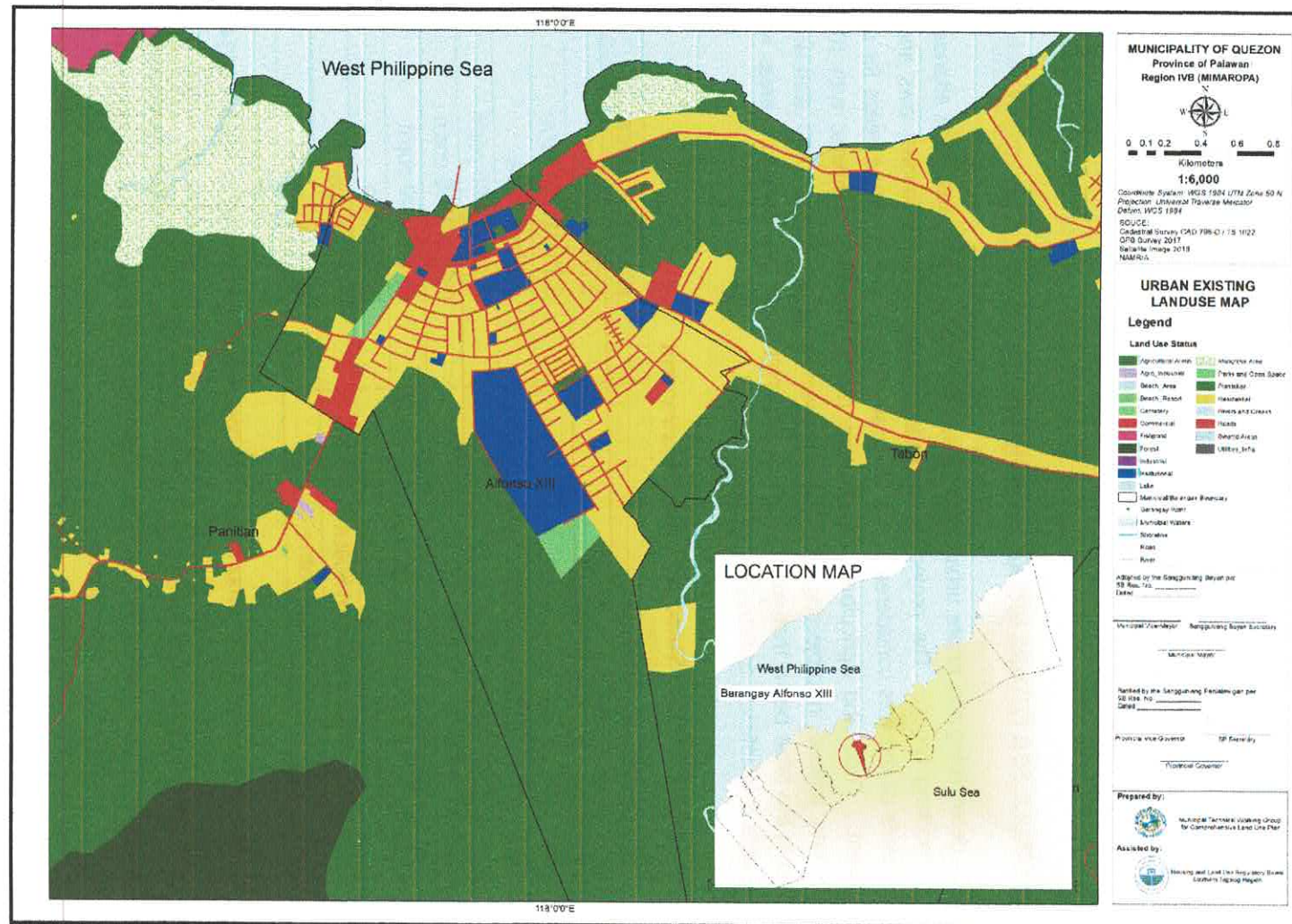


Figure 3.2.2 Urban Existing Land Use Map



3.3 DEMAND AND SUPPLY ANALYSIS

The supply and demand analysis was undertaken to determine the availability of land supply and anticipate the area requirement for the next 10 years or more. The projected demand was computed in preparing for future development triggered by population increase, private investments and government interventions. The consciousness on climate change and potential hazards also influence the land supply and demand analysis that is expected to significantly reduce land supply. The land demand for urban development is based on acceptable standard to provide basis for decision making. The LGU may adjust the land size in their proposed land uses based on their technical judgment considering economic viability, ecological impact and the general welfare of the residing populace.

3.3.1 DEMAND FOR FUTURE URBAN LAND USES

In determining the future urban land uses, initial consultation was made attended by technical working group. The projected population, structure plan, national laws and the existing needs of the was considered as the general guide to identify future needs for urban development. Food and Agriculture Organization (FAO) standards combined with HLURB standard was utilized in projecting land use requirement in 10 years. FAO standards is presented in the table below that will be used in determining the land demand in areas where available data is insufficient to follow the HLURB standard.

Table 3.3.1a FAO Standard Land Requirement

Land Use Category	FAO Standard Req't
Industrial	2.5ha/1000 pop'n
Commercial	0.1ha/1000 pop'n
Rural Roads	1.5 km/100ha.
Utilities	0.38ha/1000 pop'n
Schools	0.6 ha/1000 pop'n
Hospitals	0.2ha/1000 pop'n
Residential	3m ² /person
Recreation and Open Space	.5ha/1000pop'n
Government/Administrative	.5ha/1000pop'n

For the next ten years, the municipal total population is estimated to reach 73,634 by 2025 hence, this was considered for computing the spatial requirement for future urban development. The derived total land area requirement to satisfy 2025 urban development is 484.512 hectares in the future. The estimated additional land requirement was categorized as follows with corresponding assumptions:

RESIDENTIAL:

In computing for the additional needs for residential use, an aggregate number of 1178 households were considered due for relocation based from CDRA result. Residential requirement based on population growth or additional households and the number of informal settlers were also considered.

Using an average residential lot of 100 sq.m./household excluding the required open space, the residential requirement due to population increase, tenurial status and due to relocation was computed at 41.09 hectares. Approximately 16.92 hectares will be for socialized housing in compliance to RA 7279 or UDHA.

Table 3.3.1b Additional Residential Area Requirement

Barangay Name	Additional Area requirement					
	Due to Population Growth		Due for relocation			Due to Tenurial Status
	# of HH	Area Reqt (ha.)	# of HHs	Total Population	Area Reqt (ha.)	
Alfonso XIII	842.2	8.422	249	1245	2.49	2.89
Aramaywan	80	0.8	157	785	1.57	
Berong	262.2	2.622	68	340	0.68	
Calumpang	20	0.2	13	65	0.13	
Isugod	311	3.11				
Kalatagbak	58.6	0.586				. 2
Quinlogan	53.8	0.538	17	85	0.17	.12
Maasin	85.4	0.854				
Malatgao	180.4	1.804	28	140	0.28	.13
Panitian	-169	-1.69	531	2655	5.31	1.50
Pinaglabanan	253.2	2.532				
Sowangan	214.6	2.146	60	300	0.6	
Tabon	9.8	0.098	55	275	0.55	.30
Tagusao	193.8	1.938				
Total	2396	23.96	1178	5890	11.78	5.14

Source: CDRA, MPDO, PSA (2017)

COMMERCIAL:

The existing commercial area in Alfonso XIII is previously designated residential space but turned commercial. However, as commercial activities an increased parking and congestion issue arises. Based from FAO standard the reasonable commercial space for the municipality is approximately 7.3 hectares.

INSTITUTIONAL:

The LGU intends to improve the seat of municipal government to enhance services and working atmosphere. Following the FAO standard, the total land area of 36 hectares is the suggested space for new government center. However, the LGU cannot afford to have such a huge space. Instead, the LGU allotted a more realistic area for such purpose. A minimum of 10 hectares is considered an ample space for developing a new government center.

On the other hand, CDRA recommends new site for Panitian National High School. Assuming 43 classes a minimum of 1 hectare is recommended for a new site.

PARKS, OPEN SPACE AND RECREATION:

According to experts, perceived good health and wellness in general is associated with access to parks, open spaces and recreation areas. Research shows that vegetated areas reduced depression and stress levels. Presence of a well develop open spaces encourage

physical activity that improves mental and physical health condition of the populace. Approximately 36 hectares is the recommended for public parks and open space.

In addition, providing Children's park is a must to satisfy the requirements for seal of local good governance (SGLG). Among other the recommended open space includes, eco-park and pocket forest.

SPORTS COMPLEX OR ATHLETIC FIELD:

The handbook for educational facilities integrated in the HLURB planning standards suggest a minimum space of 36 hectares for a sports complex integrating the following:

- ✓ A standard Oval tract
- ✓ A baseball diamond
- ✓ A softball diamond
- ✓ A soccer football field
- ✓ A basketball court
- ✓ A volleyball court
- ✓ A lawn tennis

MUNICIPAL PUBLIC CEMETERY:

Considering average crude death rate, there are 33 persons per 10000 populations requiring standard size of 1.0 m. x 2.44 m. per plot, the Municipal Public Cemetery was computed at less than 1 hectare. However, the TWG decided to increase the Municipal Public Cemetery into 4 hectares to keep it functional beyond the planning period.

EVACUATION CENTER:

Based on a study conducted by Gagnon, et. al (2007) for the establishment of emergency evacuation shelters, short term evacuation should have a capacity of 6 sq.m. per person. In addition, it is a local policy to have one evacuation center by barangay. Initially, the total number of exposed population determined the size of evacuation center. However, computing the space requirement using the exposed population alone may not be a wise decision due to the following:

- ✓ As the population increases the number of exposed population is also expected to increase
- ✓ Economically important sources of income like livestock may be brought by the evacuees

Thus, a minimum of .5 hectare for every evacuation center is suggested except for barangay Panitian. Due to high population exposure to flooding, 1.5 hectare evacuation center is suggested for Panitian.

SANITARY LANDFILL

In compliance to RA 9003, sanitary landfill is required either within the municipality or shared with other municipalities through a MOA. In the case of Quezon, more than 9 hectares is already intended for developing Category I sanitary landfill. The site already passed MGB assessment.

AGRICULTURAL RESEARCH CENTER

The municipality has an existing agricultural research area. However, expansion is necessary to develop integrated research center covering all areas of agriculture sector that include livestock and poultry, fishing and crops. For research using livestock particularly cattle the area requirement is 1 hectare/head. For this purpose, 15 hectares is recommended.

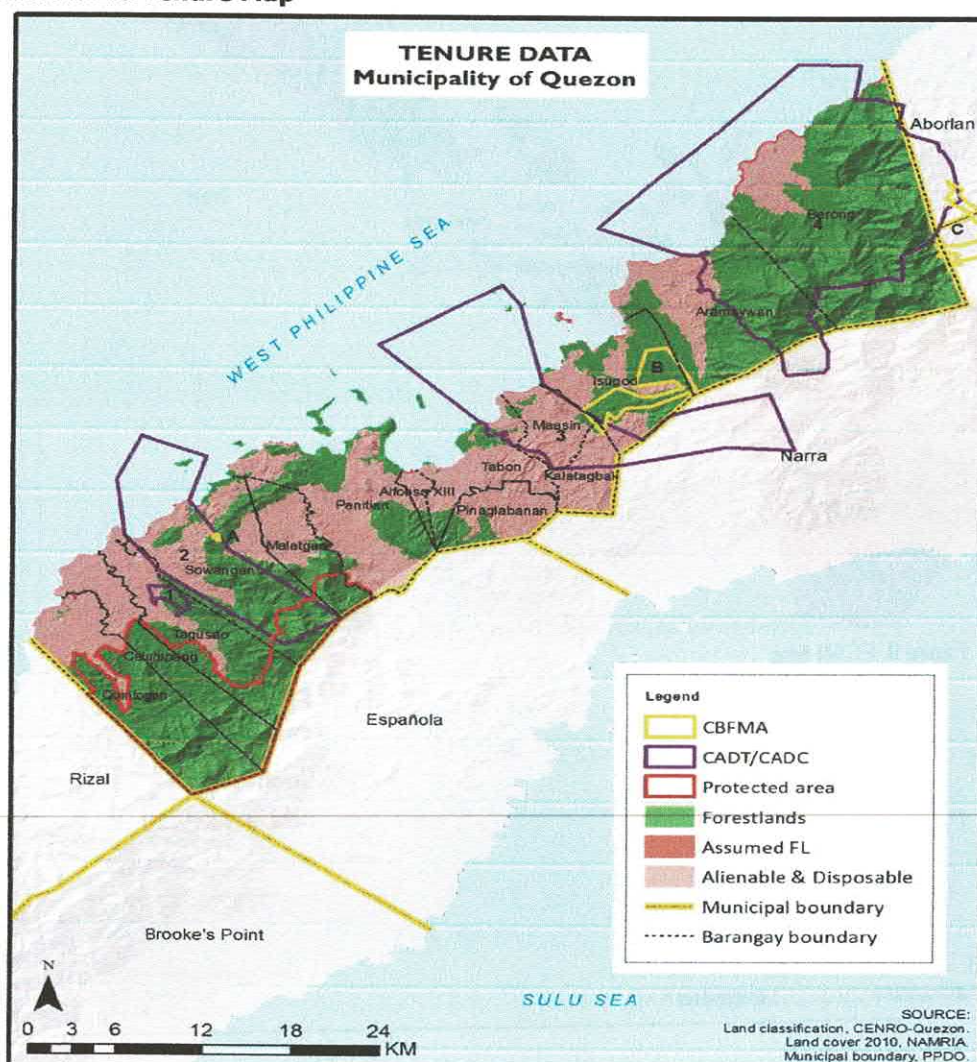
Other essential development requiring land allocation include: (1) slaughter house; (2) Dog impounding; (3) municipal seed bank and nursery; (4) eco-park; (5) airport; and (6) retirement village.

3.3.2 SUPPLY ANALYSIS

In identifying the total areas suitable for urban development, numerous policies pertaining to land uses should be considered. Hereunder are the significant laws and policies applicable to Quezon. In compliance therewith and in principle the following areas should not be allocated for urban development.

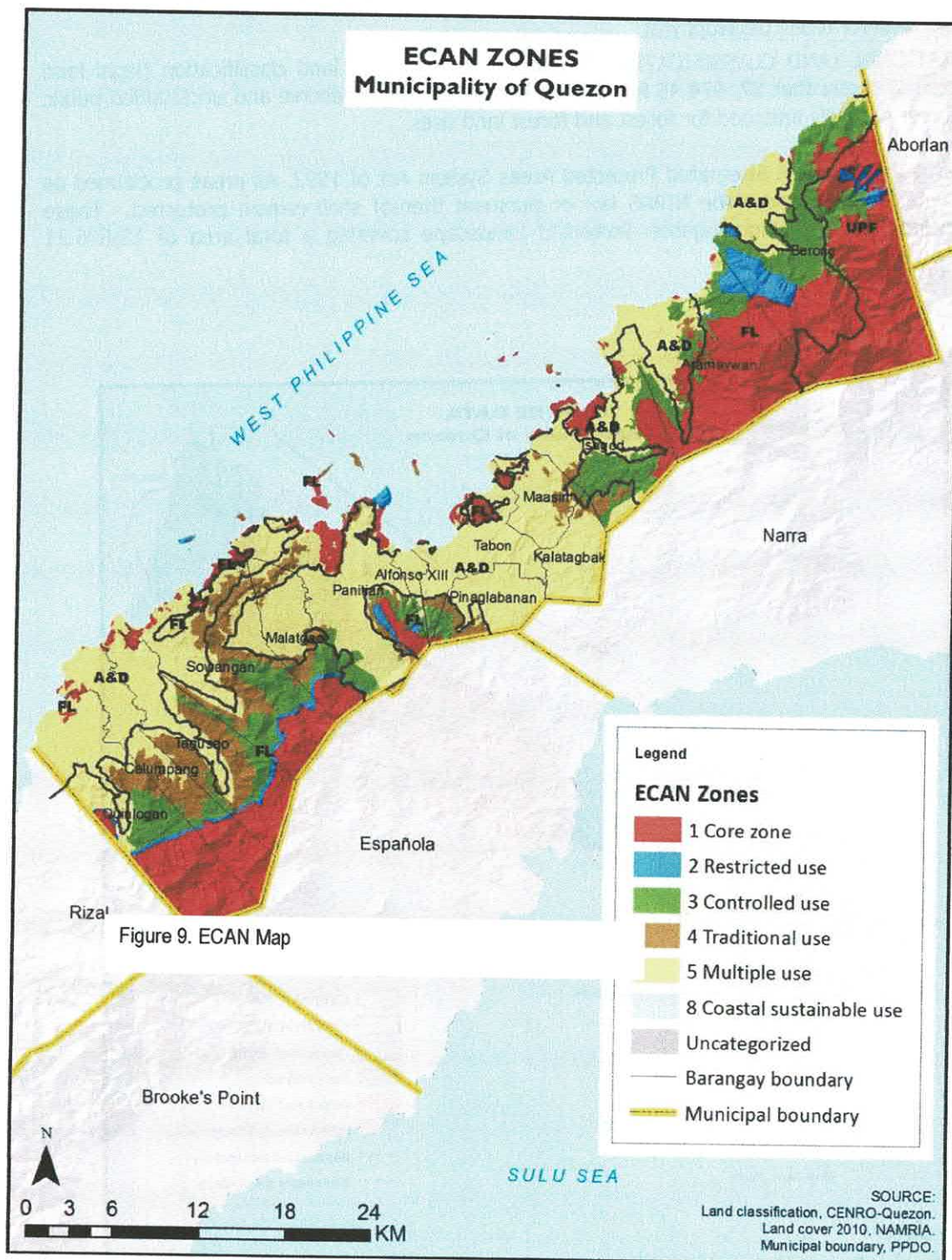
1. NATIONAL LAND CLASSIFICATION SYSTEM. The Philippine land classification (legal land status) shows that 57, 974.45 hectares are classified forest reserve and unclassified public forest primarily intended for forest and forest land uses.
2. RA 7586. National Integrated Protected Areas System Act of 1992. All areas proclaimed as protected area under the NIPAS law or pursuant thereof shall remain protected. These include the Mt. Mantalingahan Protected Landscape covering a total area of 13,676.21 hectares.

Figure 3.3.2.a Tenure Map



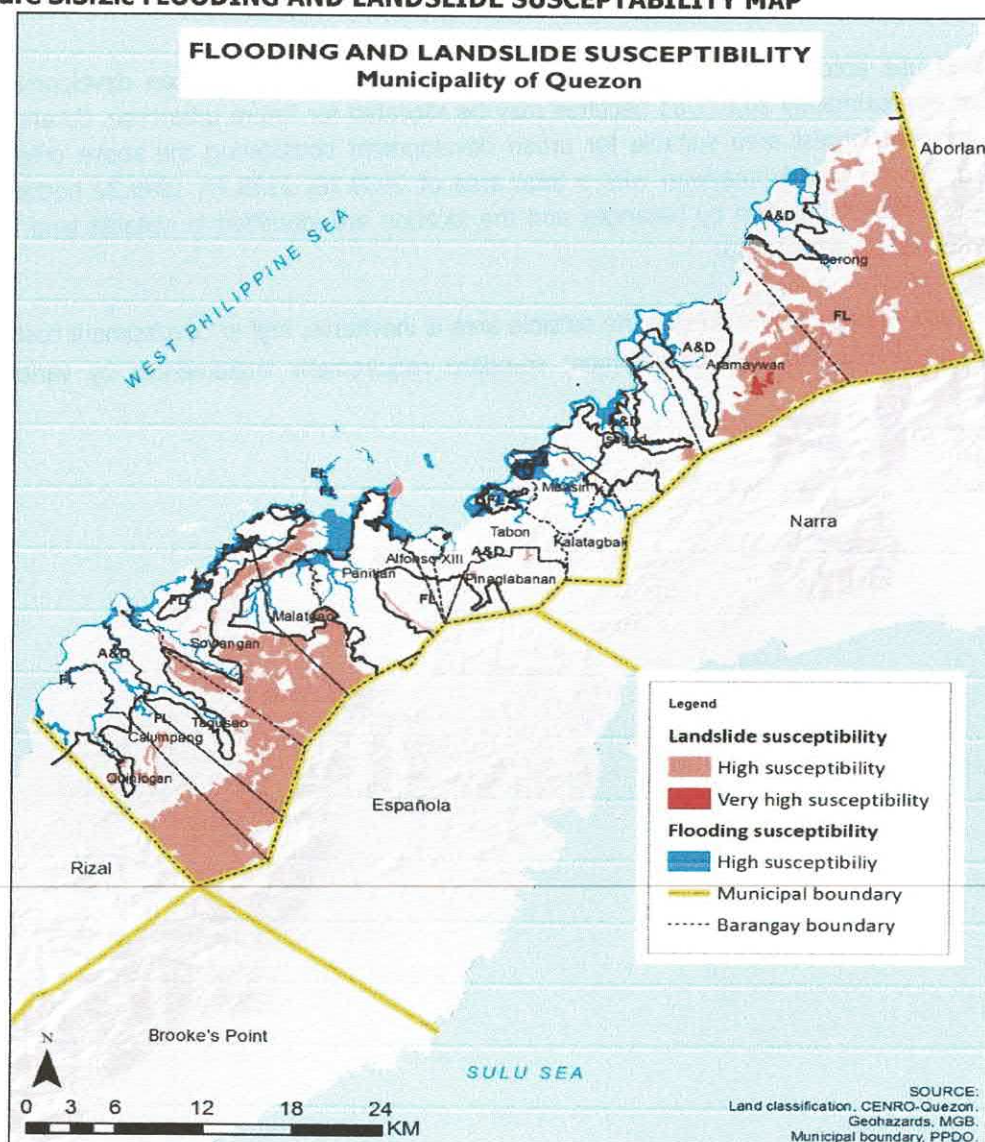
3. RA 7611 THE STRATEGIC ENVIRONMENTAL PLAN FOR PALAWAN LAW enumerated the following as areas for protection:
- i. Core Zone (Strict Protection Zone)- 23,018.50 hectares
 - ii. Restricted Zone- 4,370.19 hectares
 - iii. Controlled Use Zone- 19,014.54 hectares
 - iv. Traditional Use Zone- 8,977.21 hectares

Figure 3.3.2.b ECAN MAP



4. PROTECTION BUFFERS that includes 20 meters from the highest tide landward, river buffers on stipulated in the water code (five meters if traversing urban areas, 20 meters if agricultural areas and 40 meters if forest areas) and 5 meters from the fault, shall be free urban development for safety purposes. These areas constituted a total of 1,446.50 hectares.
5. RA10121- DISASTER RISK REDUCTION AND MANAGEMENT. Integrating the disaster risk management in local plans and adopt necessary measures to mitigate impact. Using the Geographic Information System (GIS) method and data from Municipal Assessor's Office, the total land area of Quezon was computed at 95,081 hectares. The MGB geo-hazard data revealed that the following are basically not suitable for urban development due to its susceptibility to landslide and flooding.
 - i. **LANDSLIDE SUSCEPTIBILITY.** Approximately 28,882.70 hectares is highly susceptible, 19,944.36 hectares moderately susceptible, and 38,339.35 hectares is low susceptible to landslide. MGB has also identified 102.12 hectares very high susceptible to landslide.
 - ii. **FLOOD SUSCEPTIBILITY.** With regards to flooding, about 5,566.25 hectares was identified to be highly susceptible, 3,066.58 hectares moderately susceptible, and 2,261.03 hectares is low susceptible.

Figure 3.3.2.c FLOODING AND LANDSLIDE SUSCEPTIBILITY MAP



6. In accordance to DAO 15-90 - Development and Management of Mangrove Resources, PD No. 705 - The Revised Forestry Code, PD 1067 - Philippine Water Code, inland waters that include rivers, creeks and lakes, nipa/swamp areas, mangroves and fishponds shall be deducted from suitable urban expansion area. The same shall not be utilized for economic gain and/or other purpose except for natural purpose, windbreaker and coastal protection, fish habitat and breeding ground and ecological balance. Quezon has accounted a total of 20,021.00 (suitable area for expansion) hectares which falls under this category.
7. PD 705-THE REVISED FORESTRY CODE. All areas with critical slope of 50% and above and with an elevation of 1,000 meters above sea level accounted to 13,669.94 hectares shall be automatically a protection area.
8. RA 8435. AGRICULTURE AND FISHERIES MODERNIZATION ACT OF 1997. To foster food security, prime agricultural areas shall not be converted for urban development. Quezon has a total of 4,791.98 hectares prime agricultural areas.
9. EXISTING SETTLEMENT AREA. These areas are already occupied by structures for various purposes, therefore should not be considered as expansion area for new development unless vertical development will be adopted. Urban areas of the municipality based on existing land use are 1,149.63 hectares.

Land use accounting of the available supply ideally suitable for urban development shows that approximately 20,021.61 hectares may be allocated for future urban use. Barangay Panitian has the largest area suitable for urban development considering the above criteria followed by Tabon and Aramaywan with a total area of 2439.78, 2328.27, 1940.22 hectares respectively. Area distribution by barangay and the location are identified in suitable land for future urban development map.

In case where locating outside the suitable area is inevitable, higher development cost is expected to comply with the development standard requirement implemented by various agencies.

Figure 3.3.2.d SUITABILITY MAP

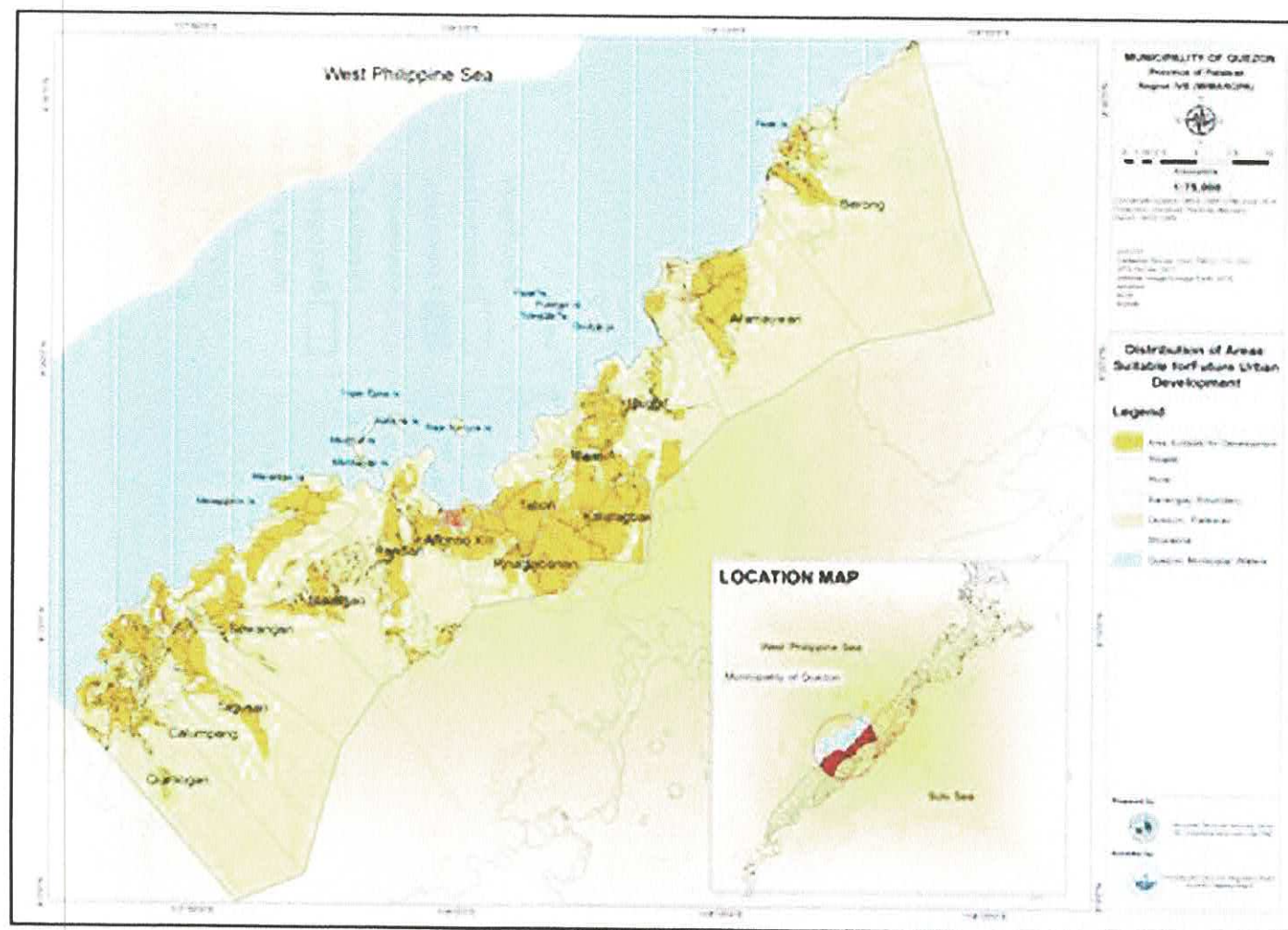
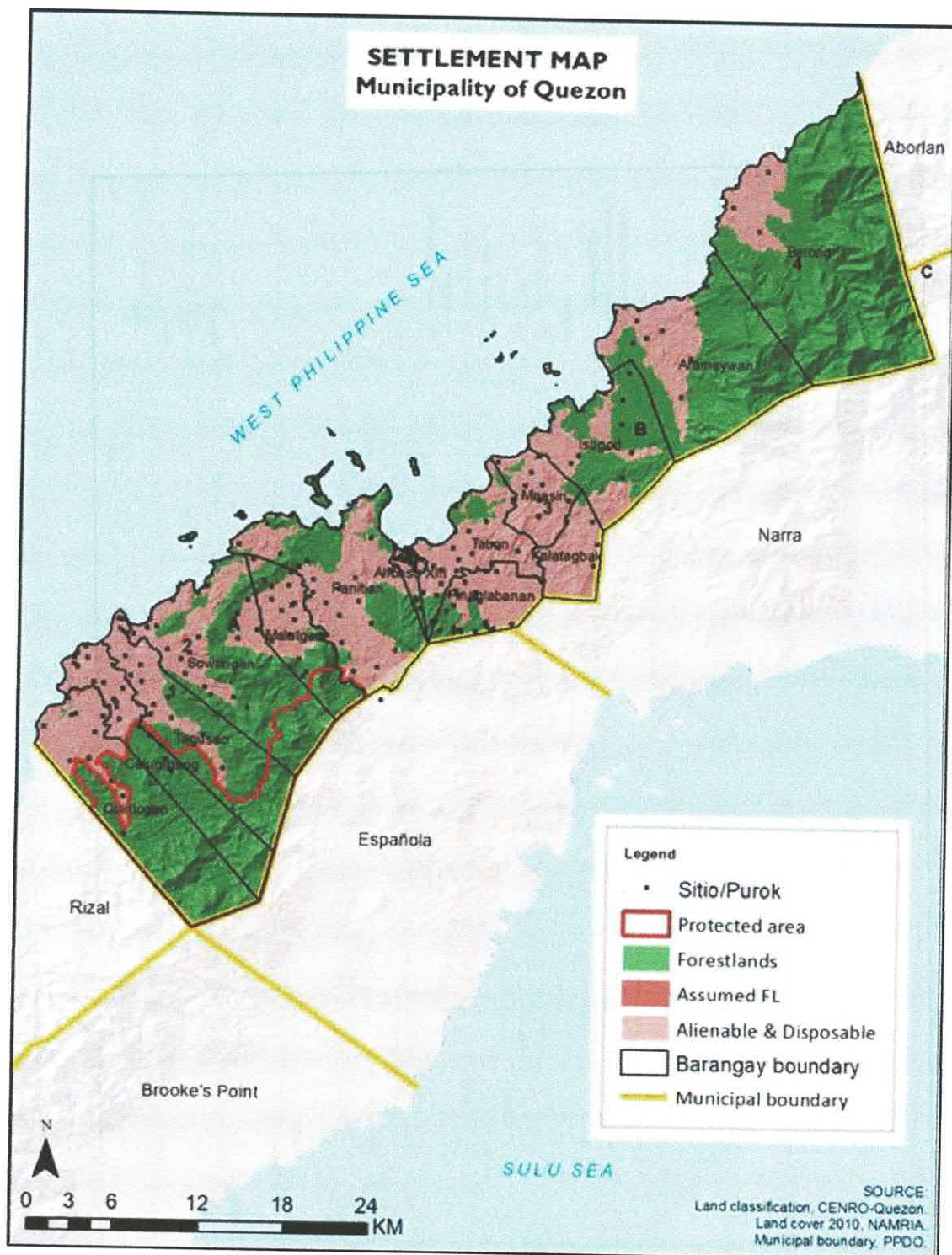


Figure 3.3.2.e SETTLEMENT MAP



3.4 PROPOSED LAND USES

Considering the supply and demand analysis, spatial analysis through sieve mapping was conducted using GIS. This is to locate the areas suitable for future urban development. To aid the LGU identify the exact location and have a clear picture what transpire on ground, overlay analysis using google map was further utilize. The intersection of the clear picture with the lot parcels identified in cadastral survey makes the identification of proposed land uses easier followed by ground validation.

3.4.1 URBAN LAND USES

Land use within the municipality will remain to be traditional in nature dominated by residential use. It is anticipated that tourism development will prosper in the future that will broaden economic structure. Diversification of economic base is expected to significantly influence the preferred land uses and the development path. In allocating expansion for future urban development, major determinants include the following:

1. Population distribution and the projected increase in total population count
2. The anticipated economic development
3. Safety and convenience of the general public
4. The physical form and the ability of the natural environment to provide various goods and services to support urban functions

In Alfonso XIII, redevelopment within the urban core and creating new development will be adopted as strategy for urban development. The new development site that will serve as the expansion site is allotted in the southern part, occupying 174.81 hectares covering part of lot number 5136. The layout of the new development site shall integrate the following:

1. Public Terminal (5 hectares)
2. Sports complex (36 hectares)
3. New Seat of Local Government to decongest the urban core (10 hectares)
4. Employees village: 5 hectares
5. Parks and Recreation including children's Park (5 hectares)
6. Botanical Garden (4 hectares)
7. Mini Sports Complex (10 hectares)

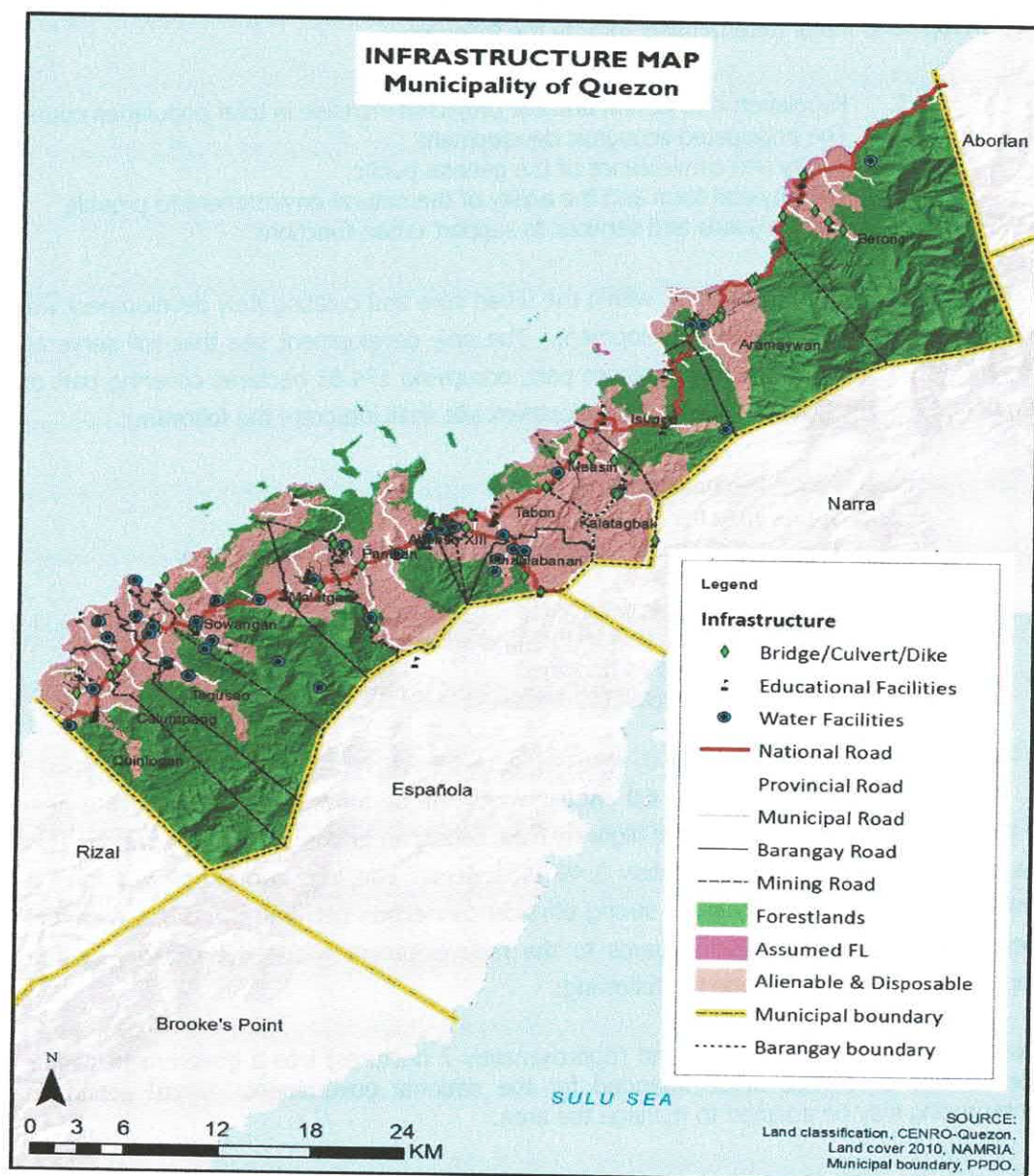
A major thorough fare with a **60 meter** width will be introduced traversing the new urban center connecting to the national highway from Sabsaban Bridge to Underground 1. This will have a total length of approximately 3.49 kilometers. The new connection will form a circumferential road that will maintain strong physical connection between the urban core and the new development site. With regards to the redevelopment within the urban core the development concept shall include the following:

1. Converting the municipal compound (approximately 2 hectares) into a government center for satellite or service office intended for the national government. Local economic enterprising may be adopted to manage the area.

2. The entire property owned by the national museum intended as a sub-station shall be reserved for forest use or urban pocket forest covering lot numbers: (a) 4222 (.06ha.); (b) 4022 (.06ha); (c) 4023 (.07ha); (d) portion of lot 5103.
3. The reservation area having a total of 5 hectares covering a portion of lot number 5136 shall form part of the future requirement to satisfy demand for socialized housing together with the identified socialized housing.
4. Satellite government center by the municipality of Kalayaan with approximately 3.94 hectares covering portion of lot number 8592 and 8597, shall be accounted for institutional use.

Other urban land uses identified in this plan that include socialized housing and the urban expansion is shown in the Table 3.4.1.

Figure 3.4.1 INFRASTRUCTURE MAP



Planned Unit Development.

A total land area of approximately 156 hectares located in Sitio Barukan, Barangay Aramaywan shall be designated as planned unit development intended to support the eco-tourism activities within the vicinity. As such, all the development within the PUD shall be subject to the general guidelines for developing eco-tourism sites. There shall be no development that will be allowed to take place within the vicinity, unless supported by a general master plan.

Table 3.4.1 URBAN LAND USE FOR FUTURE DEVELOPMENT

Location	Total land Area (ha.)	Lot no. & area (ha.)	Description
Crossing Tabon	5.5	Undetermined	Socialized Housing
Panitian	17	1818 (3.9ha), 1817 (3.5ha), 1815 (3.7ha), 1814 (4ha) 2602 (2.5ha), All from lot 176	Socialized Housing
Tagusao	36.97	11167- (5.5 ha), 11170 – (7.89ha) 11175 – (4.99ha), 11176 – (3.97ha), 11174 – (2.94ha) 11171 – (4.35ha), 11169 – (3.72 ha), 11168 – (3.61 ha)	Along Tina Road going South (to Sitio Marayparay) Urban Expansion (mixed-neighborhood commercial, institutional and residential)
Isugod	24.69	Part/6387 – (4.83) Part/ 6798, 6799, 6797, 6294, 6295, 6297 – (10.33) Part/ 6271, 6272, 6273, 6478, 6275 - (9.53)	Along the national road Urban Expansion (mixed-neighborhood commercial, institutional and residential)
Tabon	67.42	424 to 428 – 46 434 – 1.17 435 – 5.23 436 – 10.83 437 – 4.19	Along the secondary national road Urban Expansion (mixed-neighborhood commercial, institutional and residential)
Panitian	176.25	Part/176 – 111.91 Part/176 – 64.34	adjacent to Alfonso XIII along Iluluway Sitio Odiong road

Source: Overlay analysis of Cadastral lot parcels thematic maps

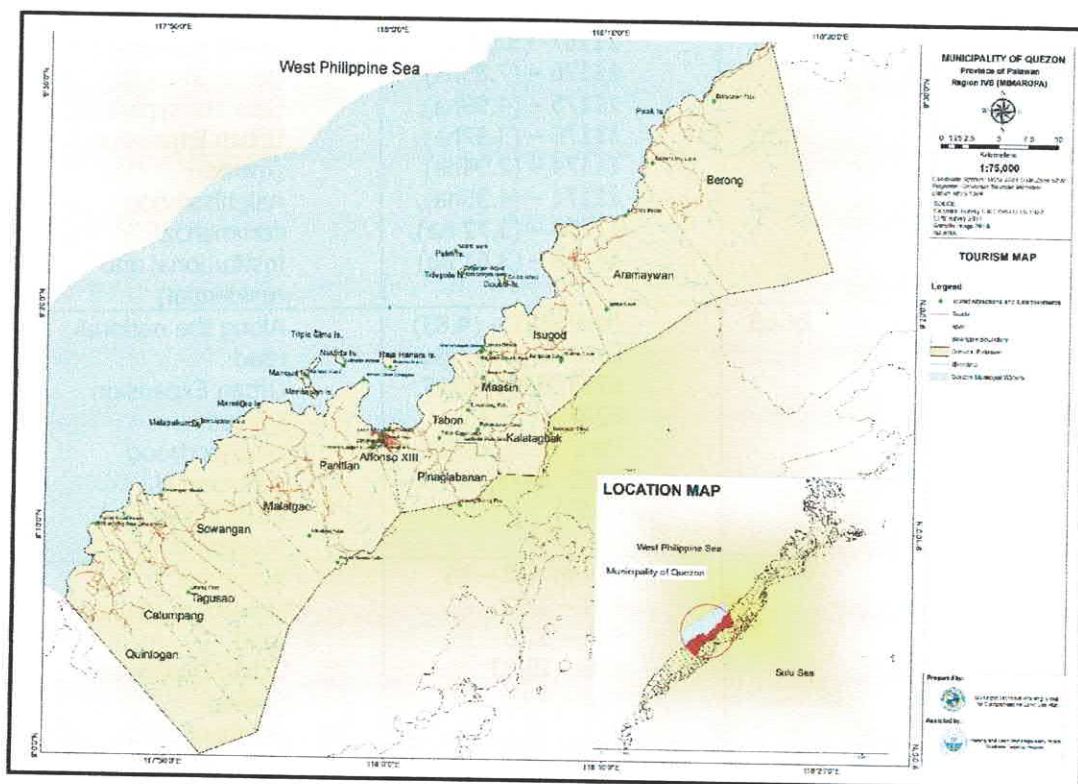
TOURISM DEVELOPMENT AREA

The municipality intends to improve areas with tourism potential either as integral part of another land use like forest use or as a distinct land use of a designated area. In this plan, tourism investment will be directed to numerous islands namely Tataran (45.9 ha.), Tamlangon (4.54 ha.), Mansalayan (12.8 ha), Sidanao (56 ha.), Marikit (105 ha), Malapakon (45.7) and Peak Island (1.5 ha.). Low impact built tourism combined with nature is the standard design within the islands.

On the other hand, in selected areas opened to tourism activities, but the distinct land use is forest use, eco-tourism development may be allowed subject to the general guidelines of pertinent agencies. In the areas enumerated below, the principle of green development

All other existing urban land uses particularly residential and institutional uses within the barangay centers shall be maintained as it is.

Figure 3.4.2 TOURISM MAP



3.4.2 PROPOSED GENERAL LAND USES

The general land uses within Quezon shall be generally categorized into Forest, Agricultural, Built-up/Settlement, and Water Use. The disaggregated uses within the Built-up/Settlement areas comprising residential, commercial, and institutional was accounted in urban land uses. This section shall only account proposed land uses for the general category and those land uses which was not incorporated in the previous section.

FOREST AREAS

The existence of forest areas is vital to sustain lifeforms on earth; hence, integrating forest areas in land use planning for sustainable use cannot be debated. However, unlike Forest Land Use Plan (FLUP) where detailed land uses within the forest are considered, CLUP take cognizant of only two broad categories in forest areas, Protection Forest and Production Forest. These areas are affected by the legal land status, the IPRA law, NIPAS law, SEP and other protection policies.. The overlapping policies within the forest areas are considered decision policy areas that likewise considered on designating future land uses.

PROTECTION FOREST. Following the general principles in land use planning supported by a legal framework, the proposed protection forest shall be the same areas identified in the supply analysis covered by the following:

a. **NIPAS Law.** The entire area of the Mt. Matalingahan Protection Landscape (14,055.10 hectares) located in the uphill of Quezon adjoining Rizal, Brooke's Point, Sofronio Española and Bataraza. Areas considered as protection forest within the MMPL are those which have been identified as strict protection zone under the management plan. The protection areas shall be free from human habitation and economic activity. Whenever allowed, all activities and mode of resource utilization shall be in accordance with the approved management plan.

b. All areas, covered by Core Zone under the RA 7611 distributed in different barangays as shown in table below.

Table 3.4.2 CORE ZONE UNDER RA 7611 PER BARANGAY

Barangay	Area (ha.)	% Share
Alfonso XIII	4.21	0.02
Aramaywan	3,351.87	14.56
Berong	8,859.92	38.49
Calumpang	1,561.07	6.78
Isugod	350.15	1.52
Maasin	69.16	0.30
Malatgao	713.07	3.10
Panitian	995.61	4.33
Pinaglabanan	37.48	0.16
Quinlogon	3,604.55	15.66
Sowangan	1,778.61	7.73
Tabon	380.03	1.65
Tagusao	1,312.75	5.70
Total	23,018.48	100.00

Source: ECAN Map 2005 (from PPDO)

The core zone shall be strictly protected and maintained free of human disruption. Exceptions, however, may be granted to traditional uses of tribal communities of these areas for minimum and soft impact gathering of forest species for ceremonial and religious purposes only.

Figure 3.4.2.a PROPOSED GENERAL LAND USE MAP

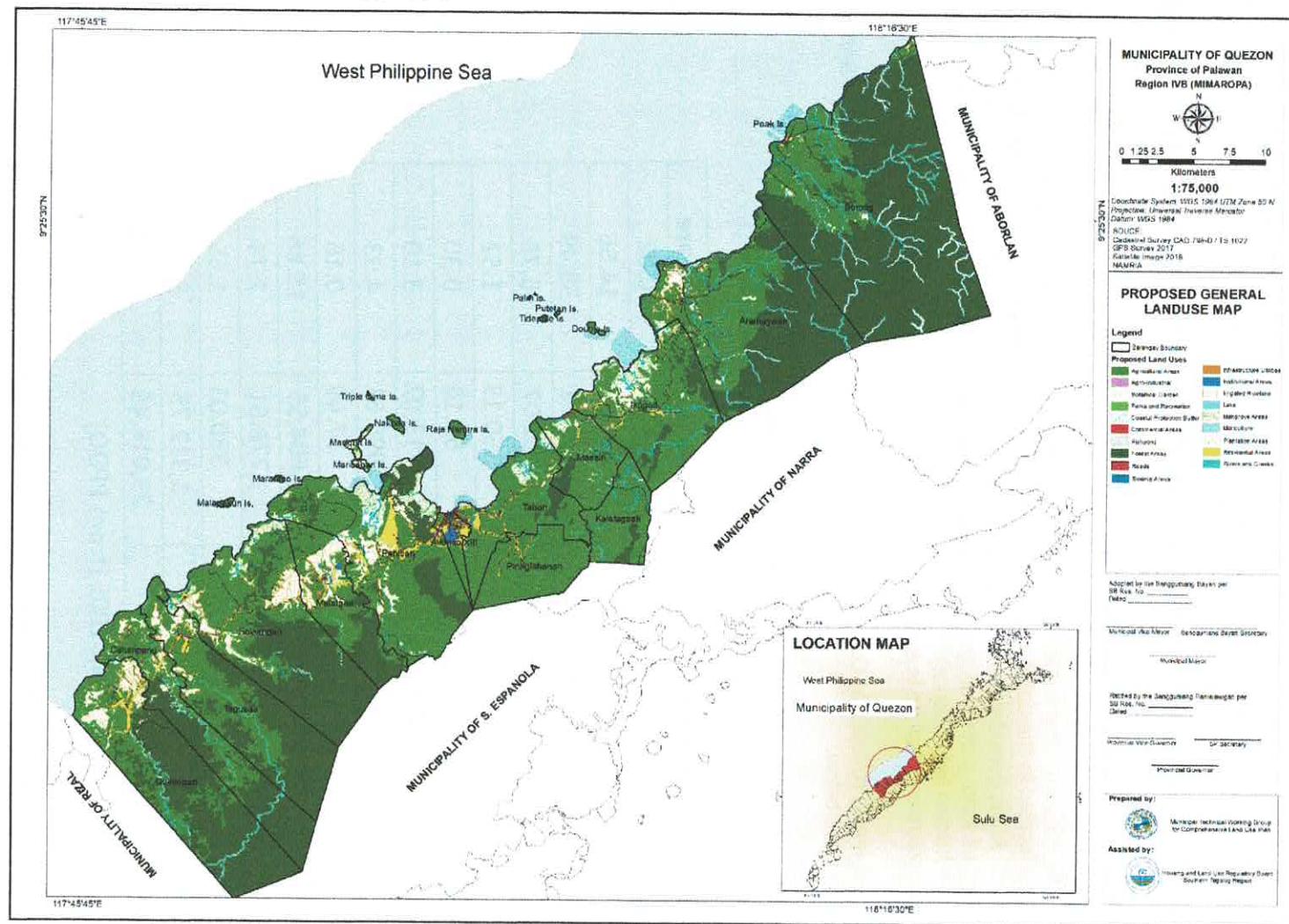


Figure 3.4.2.b PROPOSED URBAN LAND USE MAP

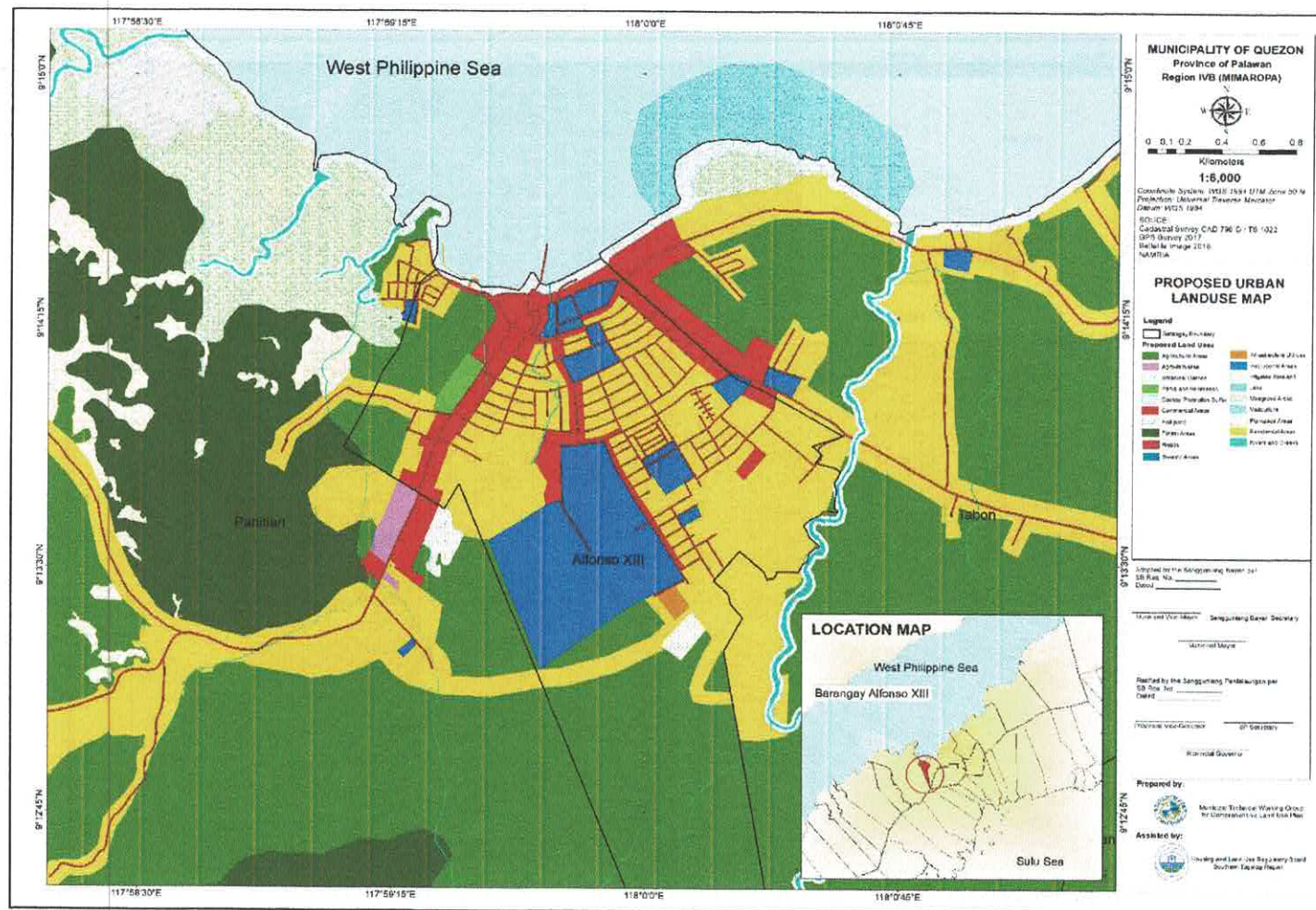


Figure 3.4.2.c PROPOSED LAND USE MAP – BARANGAY ARAMAYWAN

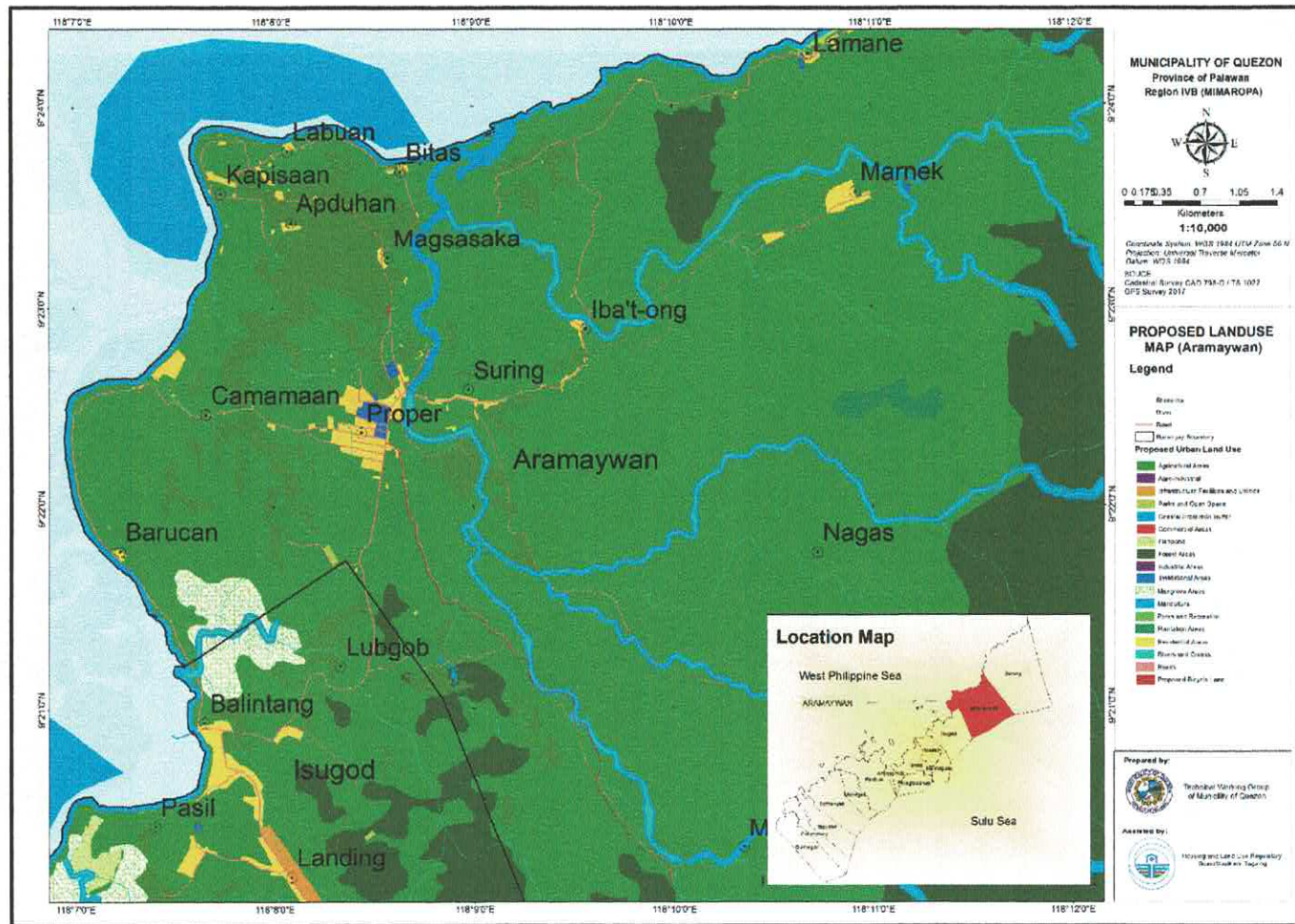


Figure 3.4.2.d PROPOSED LAND USE MAP – BARANGAY BERONG

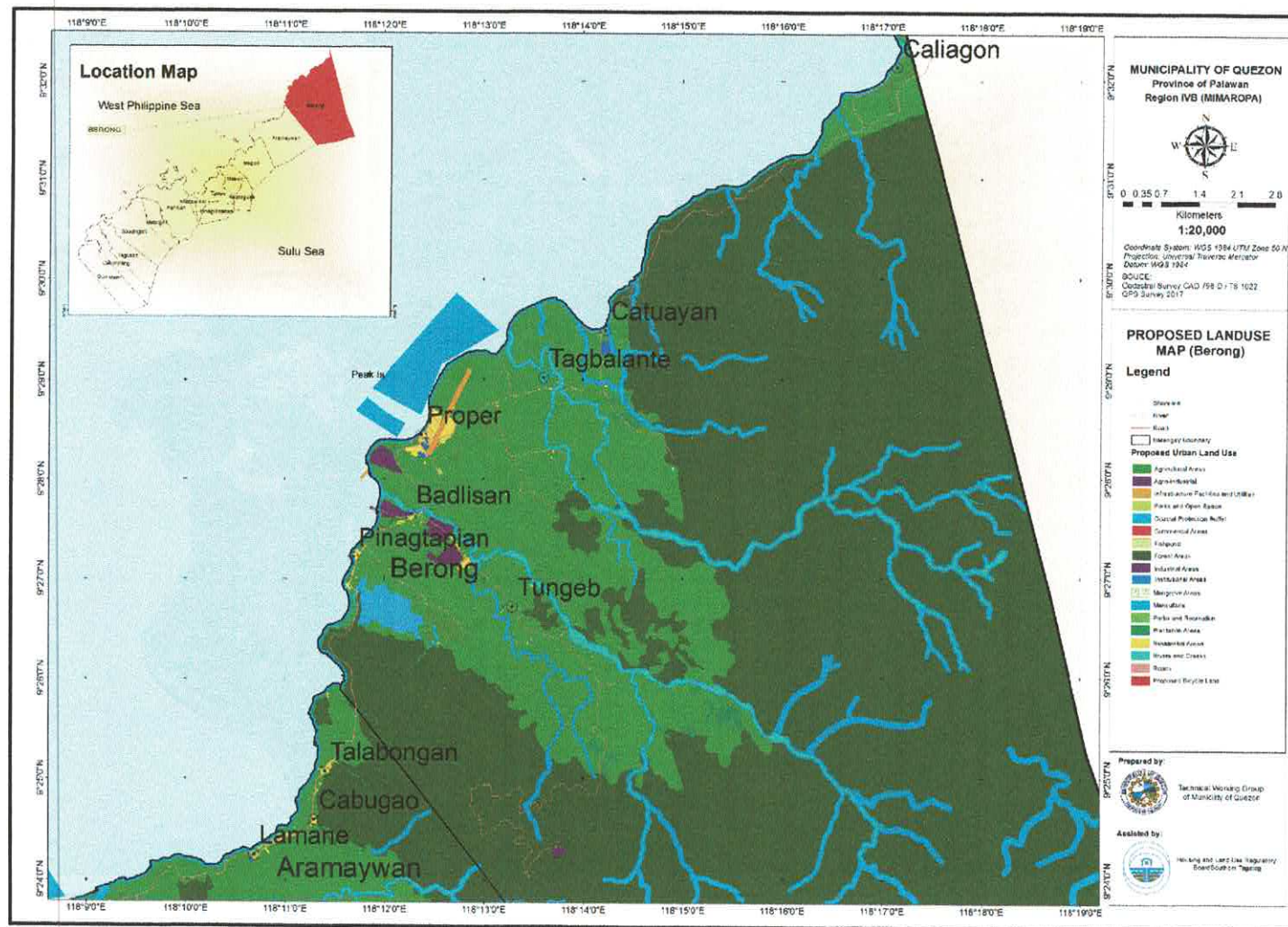


Figure 3.4.2.e PROPOSED LAND USE MAP – BARANGAY CALUMPANG

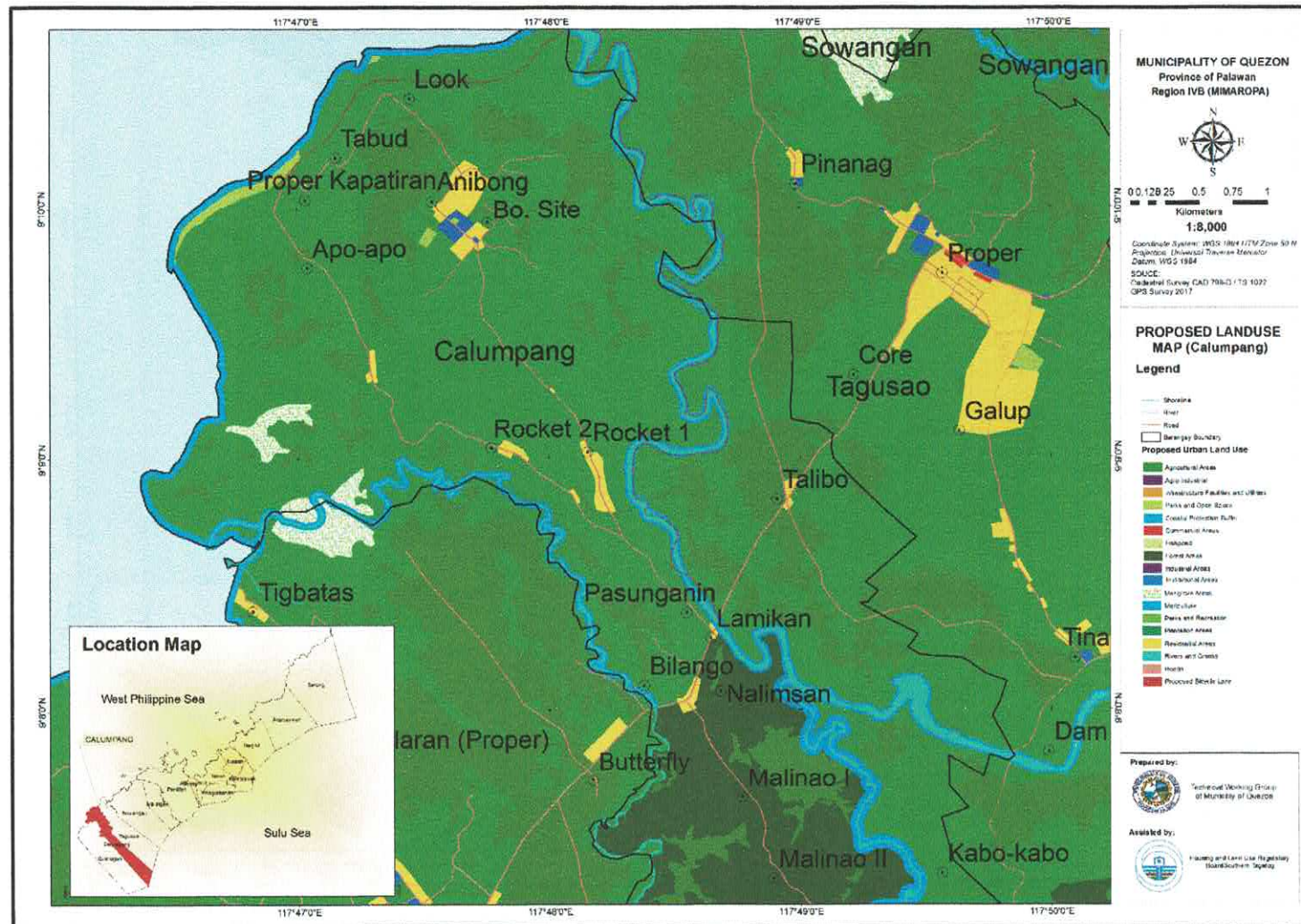


Figure 3.4.2.f PROPOSED LAND USE MAP – BARANGAY ISUGOD

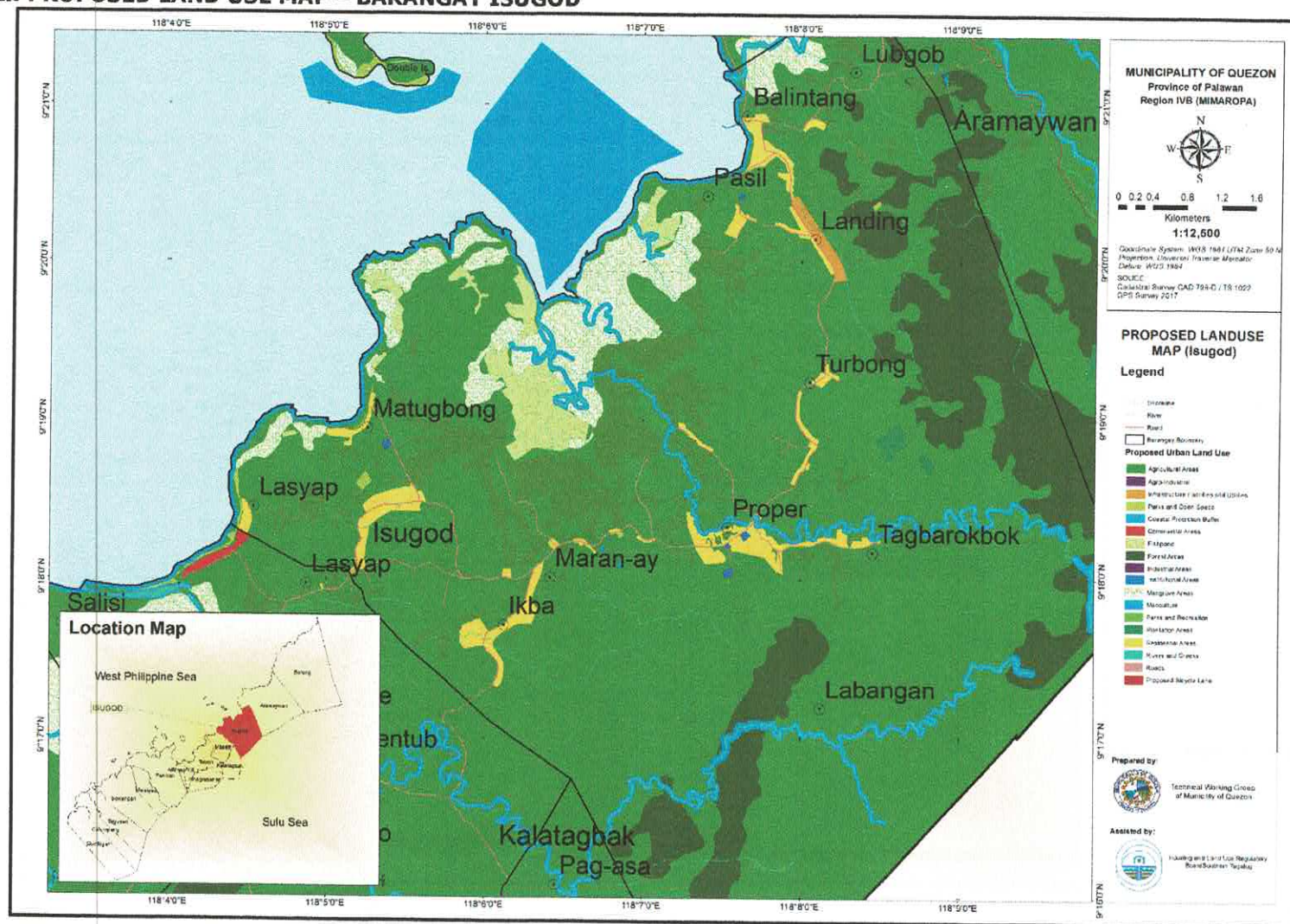


Figure 3.4.2.g PROPOSED LAND USE MAP – BARANGAY KALATAGBAK

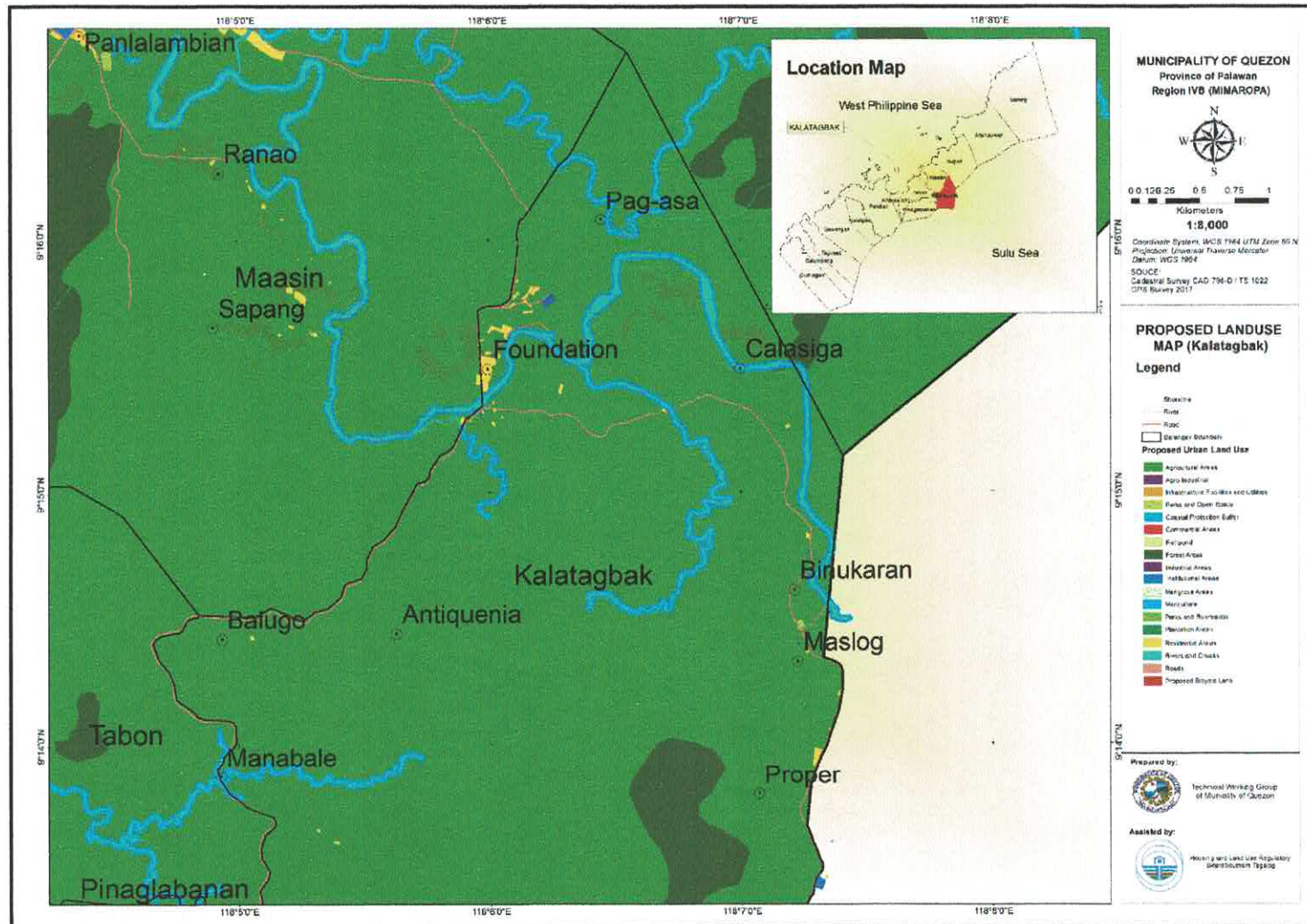


Figure 3.4.2.h PROPOSED LAND USE MAP – BARANGAY MAASIN

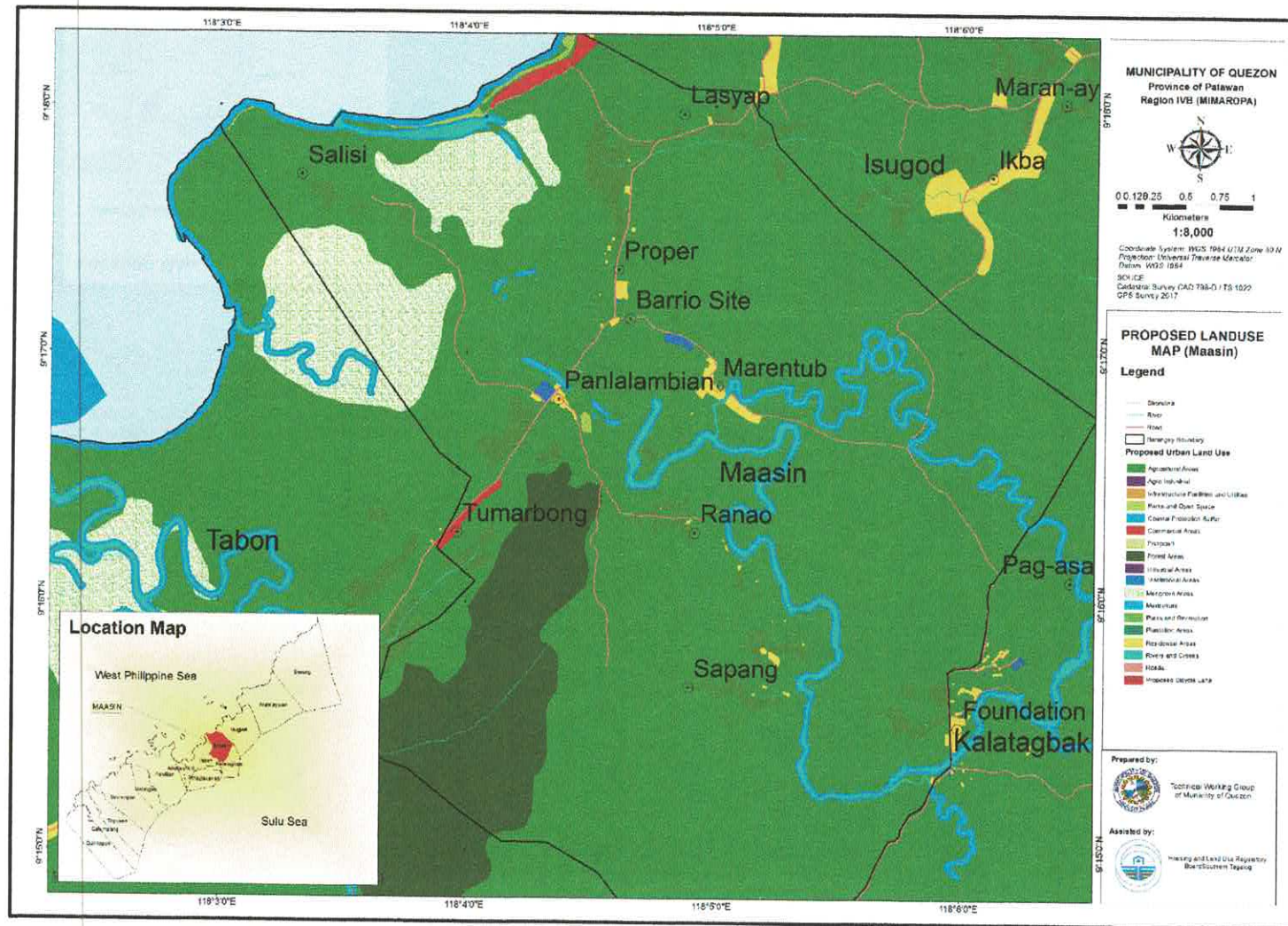


Figure 3.4.2.i PROPOSED LAND USE MAP – BARANGAY MALATGAO

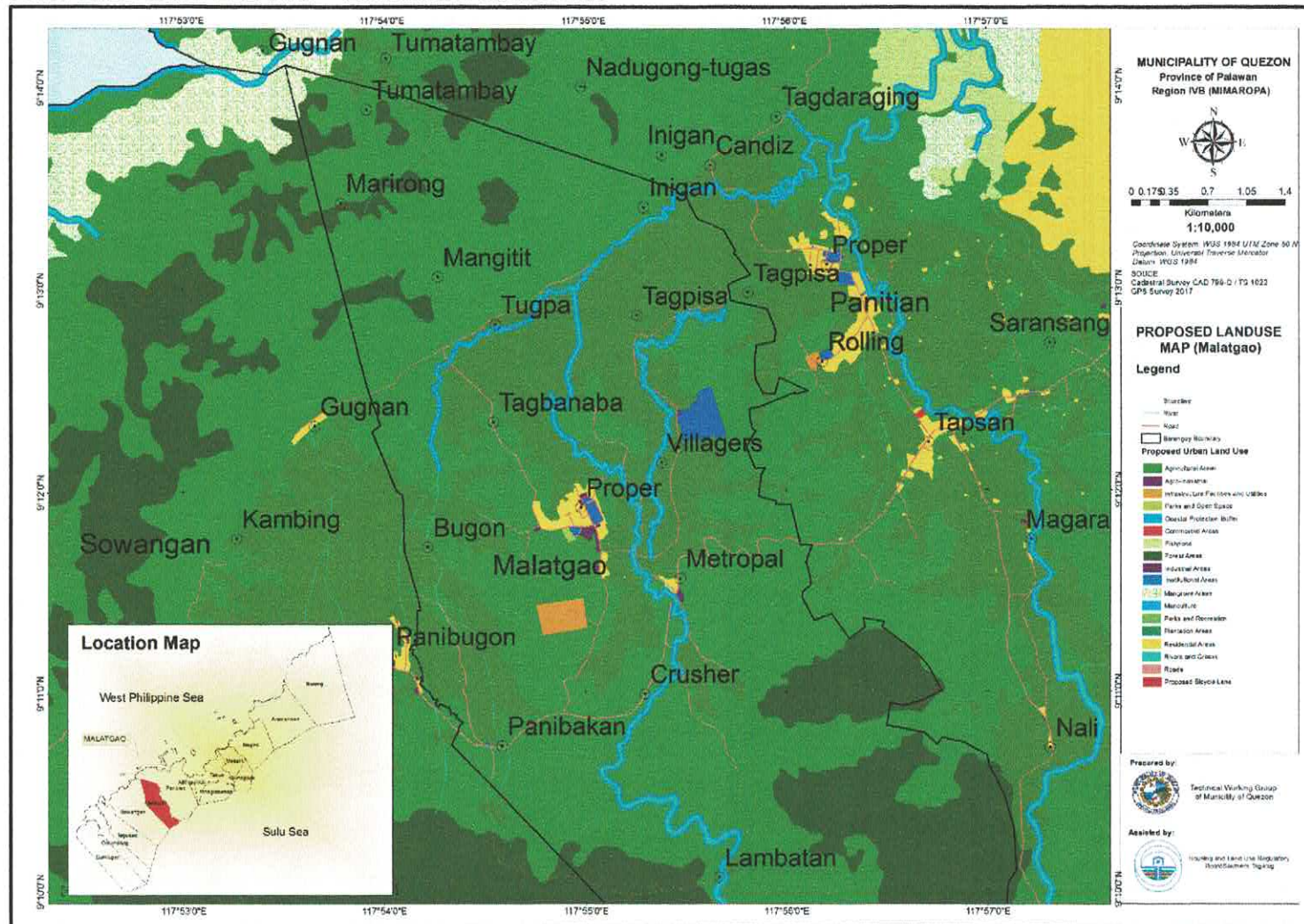


Figure 3.4.2.j PROPOSED LAND USE MAP – BARANGAY PANITIAN



Figure 3.4.2.k PROPOSED LAND USE MAP – BARANGAY PINAGLABANAN

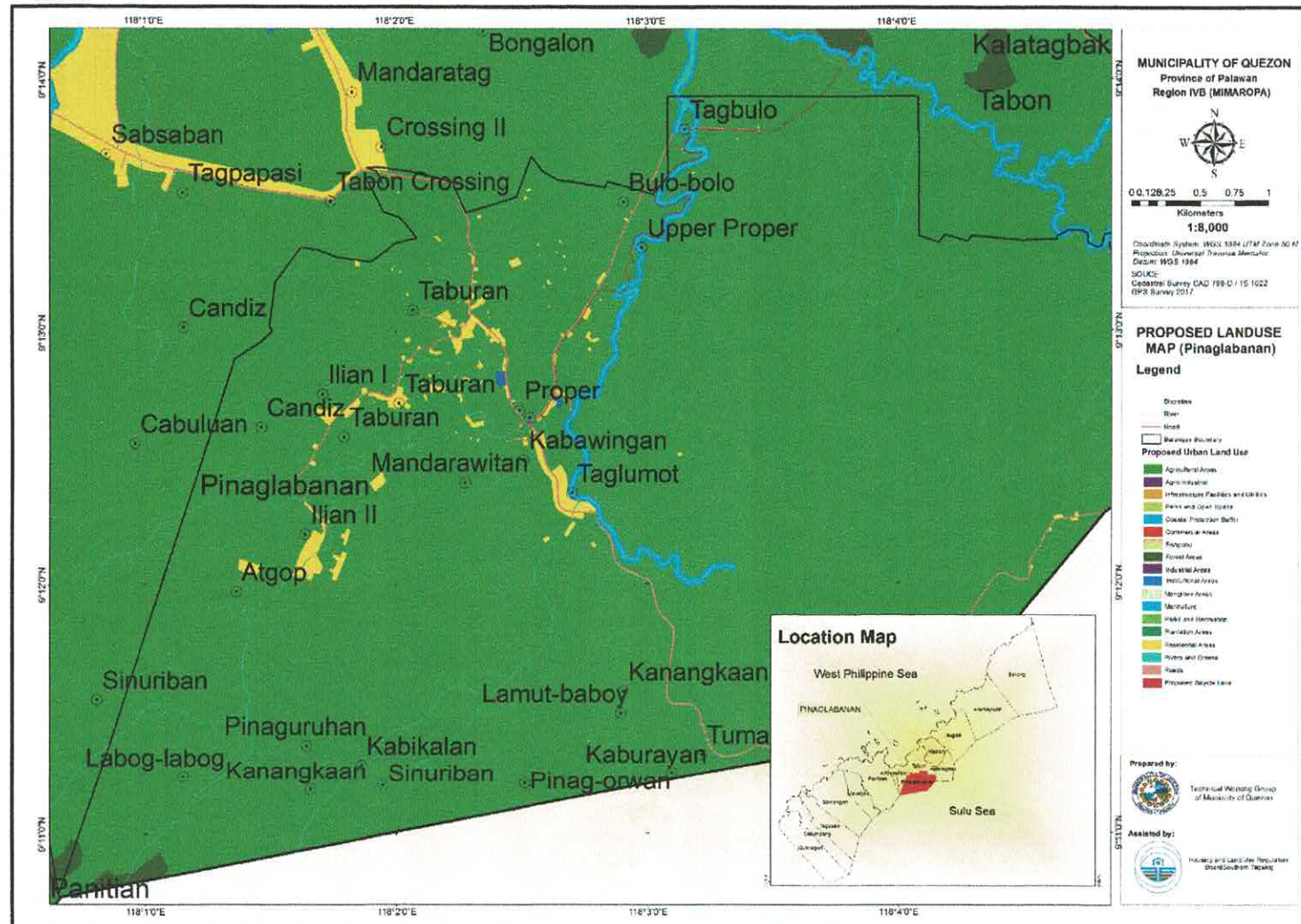


Figure 3.4.2.I PROPOSED LAND USE MAP – BARANGAY QUINLOGAN

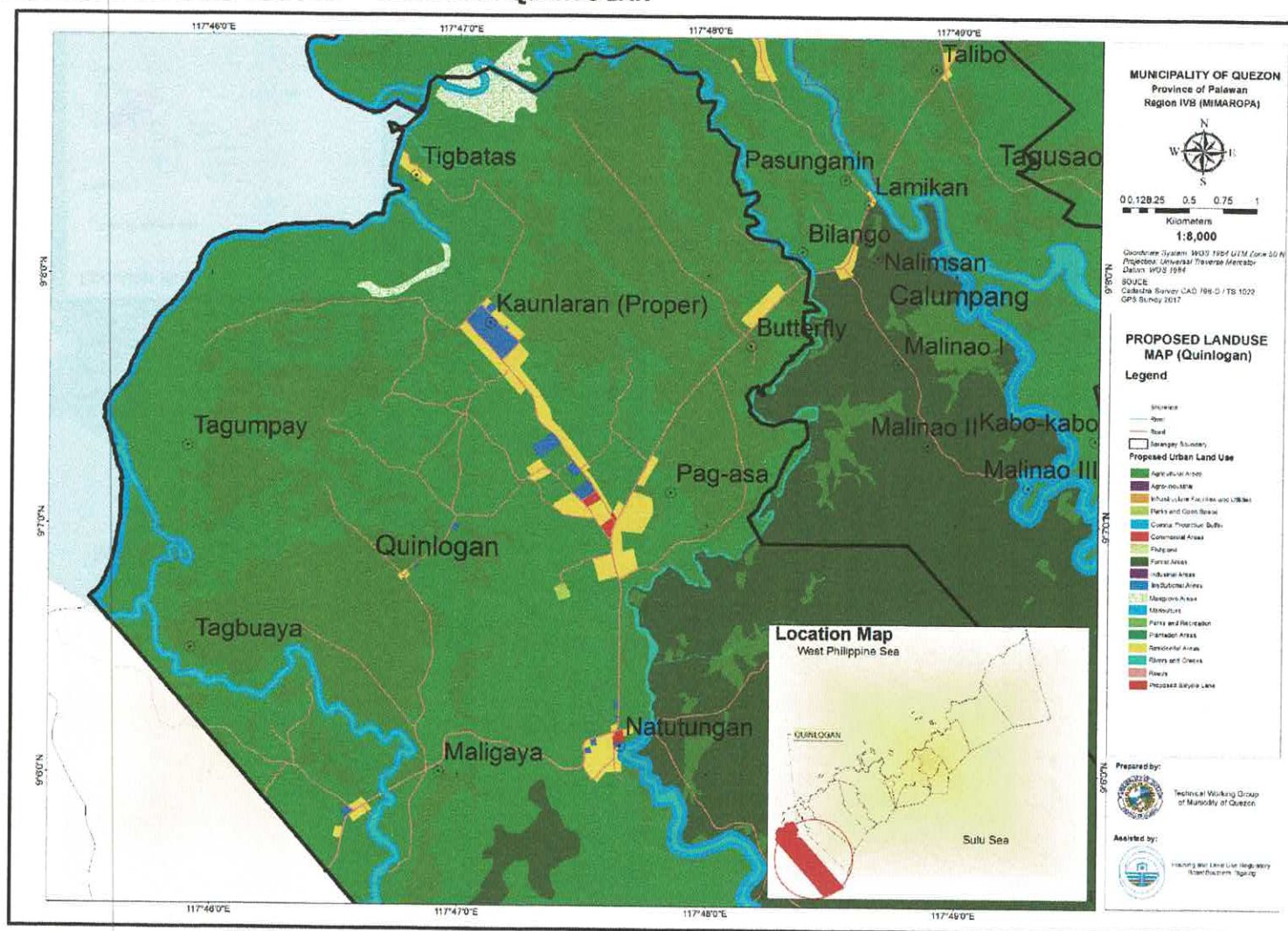


Figure 3.4.2.m PROPOSED LAND USE MAP – BARANGAY SOWANGAN



Figure 3.4.2.n PROPOSED LAND USE MAP – BARANGAY TABON

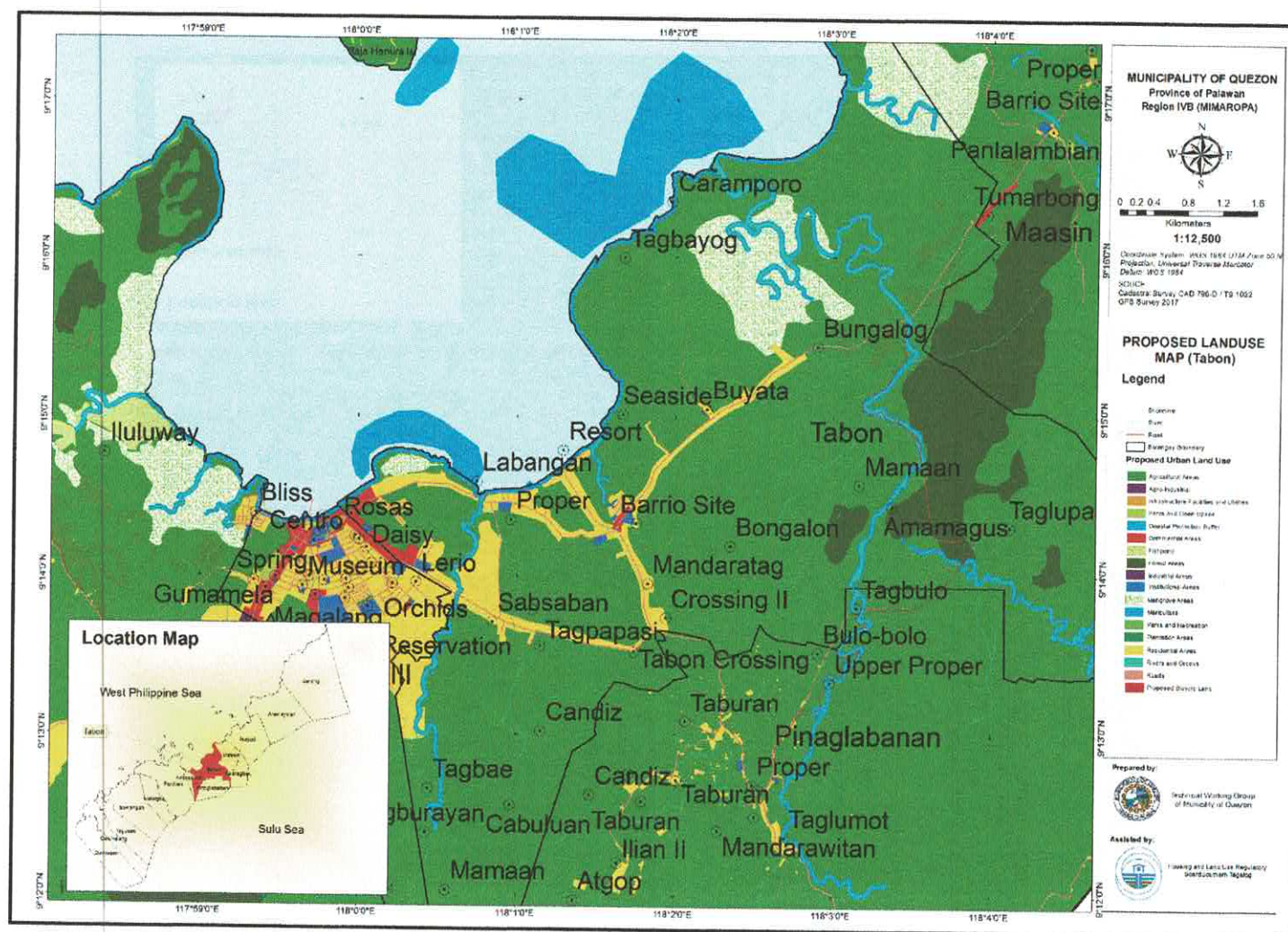


Figure 3.4.2.o PROPOSED LAND USE MAP – BARANGAY TAGUSAO

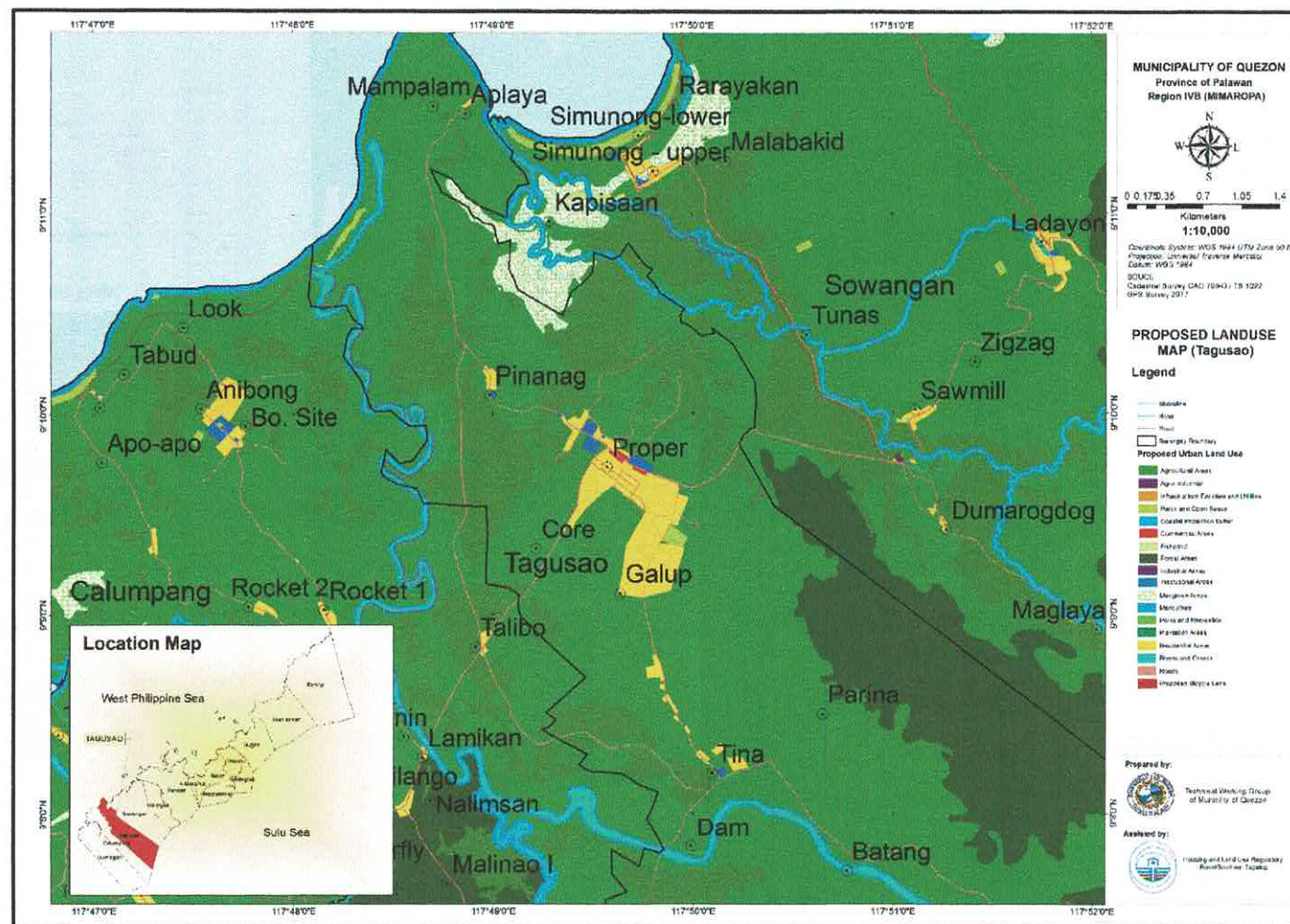


Table 3.4.3 Proposed General Land Uses of Quezon, Palawan

Land Use Category	Area (hectares)	% to Total Land Area
URBAN USE	3,730.46	3.89
Recreational	8.05	0.01
Parks and Open Space	14.56	0.02
Institutional	136.45	0.14
Residential	2,044.36	2.13
Commercial	104.56	0.11
Tourism	1,278.68	1.33
Industrial	72.81	0.08
Infrastructure	70.98	0.07
AGRICULTURAL USE	47,271.18	49.27
Agriculture/Mixed Crops/Scattered Trees	38,727.11	40.36
Irrigated Riceland	4,383.07	4.57
Rain-fed Riceland	4,161.00	4.34
FOREST AND FOREST USE CATEGORY	41,302.50	43.05
Production Forest	107.34	0.11
Protection Forest	41,195.17	42.93
WATER USE	3,201.24	3.34
Mangrove	1,927.03	2.01
Fish Pond	154.88	0.16
Quarrying	1.50	0.00
Rivers/Creeks	1,117.83	1.17
OTHER LAND USES	444.91	0.46
Cemetery	18.12	0.02
Controlled Waste Disposal	11.76	0.01
Roads	349.60	0.36
Open Beach	65.43	0.07
TOTAL	95,950.28	100.00

c. Critical local water sources enumerated below that requires thick forest cover to allow sustainability shall be designated as protection areas. Within the CWSPBA, cutting of trees is strictly prohibited including human activities solely for economic gain such as agricultural production.

Table 3.4.3 Critical Water Sources Protection Buffer Areas (CWSPBA)

Barangay	Water Source	Coordinates
Berong	Balaybayen Falls	9°29'19.00"N; 118°14'46.00"E
Isugod	Ybayon Falls	9°18'38.20"N; 118°10'23.10"E
Malatgao	Samburaya/Mangasi g Falls	9° 9'9.41"N; 117°56'9.30"E
Sowangan	Candiz Falls	9° 8'0.50"N; 117°53'39.30"E
Panitian	Siento Biente Falls	

Source: MENRO, 2018

PRODUCTION FOREST.

Within the forest areas, economic activities or human activities may be allowed based from physical attribution and tenurial instrument from DENR. Hereunder shall be proposed production forest.

1. Areas covered by Community Based Forest Management (CBFM) located in barangay Isugod and Malatgao with an approximately total land area of 1,672.47 and 16.1539 hectares respectively. Isugod was awarded to Isugod Uplanders Association in 1999 while Malatgao was awarded to Bugon Multipurpose Cooperative in 2001. Allowed uses therein shall be in accordance with the management agreement and with RA 7611.

2. All areas designated as Buffer Zone with three sub-category under RA 7611 distributed in different barangays.

i. *RESTRICTED USE AREA.* Limited and non-consumptive activities which shall include but not limited to gathering of wild honey, almaciga tapping, soft-impact recreational activities (i.e. hiking, sight-seeing, bird watching) research, sustainable activities of IPs and ecosystem restoration or rehabilitation.

ii. *CONTROLLED USE AREA.* Strictly controlled mining and logging, which is not for profit (i.e. communal forest, CBFM etc.) almaciga tapping, tourism development, research, grazing, and gathering of honey, rattan and other minor forest products.

iii. *TRADITIONAL USE AREA.* Management and control shall be carried out with the other supporting programs of the SEP which may include, but not limited to, Upland Stabilization Program (USP), Catchment Management, Hillside Farming Reforestation, Integrated Social Forestry (ISF), Industrial Tree Plantation (ITP) and CBFM.

POLICY DECISION AREAS

During sieve analysis for land use proposal within the forest areas, overlapping policies was noted affecting the implementation of this plan. Thus, decision was made within the overlapping policy areas to ease anticipated difficulty in implementation.

1. Approximately 5,807.30 hectares of CADC/CADT located in Maasin and Sowangan is within Alienable and Disposable land covered by torrens system or titling system.

This plan shall respect prior rights to IPRA law or legal rights over the land property before October 29, 1997. Hence, in areas covered by CADC/CADT where legal land status is A & D, the LGU shall recognize the rights of property owners holding proof of ownership before the passage of the IPRA law or before CADC/CADT was awarded. The LGU shall then informed the NCIP of the said overlap and request, resurvey to rectify the CADC/CADT boundaries.

2. About 1,144.61 hectares of MMPL (NIPAS area) is within CADC/CADT areas.

The utilization of these areas shall be in accordance with the approved ADSDPP. In the absence of approved ADSDPP, the management plan shall become a legal reference for resource utilization that will be used until ADSDPP is approved.

3. Roughly 488.78 hectares of critical water source protection buffer within production forest covered RA 7611 under the category of buffer zone and multiple use zone.

In areas where critical water source protection buffer intersect with the production forest, policies applied as a protection buffer will prevail to maintain sustainable water supply.

Table 3.4.4 Critical Water Source Protection Buffer Over Production Forest

Category	Area (ha.)	Location
Buffer Zone Sub-Category		
Restricted Use	42.5791	Malatgao
Controlled Use	325.1265	Sowangan, Malatgao, Aramaywan and Berong
Traditional Use	96.4631	Malatgao and Sowangan
Multiple Use Zone	24.61	Sowangan

Source: Sieve Mapping (2018)

4. Approximately 36.67 hectares of critical water source protection buffer areas (CWSPBA) are within alienable and disposable land in Isugod.

Quezon respect the rights of property owners over the use of their properties that coincide with CWSPBA subject to rules and regulations stipulated in the Philippine sanitary code and the water code. However, if common good so desires, the LGU shall have the preferential use over that property subject to giving just compensation to the property owners.

5. Approximately 149.57 hectares of critical water source protection buffer areas (CWSPBA) are within CADC/CADT in Sowangan. The utilization of these areas shall be subject to free and prior consent.

6. Multiple Use Zone within the forestland/timberland and Unclassified Public Forest occupied a total land area of 6,783.08 hectares.

These areas shall not be utilized for non-forest use unless a tenurial instrument will be released by the DENR and other pertinent agencies. Settlements which already exist at the time of approval of this ordinance may be tolerated for a certain period. Unless IP communities, such settlement shall include the list of priority beneficiaries of socialized housing projects or shall be subject of relocation.

AGRICULTURAL AREAS

To ensure food security, food production areas shall be delineated in this plan that will include prime agricultural areas or agricultural protection areas and the general production areas. These will occupy all areas with a legal land status of A and D which have not been the subject of land allocation in other section of this plan. Within such areas, all identified in the supply analysis covered by AFMA (remaining NPAAAD) and AO 20 shall be considered as prime agricultural areas. The rest shall be considered general production areas.

BUILT-UP AREAS/SETTLEMENT AREAS

Cluster of at least ten structures shall be considered built-up/settlement areas as per technical definition. In the general land use proposal, it is obvious that the barangay centers shall be designated as settlement areas where disaggregated proposed land uses have been accounted in urban land use proposal.

General Policy. Multi-storey building or structure shall be limited to a maximum of 2 storey only due to geologic characteristics. However, if critically inevitable, more than 2 floors structure may be permitted. Provided, the same shall secure a geologic study report from the MGB or an equivalent study by accredited private technical provider.

PROTECTION BUFFER AREAS

In compliance with RA 7611, and whenever applicable, 50meter shoreline protection buffer shall be followed reckoning from the highest tide landward. The area shall be kept open space which may be used for parks and recreation and related tourism activities only.

OTHER LAND USES

Other land uses which will necessarily be allotted in selected areas that include:

- i. ***PUBLIC CEMETERY/MEMORIAL PARK.*** A total of 34 hectares will be dispersed in the entire municipality to be allocated for public cemetery and/or memorial park. The location of existing cemeteries will be maintained with expansion for future use. All existing public cemetery shall be expanded up to 1-2 hectares except in Alfonso XIII, Tagusao and Isugod which will be expanded up to 4 hectares.
- ii. ***AREA FOR CATEGORY I SANITARY LANDFILL.*** The existing area will be expanded up to roughly 12 hectares covering portion of lot parcel 3308, 3309, 3294, 3195, 3310 and 3313 in barangay Malatgao.

- iii. *AGRICULTURAL RESEARCH CENTER (ARC)*. As agricultural-based LGU, it is a must to provide agricultural research center for technology enhancement and other relevant use. The existing ARC in barangay Malatgao will be extended to have at least 15.94 hectares. The area will cover portions of lot numbers 3121, 3098, 25, 24, 3346, 4, 6,3 and 2.
- iv. *CALAMITY AIRPORT*. The municipality intends to develop an airstrip with basic support facility which may be categorized as "*Calamity Airport*". Balintang airstrip stretching more than 1km will have 11.92 hectares occupying portion of lot number 6346. Another option will be in Berong having a total area of 15.04 hectares with almost the same length.
- v. *RETIREMENT VILLAGE*. To increase investment opportunity, this plan integrated the concept of creating a healthy community for the elderly. This will occupy approximately 1.01 hectares portion of lot number 5136 located in Alfonso XIII.
- vi. *SLAUGHTER HOUSE*. In compliance to RA No. 9296, Otherwise known as the Meat Inspection Code of the Philippines and its IRR stipulated in DA-Administrative Order No. 28 Series of 2005, about 3.81 hectares will be allotted for slaughter house. The LGU owned property located in Sitio Odyong, Barangay Panitian with TCT no. 065-2016000659 shall be used for this purpose.
- vii. *BICYCLE LANE AND ECO-PARK*. Adhering to the principles of green growth and urban design, the LGU intends to create functional green spaces that will serve as a place for interaction and to provide an opportunity to commune with nature. Long term benefit includes: ⁽¹⁾ Protection and conservation of legal easements and ecologically sensitive areas; ⁽²⁾ Maintain balance development; ⁽³⁾ Increase economic value of the land; and ⁽⁴⁾ Creating a spirit of community. The proposed bicycle lane and eco-park development are hereunder enumerated.

BICYCLE LANE:

- a. Along National Highway going to Tabon Cave (Alfonso XIII)
(4.59km along the road, 1.68 via farm lane) end point Viewdeck
- b. Along the roads parallel to Tumarbong river going to tourism sites under the DOT Project via Tumarbong, BarangayTabon
(3.91km)
- c. National Highway to Panandanan Cave via Brgy Pinaglabanan
(5.53 km) along Tumarbong River Tributary
- d. National Highway to sitio Puting Bato (Panitian) -4.1km
- e. National Road to Balaybayen Falls (Berong) – 1.83km
- f. National Road to Tarao Cave (Aramaywan) – 5.5 km
- g. From National Highway-sitio Pangobilian-sitio Simunong-National Highway (Barangay Swangan) 11 km
- h. National Highway to Calumpang Beach (Calumpang) – 11.4km

ECO-PARK

1. Lanipga Falls Eco-park (14.8 hectares) Tabon
2. Panandanan Cave Eco-Park (21 hectares) Tabon
3. Tumarbong Falls Eco-Park (13.8 hectares) Tabon/Maasin
4. Mudlom Cave Eco-Park (14.4ha) and Sangaran Cave Eco-Park
(30.1ha) – Twin Cave Eco-Park - Isugod
5. Taraw Cave Eco-Park (42.6 hectares) - Aramaywan
6. Tabon Cave Eco-Park (123 ha) – Alfonso XIII
7. Samburaya Eco-Park (39ha) - Malatgao
8. Ybayen Eco-Park (24.8 ha) – Isugod
9. Balaybayin Falls Eco-Park (10.9ha) – Berong
10. Tagbunsaing Lake Eco-Park (146 ha) – Berong
11. Devil's Peak Eco-Park (36.2ha) – Maasin
12. Lasong Falls Eco-Park (38.8 ha) – Tagusao
13. Unclassified Public Forest in Tagusao adjacent to the properties

indicated as urban expansion along Tina Road shall be developed as an eco-park (35.30 hectares)

GENERAL POLICY

The river legal easement will be converted into a pocket forest to create a network of linear pocket forest along the river systems. The development will occupy regular easement traversing urban areas for minor rivers and extending 5meter easement for perennial river systems or major rivers that include Aramaywan, Isugod, Iwahig, Tumarbong, Imulnod, Panitian, Tagusao, Lamikan, Malinao and Quinlogon rivers.

3.4.3 PROPOSED WATER USES

The municipal water territory integrated in this plan include all the inland waters comprising of natural drainage or the creeks and river systems, inland lakes, swamps and the 15 kilometers marine areas reckoning from the lowest tide seaward. Approximately, the total water territory of the municipality was accounted at 147,483.74 hectares. Water use which was already identified in the previous discussion will not be tackled in this section but shall be accounted for under LGU water territory.

PROTECTED AREAS

All areas for protection are primarily intended for the regeneration of marine life and relevant studies and researches.

- i. *DECLARED CORE ZONE* under the Network of Marine Protected Area with a total area of 2,668.36 ha.
 - a. *NASIRIK ISLAND* in its entirety extending 200 meters seaward. Any form of human activities or intervention specifically tourism and eco-tourism activities and/or development shall not be permitted within the area. The same will be for the purpose of turtle nesting and breeding ground.
 - b. *PEAK ISLAND*. Allowed uses within the area shall be limited low-impact eco-tourism activities only. Any form of fishing shall not be permitted.
- ii. *MANGROVE AREAS* dispersed in different barangays shown in table LU-10. Cutting and harvesting of mangrove for economic gain shall not be permitted. Economic activities shall be limited to eco-tourism and silviculture like production of crustaceans.
- iii. *SWAMP AREAS* occupying 2.27 hectares situated in barangay Isugod and Aramaywan. These serves as natural water retaining pond and shall be maintained as it is.
- iv. *NETWORK OF NATURAL DRAINAGE*. All the existing rivers and creeks shall be kept open and free from human intrusion. These will continuously be utilized to drain surface run-off and to serve as drainage outfall.
- v. *TAGBUNSAING LAKE*. Unless permitted by the IPs, this shall be for exclusive use of the community.

- vi. *TAGBUNSAING LAKE CORE ZONE*. The core zone declared in the management plan of the Tagbunsaing Lake shall be free from human activities.

PRODUCTION AREAS

These areas will be intended to support economic activities. Hence, the primary use will be production of fish and fishery products and regulated eco-tourism and tourism related activities.

- i. *DECLARED BUFFER* Area under the Network of Marine Protected Area extending 200 meters from the boundary of the declared core zone outward.
- ii. *DECLARED CONCESSION AREA* under the Network of Marine Protected Area.
- iii. *IDENTIFIED MARICULTURE* Area with a total area of 1,735.98 hectares situated in Panitian, Berong, Aramaywan and Isugod
- iv. *EXISTING FISHPOND* with a total area of 451.76 hectares located in Panitian, Sowangan, Tabon, Maasin and Isugod will be maintained for aquaculture.
- v. *TOURISM AREA*. The 200 meters seaward of all the islands declared as tourism development shall be preferably used for low-impact tourism activities. This will also include the tourism zone within the Tagbunsaing lake identified in the management plan.
- vi. *MUNICIPAL FISHING AREAS*. The remaining municipal waters within the marine areas not classified in any of the water uses including the fishing zone in Tagbunsaing Lake identified in the management plan shall be considered municipal fishing areas.

GENERAL POLICY

Regulations for the utilization of marine areas shall be in accordance with the municipal fishery code while uses of the Tagbunsaing Lake shall be in accordance with the management plan.

4.0 Implementation and Monitoring Scheme

The CLUP has an accompanying Zoning Ordinance that includes the CLUP's implementation and monitoring scheme in terms of land use regulations. This instrument includes the composition of all special committees that will be involved in the implementation, monitoring and review of CLUP and the ZO itself, wherever revision or updating is necessary. Duties and responsibilities of the implementing officers and committees are likewise stipulated in the local Zoning Ordinance.

With regards to alignment of the CLUP to the national and regional development framework, the development vision as well as the development thrust and strategies provide proper connection that will be implemented thru various programs and projects (PPs). These PPs shall be specifically integrated in the comprehensive development plan (CDP). The CDP, indicating the programs and projects towards achieving the municipal vision serves as an instrument for sectoral development. It shall be implemented thru the local development and investment program (LDIP) where prioritization took place. To streamline local development agenda, joint executive and legislative development agenda are carried out.

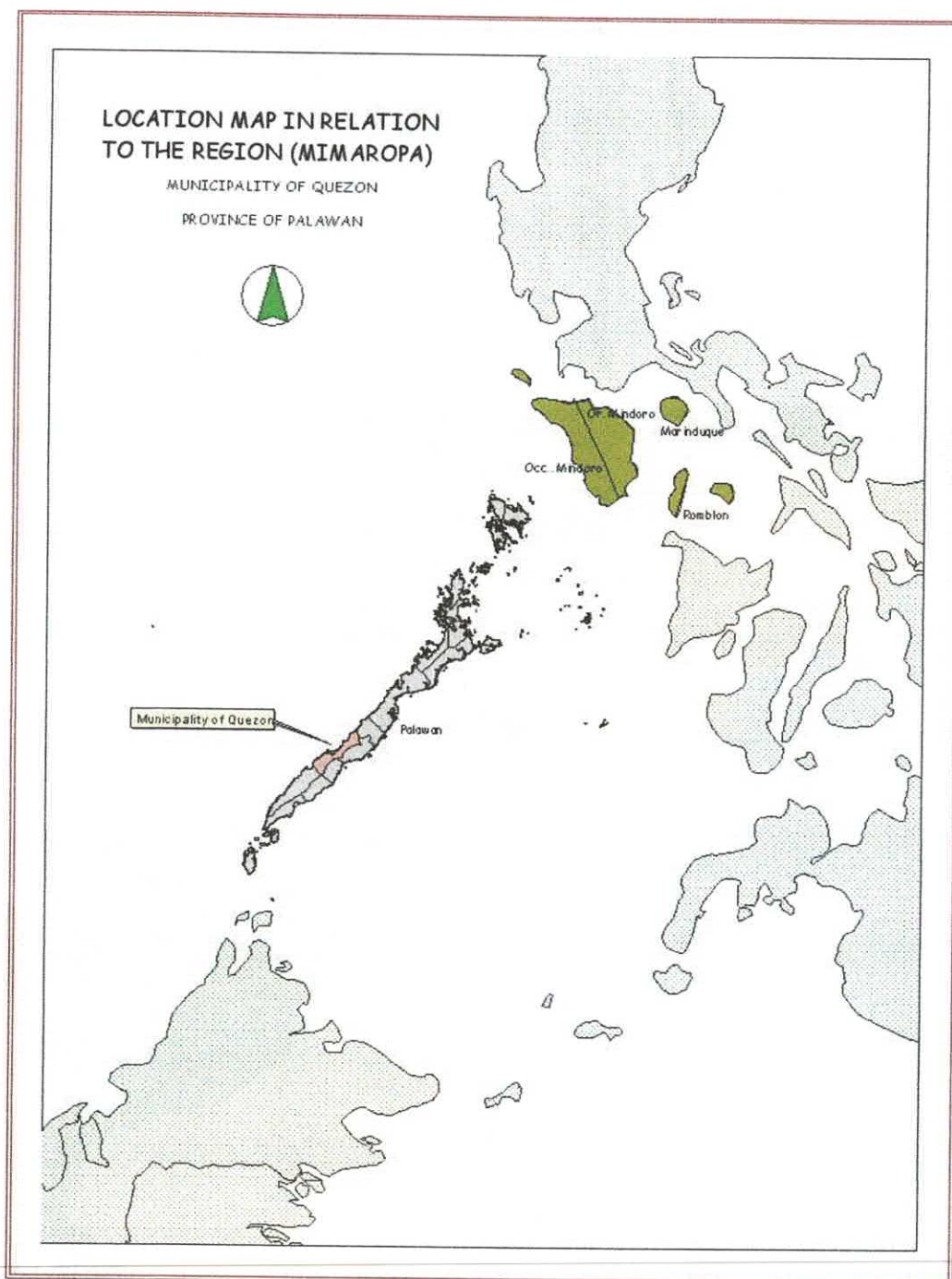
Hence, CLUP's implementing and monitoring scheme may be referred to the Zoning Ordinance for land use regulations, CDP for alignment to national and regional plan and LDIP and ELA for prioritization of development agenda.

The effectiveness of CLUP implementation in terms of land use regulations may also be reflected in annual change in land use pattern by comparing the current land uses against the zoning map indicating what expected land uses are within the planning period.

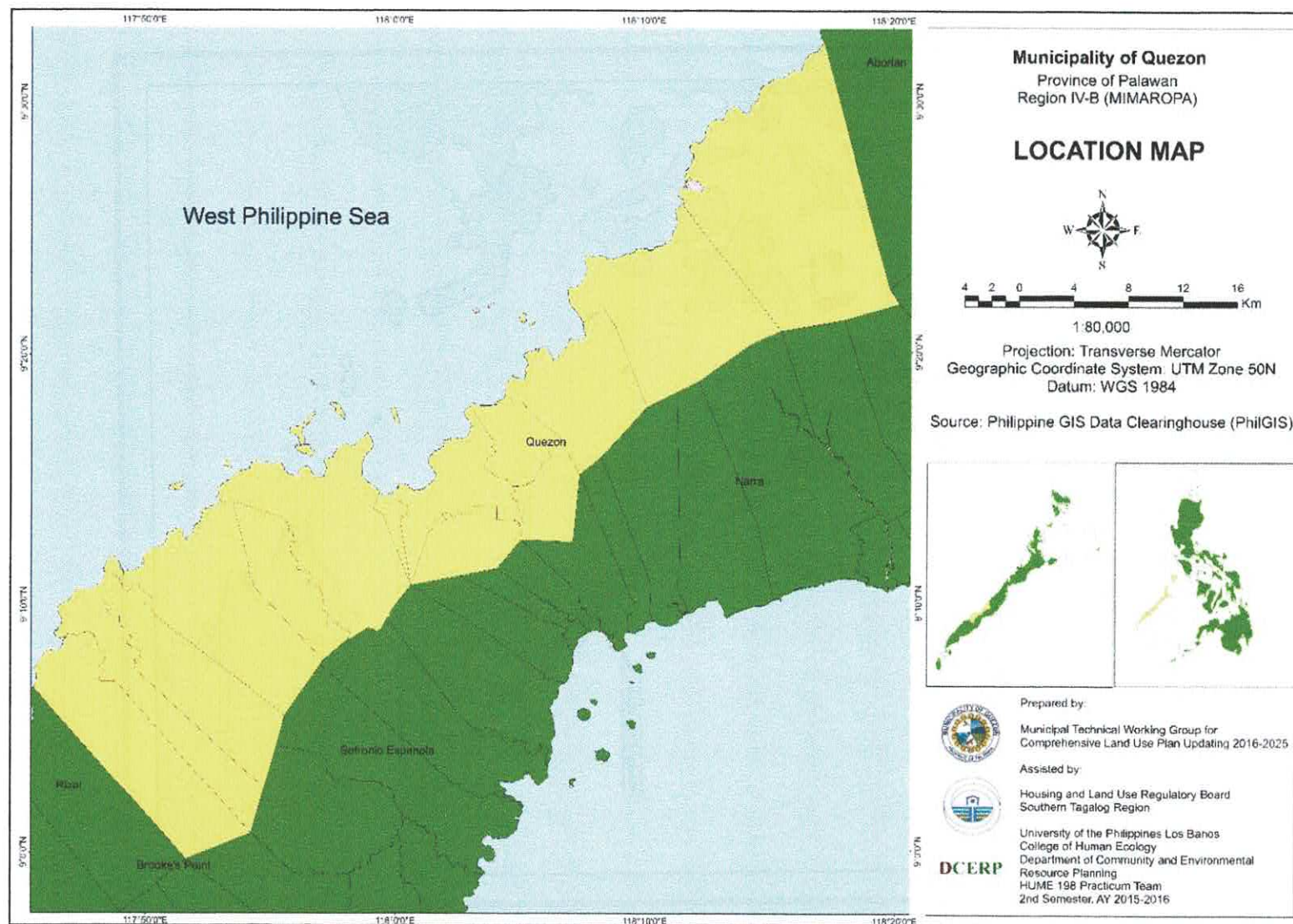
ANNEX

Annex 1. **THEMATIC MAPS**

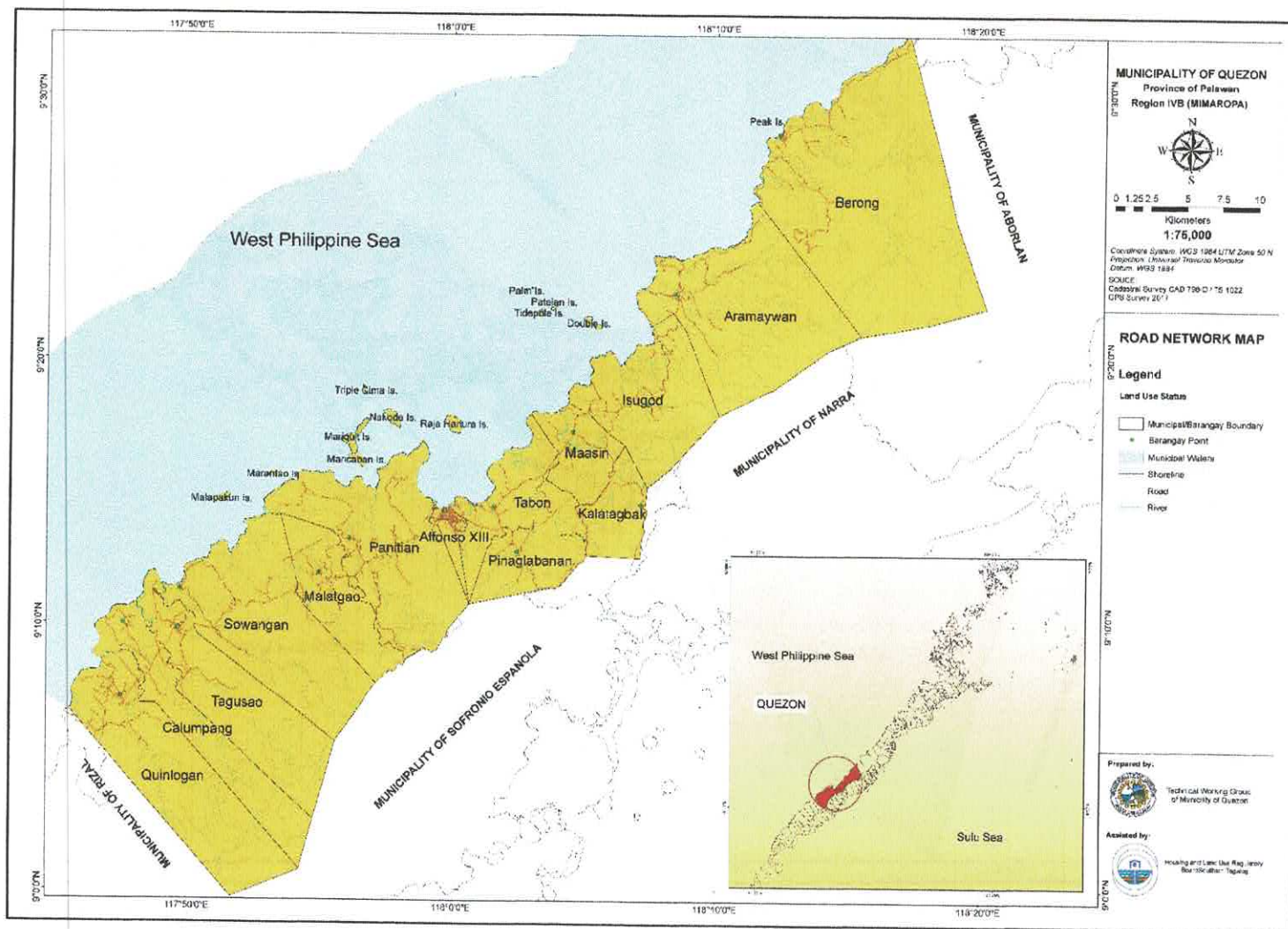
i. Location of the Municipality Relative to the Province, Region and Country



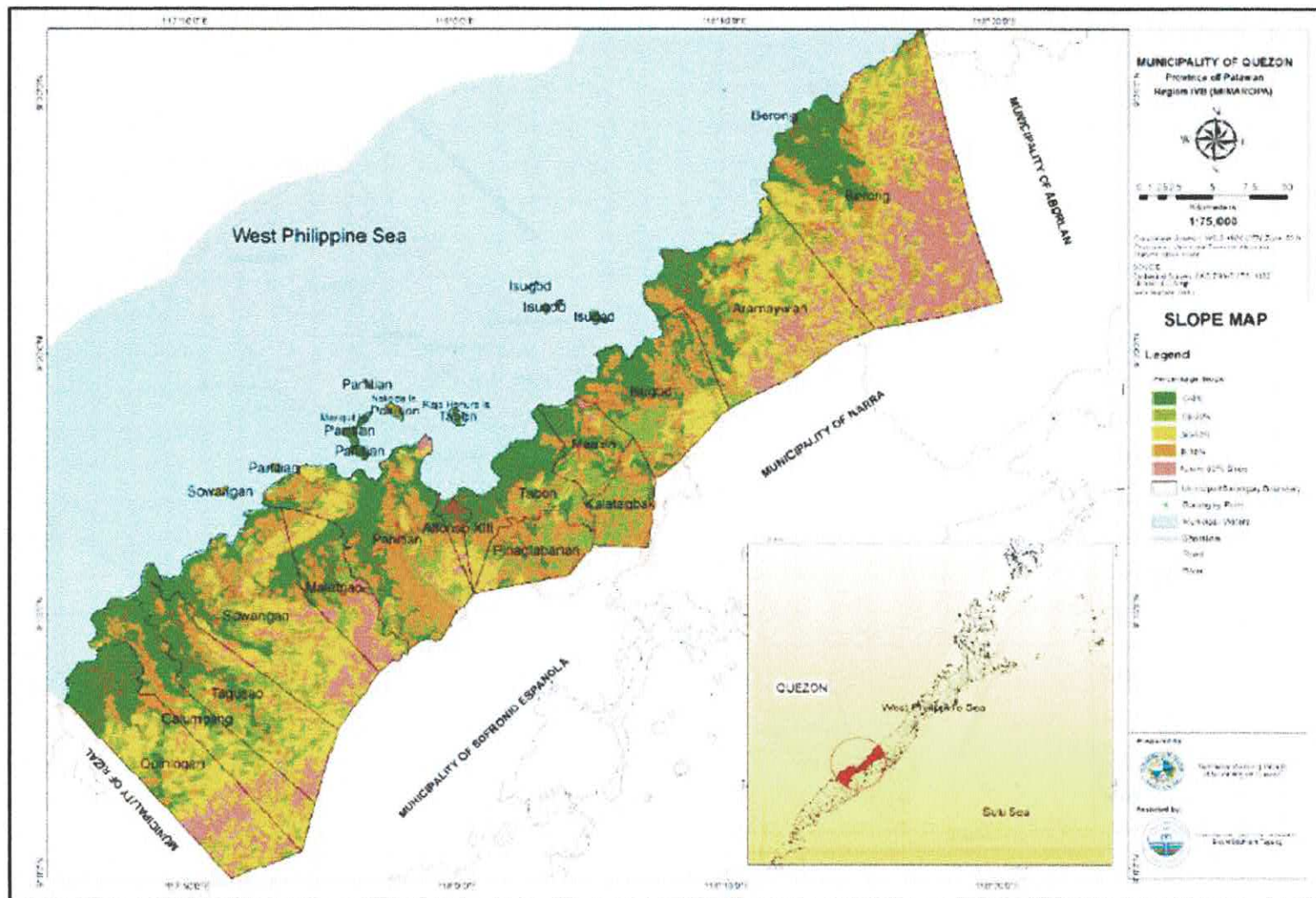
VOLUME II: LAND USE PLAN QUEZON, PALAWAN

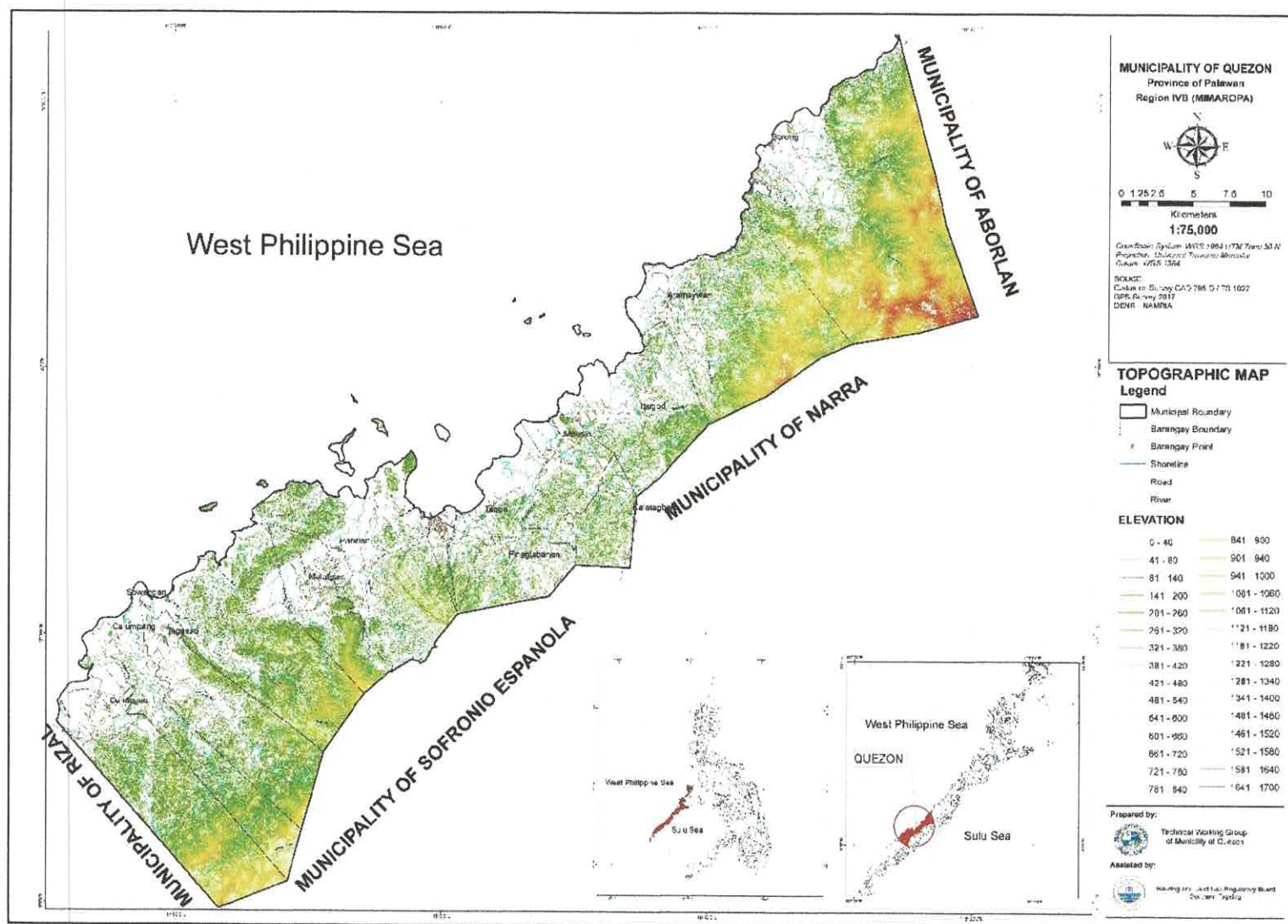


ii. Political Subdivision and Road Network Map

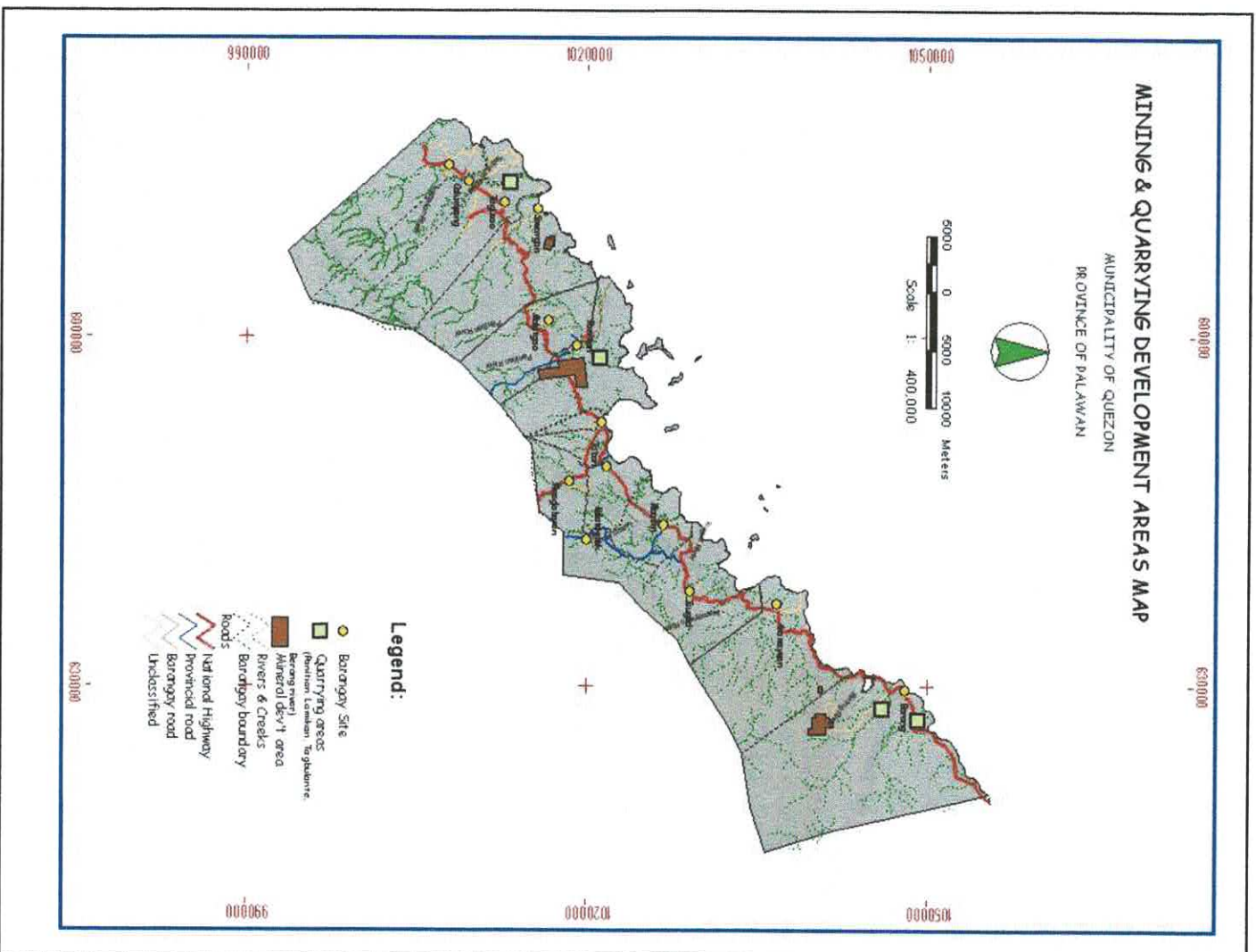


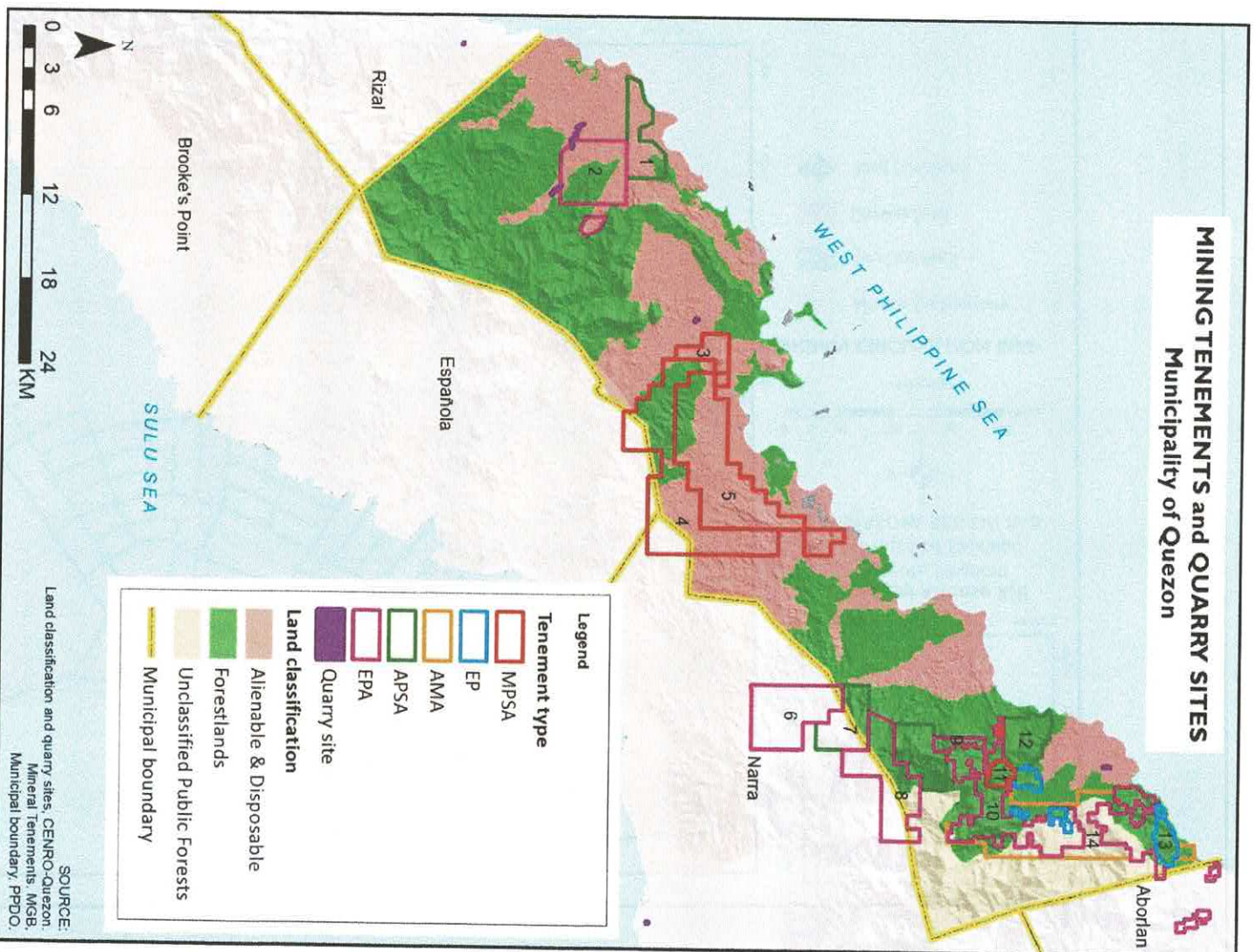
iii. Slope and Topographic Map



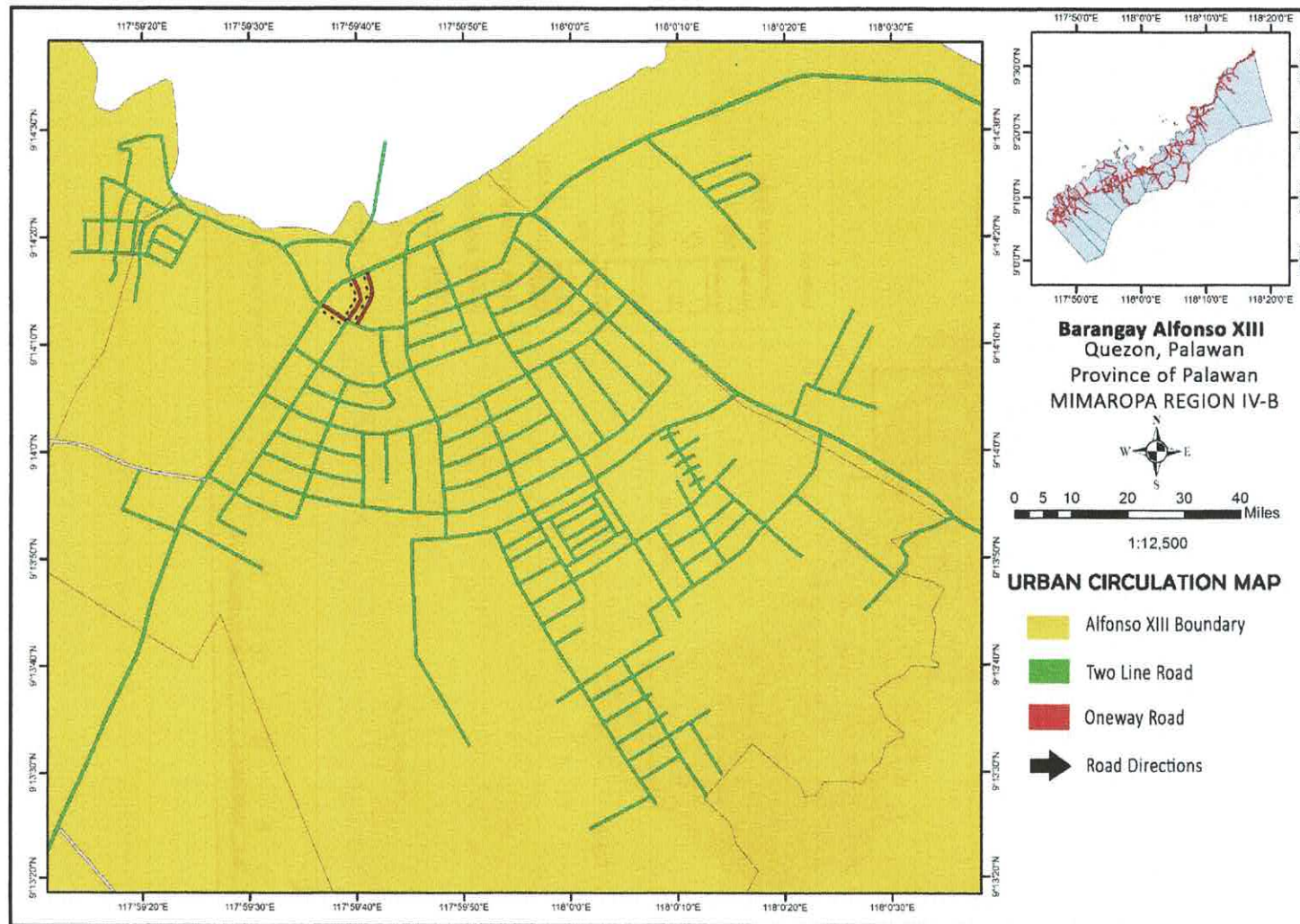


iv. Location of Quarry Sites

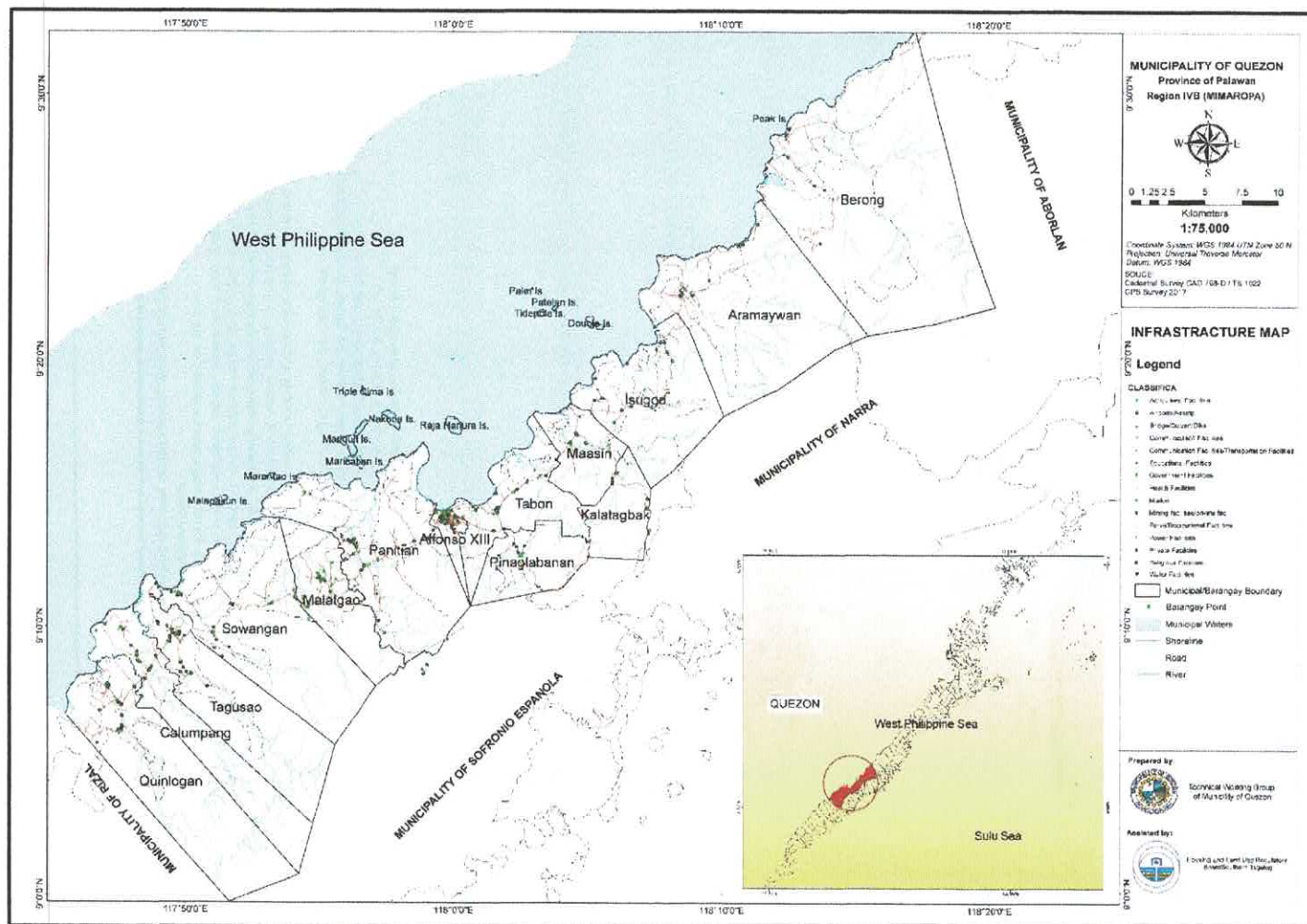




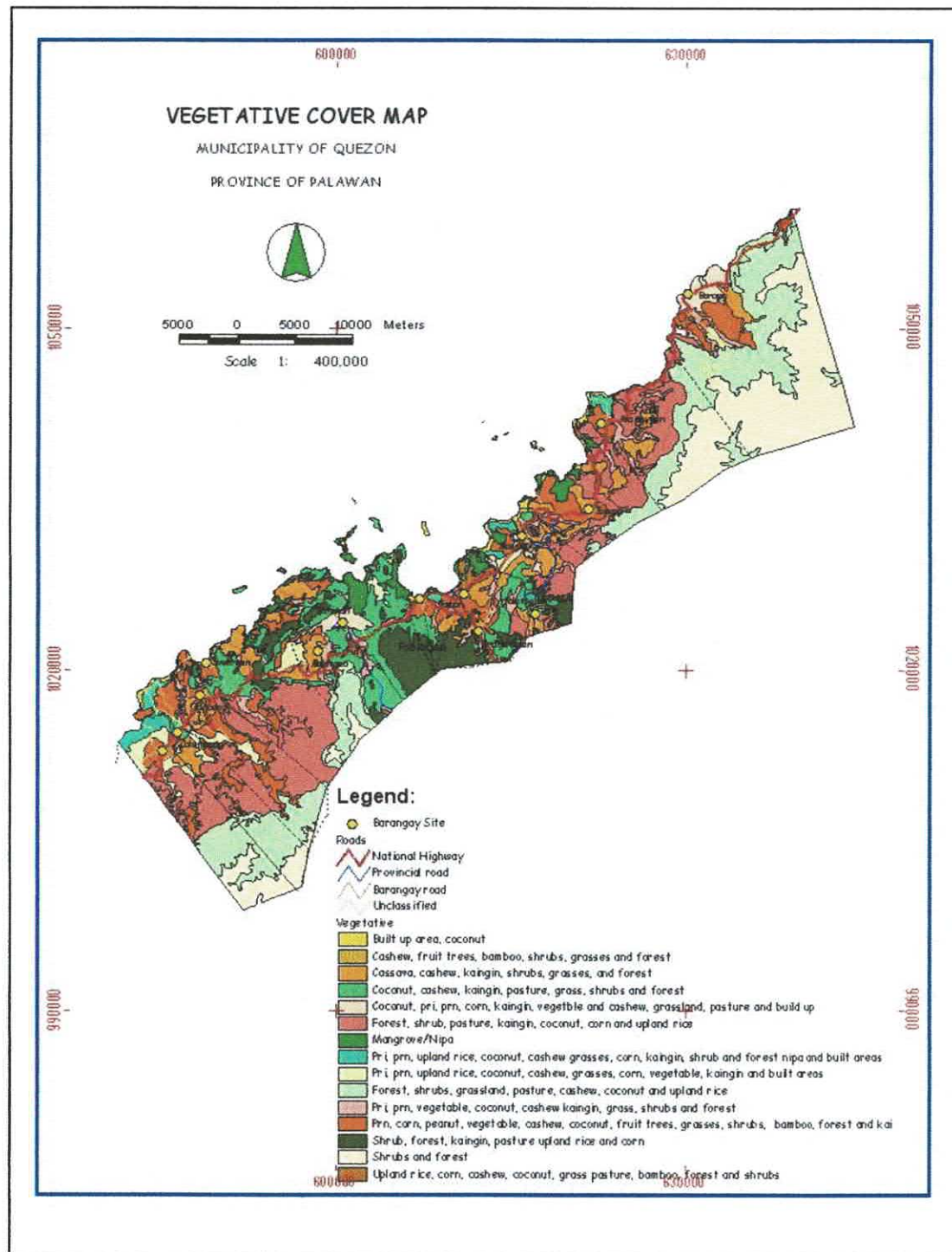
v. Existing and Proposed Circulation Map



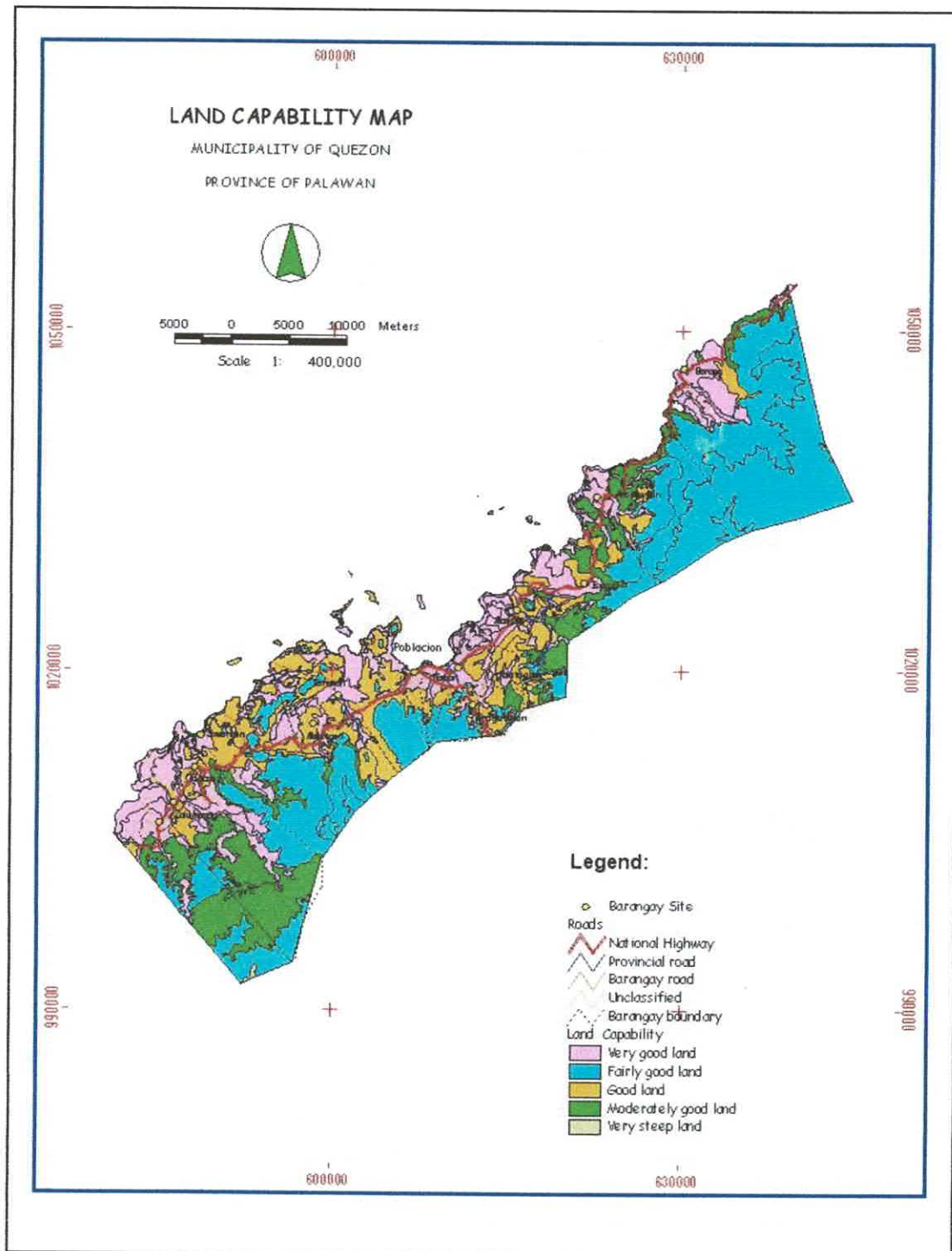
vi. Existing and Proposed Health and Educational Facilities Map



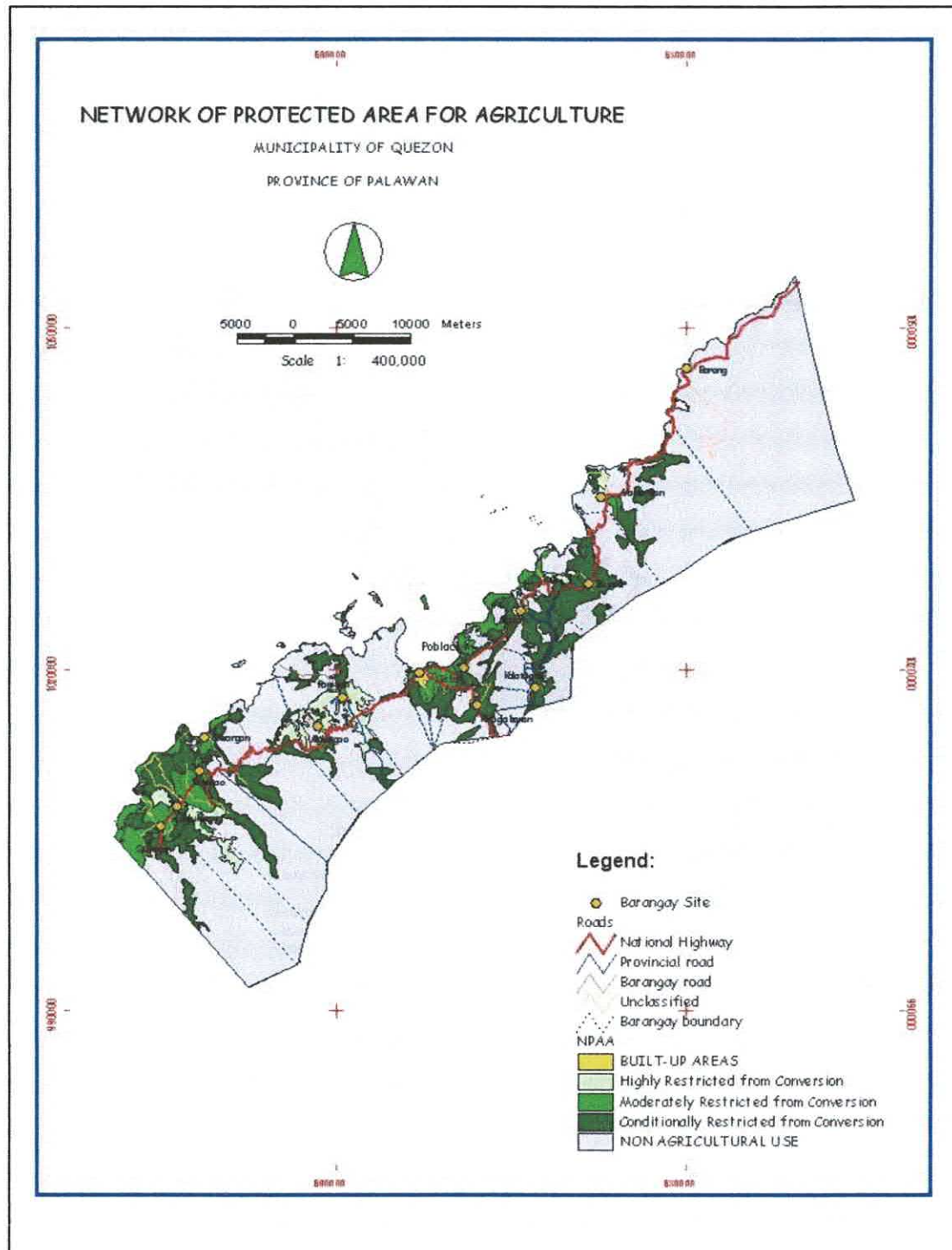
viii. Vegetative Cover Map



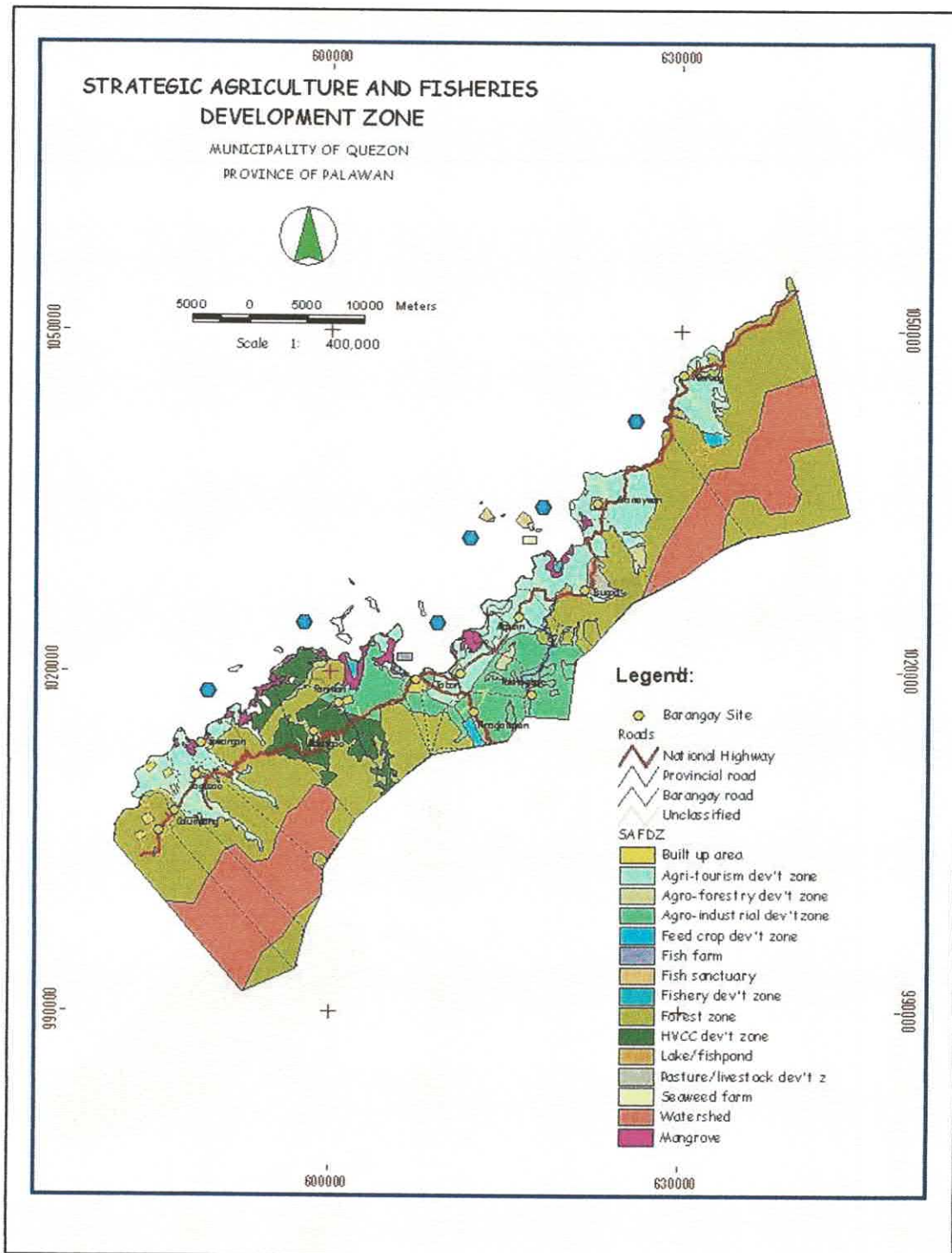
ix. Land Management Unit Map



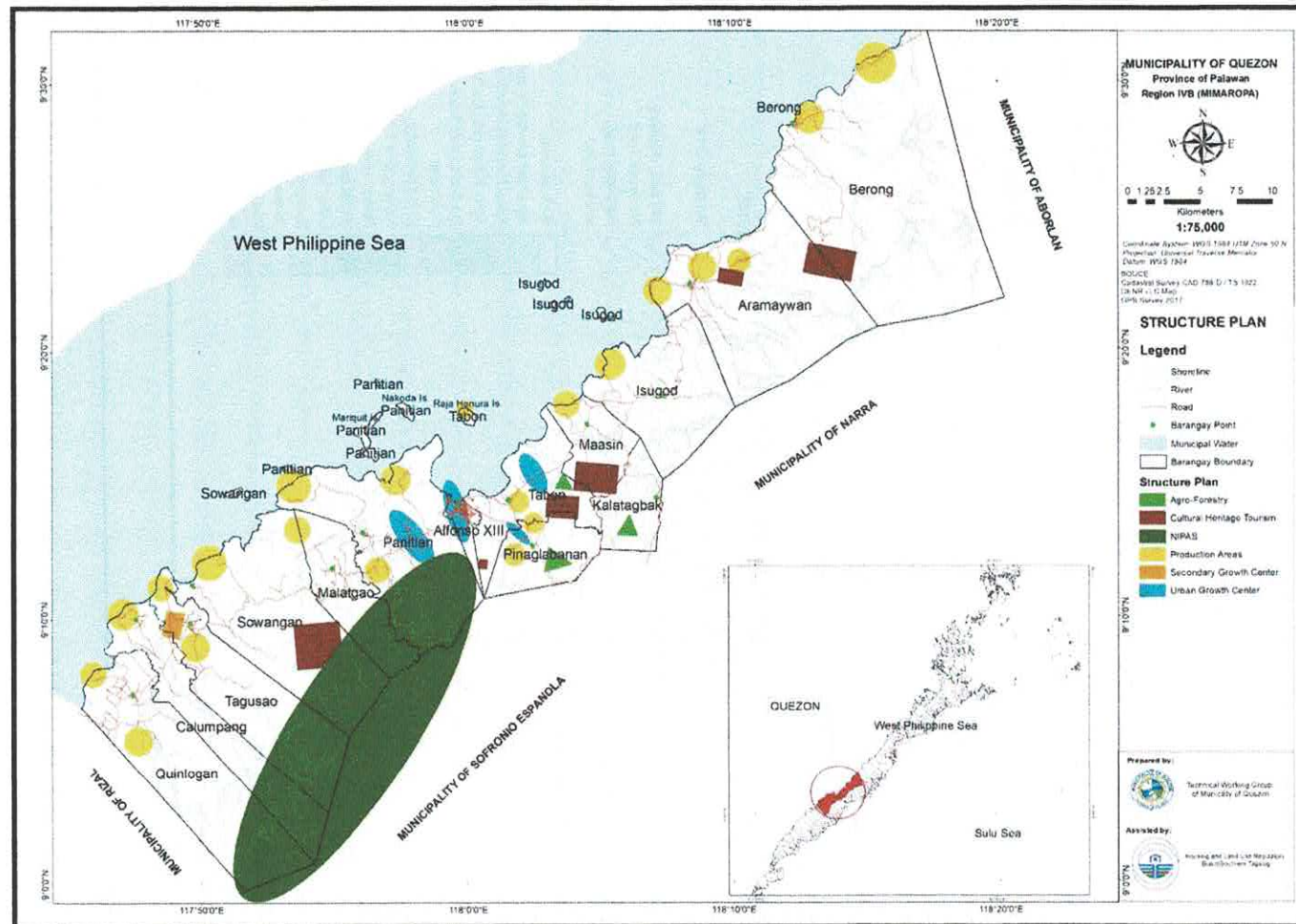
x. Network of Protected Areas for Agriculture and Agro-Industrial Development Map



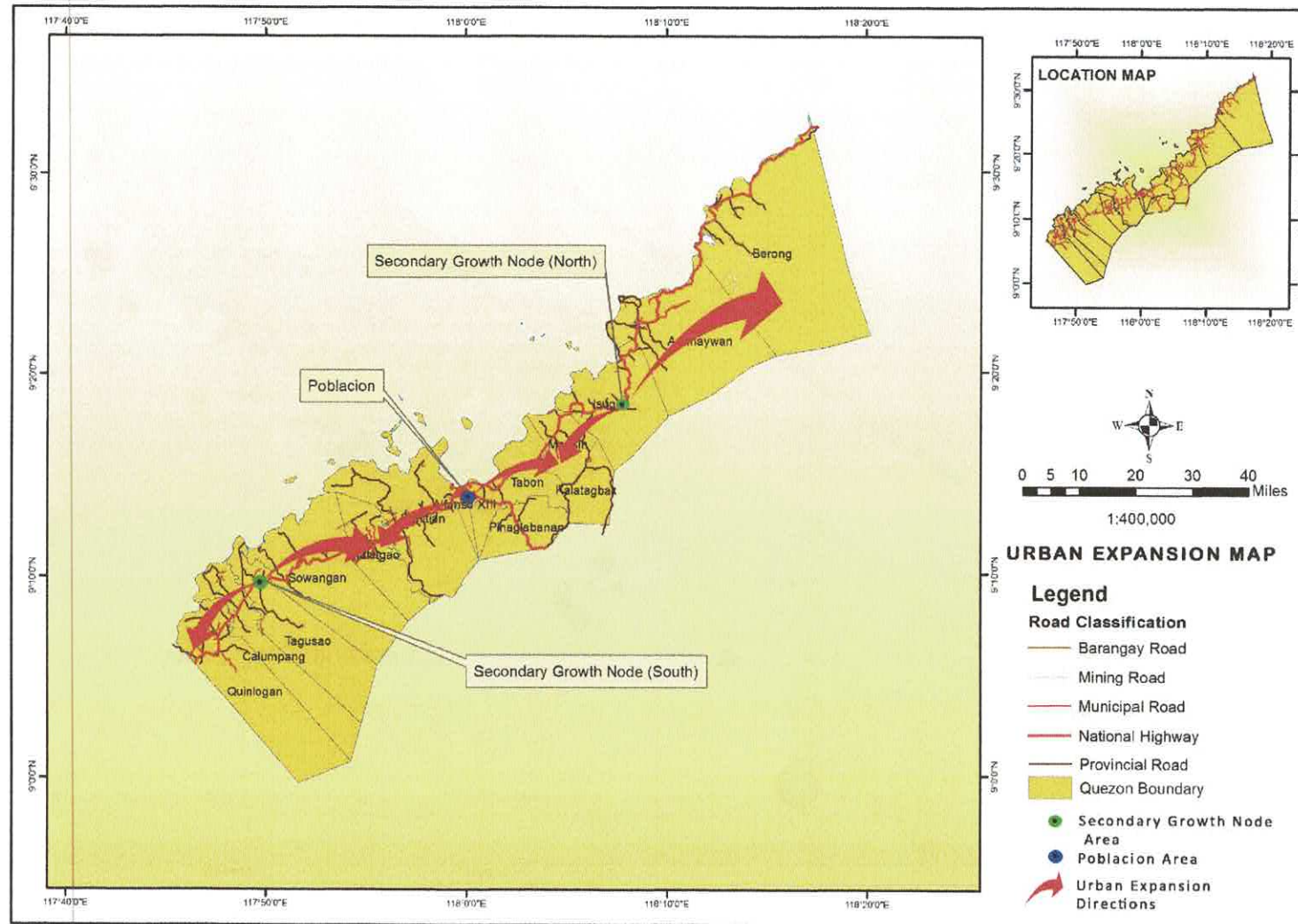
xi. Strategic Agriculture and Fisheries Development Zone Map



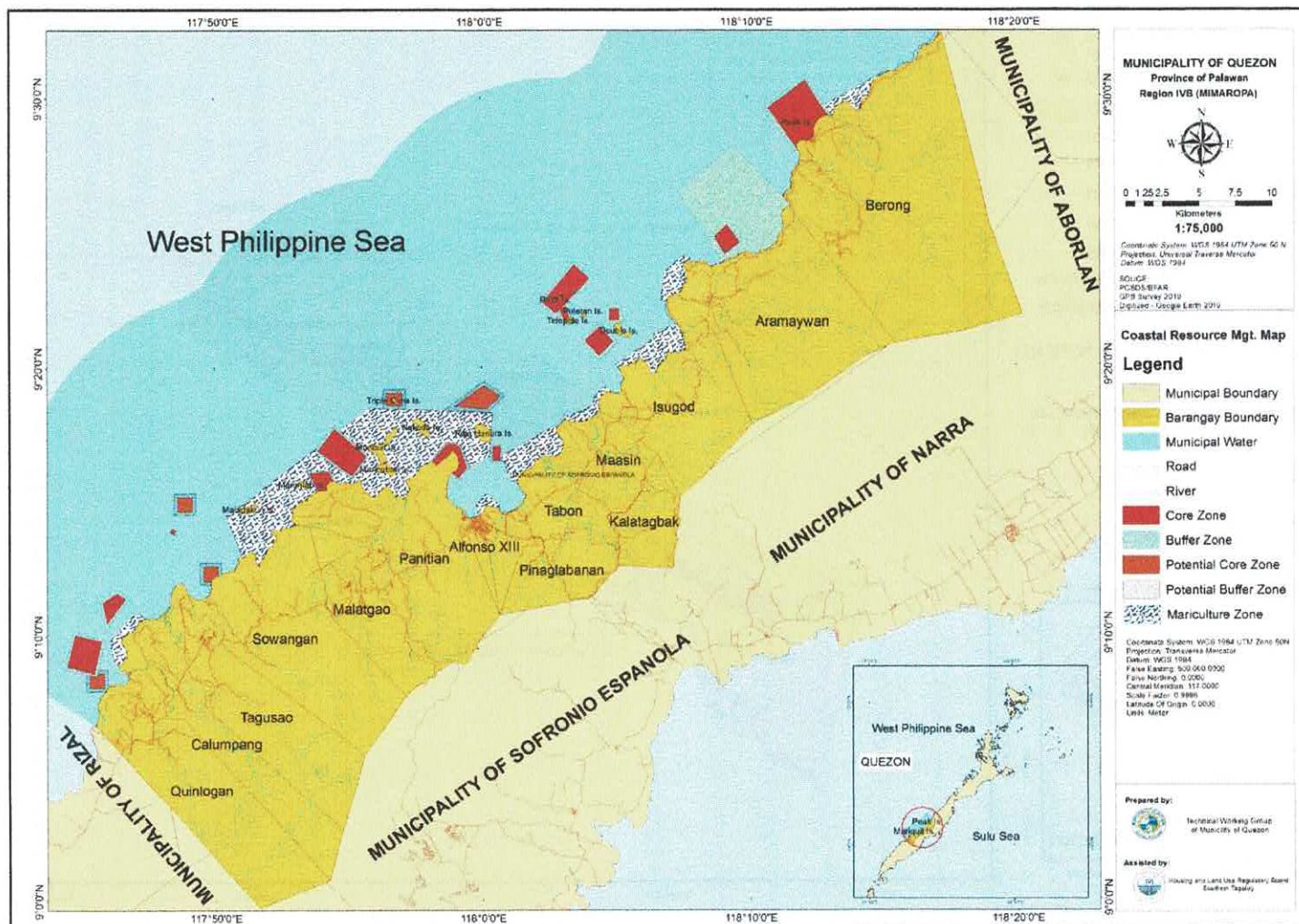
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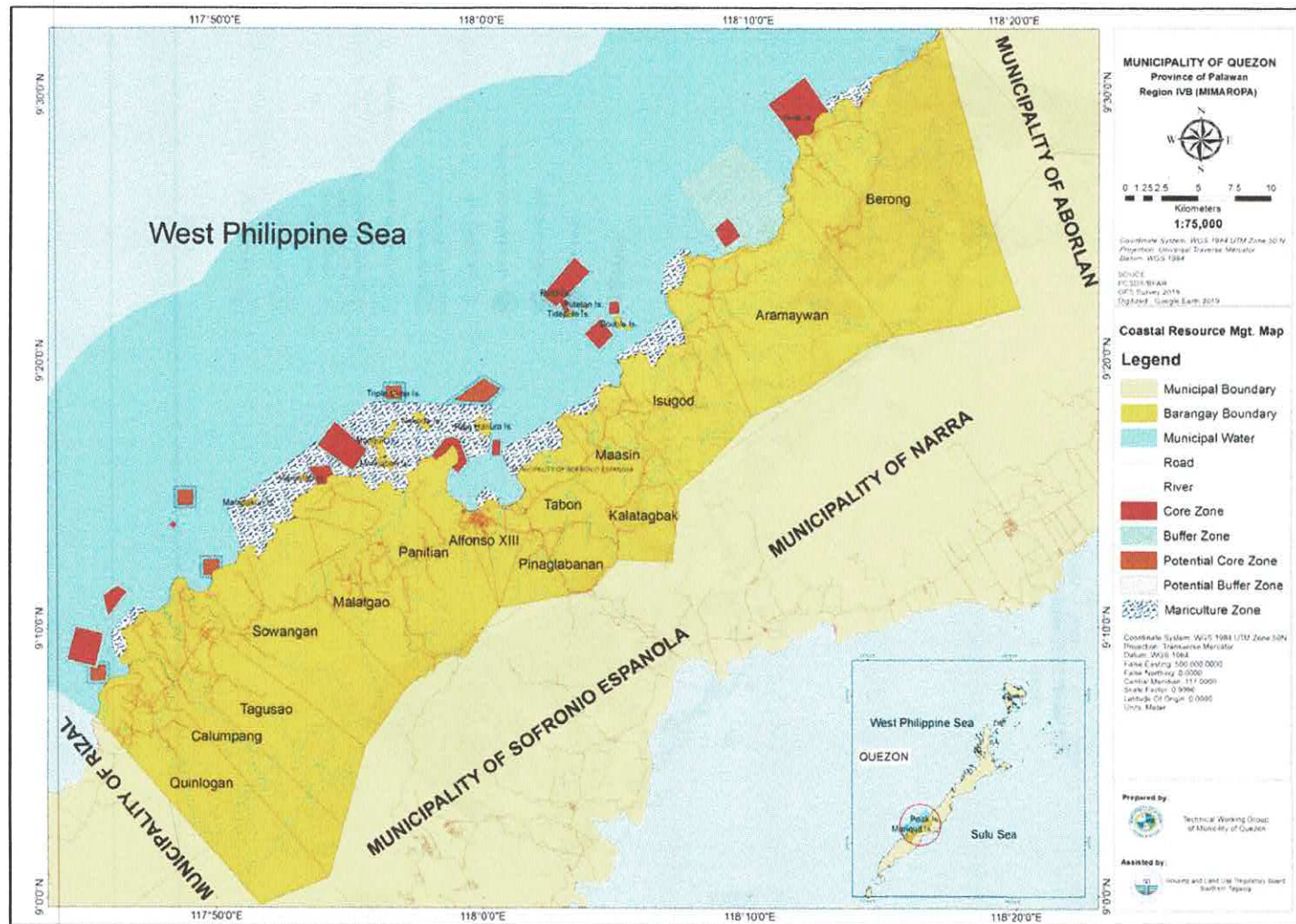
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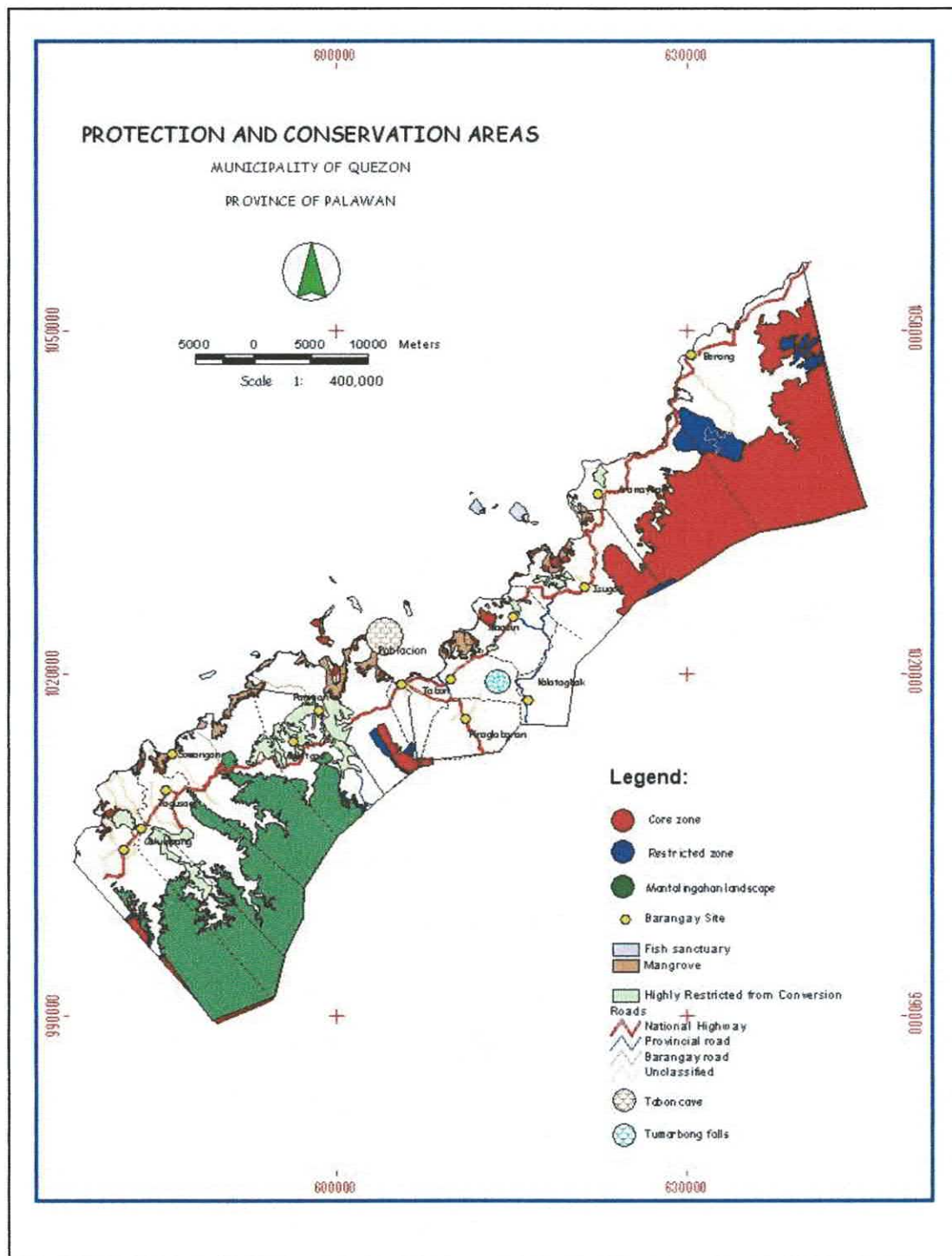
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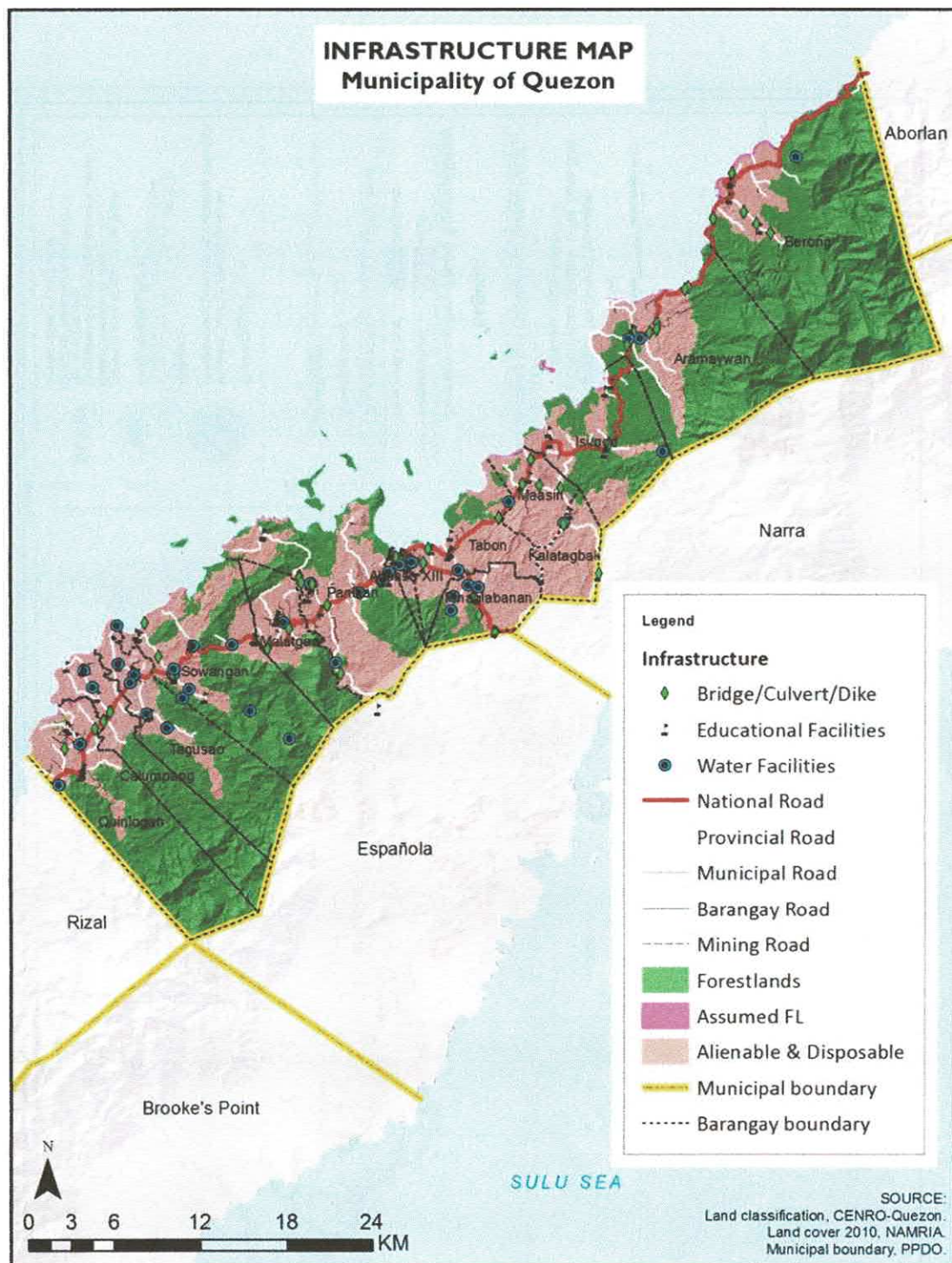
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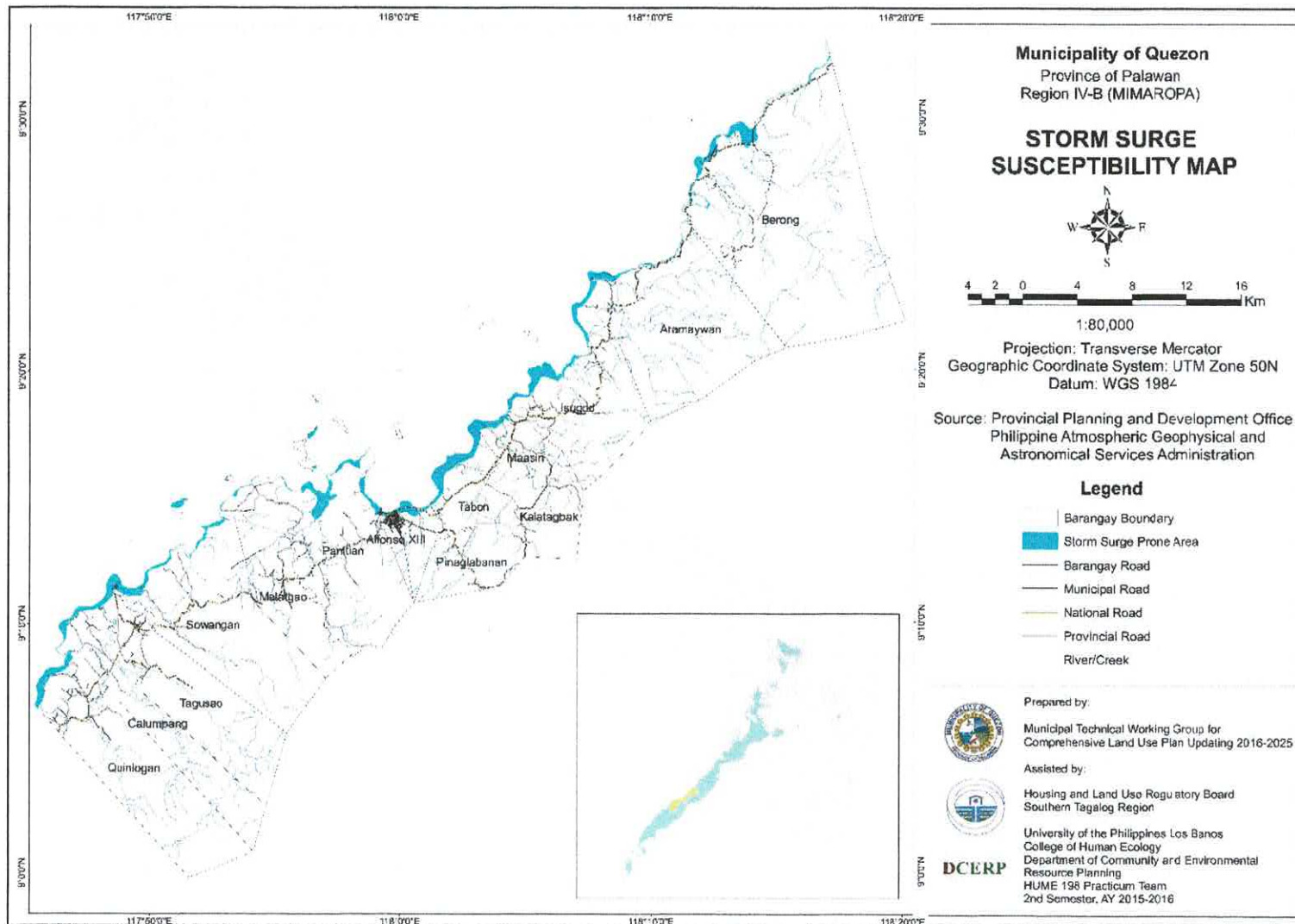


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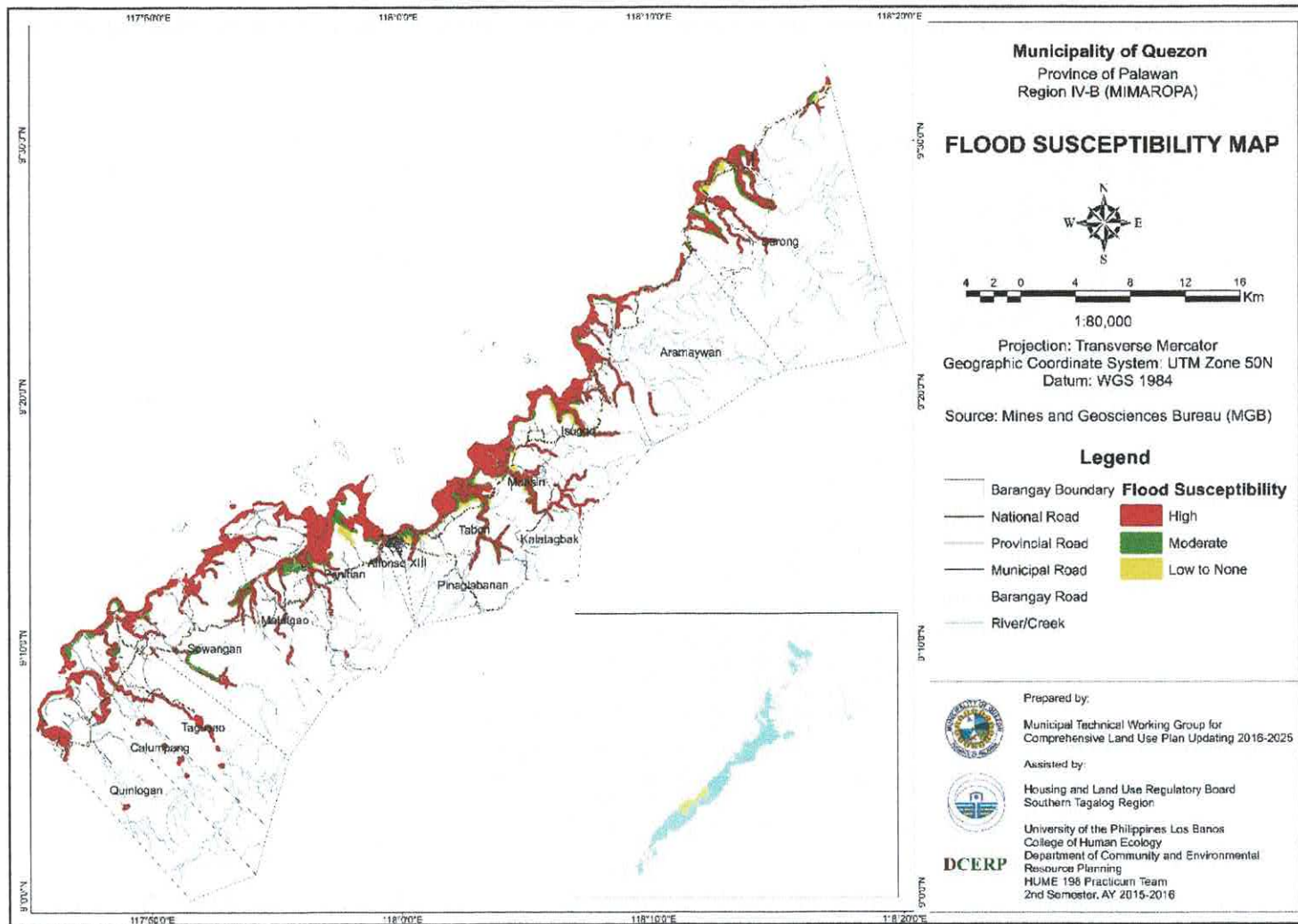


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<https://www.healthyplaces.org> (Parks and open spaces)



**SOCIO-ECONOMIC IMPACT ASSESSMENT OF BERONG NICKEL
CORPORATION'S IMPLEMENTATION OF THE SOCIAL DEVELOPMENT AND
MANAGEMENT PROGRAM (SDMP)**

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INTRODUCTION

1.1 Rationale

Berong Nickel Corporation (BNC), located in Quezon, Palawan, started its commercial operations in June 2007 by virtue of Mineral Production Sharing Agreement (MPSA)-235-2007-IVB. It is engaged in shallow surface mining method by extracting nickeliferous laterite from open excavations ranging in depth of 5-10 meters. The extracted nickel ores are sorted by size, crushed and screened prior to direct overseas shipping. BNC mining operation has an approved annual production of 1,000,000 dry metric tons (BNC-SDMP 2017-2021 Report).

The Philippine Mining Act of 1995, revised implementing rules and regulations of R.A. 7942, mandates mining companies the implementation of Social Development and Management Program (SDMP). It is a comprehensive five-year plan developed and implemented to fulfill the social obligations of mining companies on its host and neighboring communities/barangays that are directly or indirectly affected by its mining operations. The main goal of SDMP is to assist in the development of its impact communities and implement programs that will empower its host towards self-reliance through the provision of concrete and meaningful socially-oriented development programs, projects and activities (PPAs).

The host communities of BNC are barangays Berong and Aramaywan in Quezon, Palawan. The eight sitios of Berong, Badlisan, Caliagon, Catuayan, Pinagtapian, Proper, Tagbalante, Talabongan and Tungib, are the direct or primary impact areas of BNC operations. Thus, they are the main recipients of BNC's SDMP because mine operations are in its area of jurisdiction. Barangay Berong is inhabited by indigenous communities and migrants from Visayas, parts of Luzon and Cuyo island. The secondary impact area is barangay Aramaywan which is consisted of ten sitios: Apduhan, Barucan, Bitas, Capisaan, Ibat-ong, Labuan, Lamane, Marnok, Proper and Suring.

The third cycle of SDMP that commenced from 2017 and would end in 2021 has an allotment of PhP 78.5 Million for the implementation of various PPAs. The fifth cycle of the SDMP will start in 2022. The main objective of this study is to assess the socio-economic impact of the implementation of SDMP on its impact areas. There is also a need to reassess the performance of PPAs implemented in its host and neighboring communities. Moreover, the needs of the community should be assessed which would be helpful in determining what PPAs would be continued or should be improved that would highly benefit its impact communities.

This research commissioned by BNC was conducted in August 2020 and is expected to be completed in February 2021. The Palawan State University (PSU) researchers are engaged in this project through the Office of the Vice President for Research, Development and Extension.

The socio-economic conditions of BNC's impact communities in the Municipality of Quezon, Palawan was assessed through the fast, cost-effective and efficient approach of Rapid Rural Appraisal (RRA) that offers the advantage of soliciting active participation among the stakeholders in gathering the primary data and in determining their development needs and priorities.

1.2 Objectives

The main goal of the study is the assessment of the socio-economic impact of the five-year Social Development and Management Program (SDMP) implemented by Berong Nickel Corporation to barangays Berong and Aramaywan, Quezon, Palawan. The specific objectives are:

1. to determine the state of development in the BNC's impact areas and the priority development needs of the communities;
2. to assess the socio-economic impact of SDMP on the lives of the residents in the impact communities in its 5 years of implementation;
3. to determine the perceptions of respondents regarding the performance and impacts of the projects of the BNC's SDMP in the past five years;
4. to document best practices on SDMP programs and projects that need to be scaled up and replicated in other areas; and
5. to recommend social development programs and projects to address development needs of the mining impact communities which the BNC may pursue in the future.

1.3 Research/Project Components

- Study 1. Review of secondary data and literature to update the profile and describe the community needs of Barangays Berong and Aramaywan, Quezon, Palawan.
- Study 2. Impact assessment of the ongoing SDMP projects, programs and activities of BNC on its primary and secondary impact barangays.
- Study 3. Documentation of the best practices of SDMP projects, programs and activities and recommendation of new and to be continued SDMP projects, programs and activities.

1.4 Conceptual Framework

A systematic description of the RRA activities is presented in Figure 1.

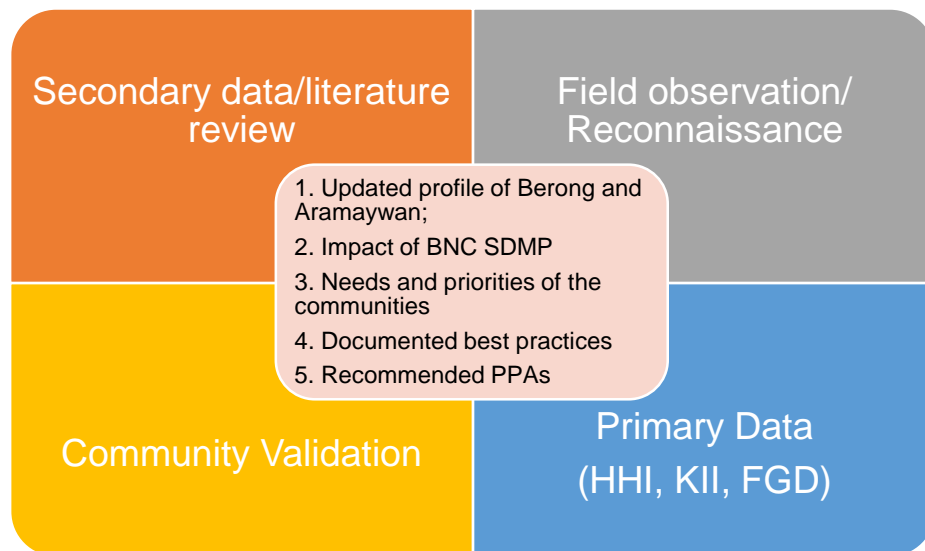


Figure 1. Systems description of the RRA process in the impact communities

1.5 Significance of the Study

The primary data that are essential in the planning for the development of a certain area as well as the proper management of its resources can be generated through rapid rural assessment. Results of this research will assist BNC in implementing more specific and effective SDMP programs, projects and activities for Barangays Berong and Aramaywan. As the respondents are the community members and key leaders themselves (barangay officials, tribal leaders, education administrators, women's group, etc.), the inputs in this study will make the recipients of the program become more involved in identifying the development needs and priorities of their community.

Apart from fulfilling the R.A. 7942 mandate by implementing SDMP, assessing the socio-economic status of the mining impact communities is vital in predicting the health, achievement, success and mortality of the mining impact communities (APA, 2007).

The mining company employs locals from the impact areas; assessing the community's socio-economic status will be the mining company's avenue for their employees' development. Workers need support and facilitation of the mining company to enhance their skills and potential through education and training, thus to deliver more effective workforce. Additionally, socio-economic assessment will also be an opportunity to measure the impact communities' level of awareness and advocacy on mining rights, rules, and policies, since the mining activity is situated in their locale. Since the socio-economic assessment will entail community members that are also mining workers, measuring their socio-economic status is imperative to identify if they are well compensated given with their occupational health and safety risks. Employee development can be realized by the mining company when the communities' socio-economic conditions are well identified.

Socio-economic condition is an important indicator in sustainable development, which reflects if the project or undertaking is attaining its social corporate responsibility.

CHAPTER 2. METHODOLOGY

2.1 Introduction

The researchers assessed the current profile of Barangays Berong and Aramaywan, Quezon, Palawan using Rapid Rural Appraisal (RRA) method. This included the impacts of BNC SDMP projects, programs and activities (PPAs) and the documentation of its notable social development practices. This consists of four interactive processes: secondary data analysis, primary data, field data gathering/reconnaissance, and stakeholder/community validation.

2.2 Secondary Data

The secondary data and literatures were gathered, reviewed and analyzed. Malleret-King et al. (2006) stated that secondary data are previously published literatures which may come in various forms not limited to official documents e.g. statistical reports, reports of previous assessments and surveys, research reports, documentation of previous or ongoing projects including monitoring and evaluation reports, maps, historical documents and accounts and websites on the internet, etc. Secondary data obtained was the Report of Berong Nickel Corporation Social Development and Management Program 2017-2021, Berong Annual Profile 2020 and Aramaywan Annual Profile 2019.

2.3 Primary Data

The primary data comprised of household interview (HHI), key informant interview (KII) and focus group discussion (FGD). A big part of the data gathering is attributed to the participation of the members of the barangays and their officials.

2.3.1 Household Interview (HHI)

The socio-economic survey questionnaire (**Appendix 2**) was modified from the Environmental Resource Management socioeconomic survey questionnaire composed of seven major parts: household characteristics; income, expenditure and savings; agriculture and other sources of livelihood; housing and infrastructure; education and health; and the respondents perceptions, and expectations of the Corporation's Social Development and Management Program.

2.3.1.1 Sampling

Respondents for the conduct of household surveys or face-to-face interviews were chosen through two-stage sampling method in Barangays Berong and Aramaywan, Quezon. A total of 18 Sitios, eight from Berong and ten from Aramaywan, for the entire study were covered in this RRA. Table 1 shows the sitios of both barangays and the number of samples from the sitios.

Table 1. Sampling for Household Survey in Barangays Berong and Aramaywan, Quezon, Palawan for RRA.

Berong Sitios	Population	Sample	Aramaywan Sitios	Population	Sample
Badlisan	93	16	Apduhan	37	6
Caliagon	27	5	Barucan	19	3
Catuayan	45	8	Bitas	48	8
Pinagtapián	78	13	Capisaan	46	8
Proper	256	44	Ibat-ong	136	23
Tagbalante	57	10	Labuan	58	10
Talabongan	96	16	Lamane	132	22
Tungib	257	44	Marnok	115	20
			Proper	267	45
			Suring	105	18
Total	909	156	Total	963	163
Total				319	

The two-stage sampling was employed wherein instead of randomly selecting 156 and 163 from the total household population of 909 and 963 in Berong and Aramaywan, respectively, a clustering was done. On the first stage, that is, the available data per sitio was used to get the 20% from each sitio. The second stage was done by employing a systematic sampling by dividing the total population size by the desired sample size and using the quotient as the sampling

interval. Using the barangay hall as a starting point, every third house was chosen as a respondent household until the desired number of household representatives/respondents who were primarily the family heads of households in each sitio, were reached.

2.3.1.2 Research Instruments

Four types of survey questionnaires were prepared and structured with a combination of close-ended and open-ended questions designed to elicit information on the following aspects: (1) updated profile of the barangays; (2) assessment of community development priorities; (3) impact evaluation of SDMP; (4) documentation of best practices of SDMP projects; and (5) recommendations for new projects.

The research instruments used were 22-page household interview (HHI); two-to-three page key informant interview to determine impacts of the SDMP projects, programs and activities; a set of guide questions for the focus group discussion; and a checklist for the reconnaissance or field observation survey.

The research instruments, especially the questionnaire for the survey and the research questions for the key informant interview, were pretested to not less than 10 household heads and key officials of barangays Berong and Aramaywan before the actual data gathering. Thus, the effectiveness of the research instruments was evaluated and determined prior to the conduct of survey to ensure that the questions are well-phrased and understood easily, the interview is not too long to use up too much of the respondents' time, and the significant issues are understood thru individual perspectives and are included and reiterated in various forms for verification of responses. As one household interview session took 45 minutes to conduct, 20 enumerators were commissioned to help conduct the survey in the two research sites. Prior to the conduct of actual surveys, enumerators were required to undergo quality assurance training, orientation, and

briefing sessions before deploying them to ensure professionalism and objectivity in the conduct of the interviews.

2.3.2 Field Observation and Reconnaissance Survey

While members of the team were doing the household survey, ocular observations were made by team leaders to familiarize themselves with the physical, social and environmental characteristics of the study area. These was after proper coordination was done with Barangays Berong and Aramaywan, Quezon, requesting permission to conduct the RRA. The barangay chairs and councilmen of the two barangays were sought by the researchers during the fieldwork, as a sign of courtesy as well as to have a discussion on the RRA's objectives and requirements.

In areas of the impact communities of Barangays Berong and Aramaywan, Quezon that are accessible and directly observable, the reconnaissance team identified the physical characteristics as well as the possible threats and opportunities on the ground. A reconnaissance guide who is a knowledgeable community member, accompanied the research team to each of the two research sites to document the communities' biophysical condition, take photographs and fill out the Field Observation Table (**Appendix 1**).

2.3.3 Key Informant Interview

Data gathered from the household interview was validated through a key informant interview. The instrument used was an interview schedule where questions asked were grouped according to SDMP Program components, namely; Health-related; Livelihood-related; Education-related; Socio-cultural related; Information Education and Communication-related; and Mine Technology and Geosciences-related. Questions asked reanged from the usefulness of each program component, positive change3s in the community that may have occured since the

implementation of the programs, their perceived level of usefulness, and suggestions that may help improve the implementation of the program.

2.3.4 Focus Group Discussion

A focus group discussion was also conducted in Berong and Aramaywan, Quezon to further verify data gathered from both household interview and key informant interview. Questions that were verified were related to income, self-rated economic status, household expenditures and savings, sources of livelihood, satisfaction of the community on various SDMP programs, and concerns and issues the respondents may have related to the implementation of the various SDMP components. This was attended by key representatives of concerned sectors like barangay officials, school heads, health workers and members of indigenous people tribes residing in the barangay.

CHAPTER 3. BERONG & ARAMAYWAN PROFILE

In any community, better understanding of the different parameters, physical and socio-economic, is crucial. Possible involvement of a potential intervention in the site could be utilized as essential baseline. This is achievable through analysis and integration of the site's current situation focusing on the strategic development parameters.

This chapter presents the physical and socioeconomic profile of the Barangays Berong and Aramaywan, Quezon, Palawan. The chapter is divided into three main parts: (1) the physical profile, (2) the socioeconomic profile, and (3) the chapter summary which integrated the development potentials and challenges in two barangays.

3.1 Physical Profile

The municipality of Quezon is a coastal area situated in the South Western part of the Province of Palawan with a total land area of 94,921 has.



Figure 2. Map of Quezon in relation to Puerto Princesa City and the Province of Palawan.

3.1.1 Location and Land Area

Quezon is renowned for the Tabon Caves, dubbed as the “Philippine’s Cradle of Civilization” where the remains of the oldest human bones in the Philippines called the Tabon Man, discovered in 1962 and was believed to be approximately 22,000 to 24,000 years old, were found. It was also in Quezon where earthenware, jade ornaments and jewelry, stone tools, animal bones, human fossils and over 1,500 burial jars were found, one of which is the Manunggul Jar considered to be a national cultural treasure.

Quezon, a first-class municipality is comprised of 14 barangays: Berong, Aramaywan, Isugod, Maasin, Kalatagbak, Tabon, Alfonso VIII, Pinanglabanan, Panitian, Malatgao, Sowangan, Tagusao, Calumpang and Quinlogon. The largest barangay (17.73% of the municipality) is Barangay Berong with a total land area of 16,827 has. It is 53 kilometers away from Quezon town proper, approximately a two-hour travel by jeep and an hour travel with a private vehicle. In 2020, Berong has a recorded population of 3,735.

Adjacent to barangay Berong is barangay Aramaywan, just 30 kilometers away from the town proper and reachable by sea and land transportation. Its total land area is 9,941 hectares with a population of 4,137 people.

3.1.2 Physical Characteristics

The Berong Nickel Corporation project area is located in the northwest-southeast trending Dangla Ridge, with elevation ranging from 400m and 710m above sea level. As cited in the 2017-2021 BNC SDMP report, topography in the project area’s interior is generally rugged and terraced, but it is sufficiently low in relief with gentle to moderate slopes in adjoining areas. The soil nature of BNC’s project area covered by the Mineral Production Sharing Agreement (MPSA) is iron-rich lateritic and is therefore not favorable for agriculture. However, the low-lying areas north of the project area are mainly agricultural and settlement areas.

As cited by BNC SDMP 2017-2021 Report, the annual average rainfall of the province ranges from 2,327 to 2,577 mm. Generally, the Province of Palawan is free from major typhoons, according to the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA).

Since the start of its operations at the end of December 2005, BNC has established its own rainfall monitoring through data gathering. Berong has two evenly divided climate types: the dry season that lasts for six months from November to April, and the wet season that also lasts for six months during May to October. A five-year average rainfall from the mountainside to the coastal side of barangay Berong ranges from 2,491 to 3,376 mm (BNC SDMP 2017-2021 Report).

3.1.3 Field Observation/Reconnaissance Survey Results

The research team identified the physical characteristics of the study area, including the possible threats and opportunities.



Figure 4. Bridge at Sitio Pinagtapián, Berong, Quezon. The road is entirely covered by mud from the wheels of the truck carrying stockpiles.

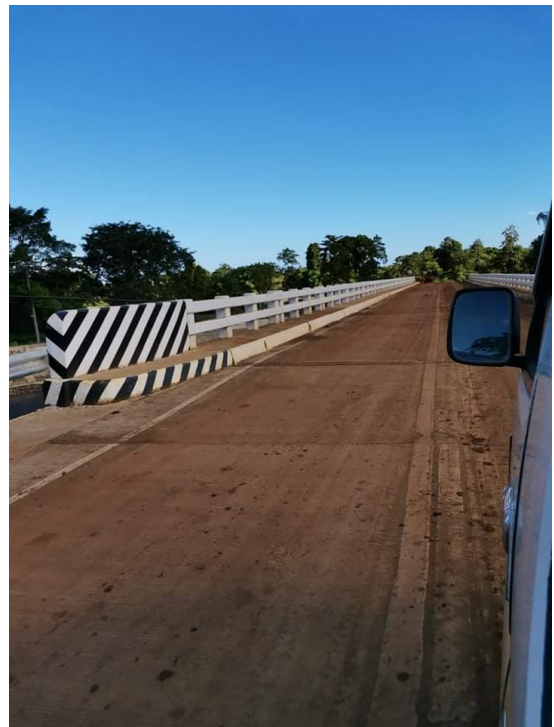


Figure 5. The dusty road between Barangay Hall of Berong and Berong Nickel Corporation Staff House, Berong, Quezon



Figure 6. The dirt road at Sitio Tungib, Berong, Quezon during rainy season



Figure 7. The bridge at Sitio Pinagtapián, Berong, Quezon



Figure 8. The bridge overburden at Yard 7 (within the active site) of Berong Nickel Corporation

Figure 9. The ore collecting trucks at Yard 7 (within the active site) of Berong Nickel Corporation





Figure 10. The port (within the active site) of Berong Nickel Corporation



Figure 11. The intact non-irrigated and non-fertilized farmland of Sitio Ibat'eng in Barangay Aramaywan, Quezon, Palawan



Figure 12. The Ibat'eng River in Sitio Ibat'eng, Barangay Aramaywan, Quezon, Palawan



Figure 13. The discoloration in Ibat'eng river during heavy rains caused by mud in Sitio Ibat'eng, Barangay Aramaywan, Quezon, Palawan

The respondents from Sitio Ibat'eng, Aramaywan, Quezon Palawan had clearly stated that there had never been a change in their environment as far as they could remember and even during the time when Berong Nickel Corporation has started their mining operations. During the reconnaissance and field observation, it was confirmed that the farmlands are intact and crops are growing despite the absence of irrigation system. Moreover, Ibat'eng River is visually clear and children and adults bathe in it. However, the river is not used as source of household and drinking water because according to some residents interviewed, "there are more people living in Sitio Marnek (which is basically upriver) than Ibat'eng who bathe their children, and carabaos in the river."

It was also eminent that small seaweeds farming is widespread in the area and has been a source of livelihood of the Tagbanwas. Believing that sea water in their area is still safe, one respondent retorted, "*Kung polluted na ang area namin, hindi na po kami magseseaweeds.*"

As claimed by interviewees, there is no record of flooding nor landslides in Ibat'eng. There are, however, occasional increase of water in the river during heavy rains, which could also bring some mud from the mountains to the coastal area of Aramaywan. The respondents also said that the discoloration of water lasts in less than a day.

During the reconnaissance, it was observed that there were many small houses near the river. Medium to large boulders lining up the river banks were intact. The shoreline was similarly intact with relatively wholesome water. Asked why there are no more people fishing in the beach area, respondents said it is because of the occasional sightings of crocodiles.

3.2 Socio-Economic Profile

The socio-economic profile integrates data gathered from secondary sources and primary data during the household interviews of the two barangays, Berong and Aramaywan, comprising the research area. The household interview was conducted to 323 household samples chosen through

stratified sampling in the impact areas of BNC, namely, in Barangays Berong and Aramaywan, Quezon, Palawan (**Table 2**).

Table 2. Distribution of sample households, impact communities of Berong Nickel Corporation, Municipality of Quezon, Province of Palawan (n= 323).

Barangay	Sitio	Population	Frequency
Berong	Badlisan	93	17
	Caliagon	27	5
	Catuayan	45	8
	Pinagtapián	78	13
	Proper	256	44
	Tagbalante	57	10
	Talabongan	96	16
	Tungib	257	46
Aramaywan	Apduhan	37	6
	Barucan	19	3
	Bitas	48	9
	Capisan	46	8
	Ibat-ong	136	23
	Labuan	58	10
	Lamane	132	22
	Marnok	115	20
	Proper	267	45
	Suring	105	18
Total		1,872	323

3.2.1 Demographic Profile of Household Members

Household parameters e.g. household size, roles, gender, age, marital status, and educational attainment of household members, were taken to acquire a better understanding of the target population (**Tables 3 and 4**).

Table 3. Demographic parameters of respondents' household members of the impact communities of BNC, Quezon, Palawan (n = 1,423).

Demographic Characteristic	Frequency	%
<u>Household Size n= 323</u>		
1 – 2	39	12.01
3 – 4	131	40.56
5 – 6	108	33.44
7 – 8	36	11.15
9 – 10	7	2.17
11 and above	2	0.62
<u>Gender</u>		
Male	696	48.9
Female	727	51.1

<u>Age, in years</u>		
Below 5	149	10.5
5 – 12	305	21.4
13 – 16	128	9.0
17 – 20	133	9.3
21 – 29	186	13.1
30 – 39	191	13.4
40 – 49	158	11.1
50 – 59	98	6.9
60 and above	75	5.3
<u>Household Role</u>		
Household Head	294	20.7
Spouse of Household head	324	22.8
Son of HH head	397	27.9
Daughter of HH head	355	24.9
Parents/children in-laws of HH head	13	0.9
Grandchild of HH head	27	1.9
Other relatives of HH head	9	0.7
<u>Marital Status</u>		
Single	843	59.3
Married	549	38.6
Divorced	2	0.1
Widowed	19	1.3
Separated	8	0.6
<u>Years of Residence in Barangay</u>		
Less than 5	29	9
5 – 12	110	34.1
13 – 16	31	9.6
17 – 20	29	9
21 – 29	37	11.5
30 – 39	45	13.9
40 – 49	22	6.8
50 – 59	14	4.3
60 and above	6	1.9

The household size in barangays Berong and Aramaywan resulted in a mean household size of 4.57, with a standard deviation of 1.89. The 40.56% of the respondents have households of 3-4 members, followed by a household size of 5-6 members (33.4%).

There is no significant difference in the gender of the households (51.1% & 48.9%, female and male, respectively). The 21.4% of the sample household members belong to the adolescent period (13-16 years old). The median age is 20, lower than the mean age of 25.56, indicating that half of the household members are 20 years old or younger. This could explain why the 59.3% of the population is single and only 38.78% are married. The median and mean years of

residency is 15 and 19.5 years, respectively, indicating that majority of the household members were not born in their current residences (**Table 4**).

Table 4. Summary measures of sample household size and members' ages, years of residence, of the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Variable	No. of cases	Median	Mean	StdDev
Household Size	323	4.0	4.57	1.89
Household Members' Ages	1423	20.0	25.56	23.8
Household Member's Years of Residence	323	15.0	19.5	15.3

3.2.2 Literacy and Cohort Survival

The household members' literacy and level of education was taken into account as shown in Table 5. Literacy results in 86.8% of the household members shows that majority are literate while only 13.2% are illiterate. Among the 1,423 household members, 386 (27.1%) attended and are currently attending primary school and 11.7% completed primary level of education. The other 12.9% reached and are currently attending high school and some even finished their basic or secondary education (13.2%). Some 77 individuals (5.4%) were able to attend and are currently in college with a 3.4% earned college diploma. A small percentage (0.5%) took and are currently attending vocational courses, and 1.9% earned vocational courses' diploma.

Table 5. Sample household members' literacy and educational attainment, impact communities of Berong Nickel Corporation, Municipality of Quezon, Province of Palawan, November 2020 (n= 1,423).

Education-related Characteristic	Frequency	%
<u>Literacy</u>		
Illiterate	187	13.2
Literate	1235	86.8
<u>Educational Attainment</u>		
Below school age	144	10.1
Hasn't graduated from any institution	79	5.9
Primary School Student	386	27.1
Primary School Graduate	167	11.7
Junior High School Student	93	6.5
Junior High School Graduate	22	1.5
High School Student	184	12.9
High School Graduate	188	13.2
Vocational School of Higher Education Student	7	0.5
Vocational School of Higher Education Graduate	27	1.9

University Student	77	5.4
University Graduate	48	3.4
Masters Student	1	0.1

3.2.3 Language and Residence History of Households

To have an updated understanding of the current population mix in Barangays Berong and Aramaywan, the sample households were asked about their language spoken and residence history.

3.2.3.1 Language Spoken

Other than Filipino, majority of the respondents in the sample households speak Ilonggo (33.7%). This is followed by Tagbanua (29.1%) and Bisaya (11.1%), while 19.2% speaks only Filipino. The languages spoken in the study area are shown in Table 6.

Table 6. Language spoken in sample households other than Filipino in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Language Spoken	Frequency	%
1. Ilonggo	88	33.7
2. Tagbanua	76	29.1
3. Bisaya	29	11.1
4. Bisaya and Ilonggo	11	4.2
5. English	8	3.1
6. Ilonggo and Cuyuno	8	3.1
7. Ilonggo and Tagbanua	7	2.7
8. Karay-a	7	2.7
9. Bisaya and Tagbanua	6	2.3
10. Cuyuno	5	1.9
11. Ilonggo and Ilocano	4	1.5
12. Palaw'an	4	1.5
13. Tagbanua and Palaw'an	3	1.1
14. Ilonggo and Palaw'an	2	0.8
15. Ilonggo and Cagayanin	1	0.4
16. Bicolano	1	0.4
17. Ilocano	1	0.4
18. Only Speaks Filipino	62	19.2

3.2.3.2 Residence History of Households

The majority of the respondents were native to Quezon and Aramaywan (89.5%). Immigrants results in 10.5% only where a small portion of 1.5% came from Iloilo City. Others came from

other provinces e.g., Negros Occidental and Batangas, and other towns and barangays within the Province of Palawan. The top three reasons for moving were schooling for children, looking for work and starting a new job. The key informant interview with school heads in both Berong and Aramaywan conferred that settlers from the Municipalities of Aborlan and Narra, and from the Province of Negros migrated to the barangays due to the favorable land condition in the area for farming and due to employment opportunities at BNC. Only 8.0% had relatives in the area and only 3.4% were helped by their relatives to settle because settlement to this few was not easy (Table 7).

Table 7. Residence History of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Residence History	Frequency	%
Immigrant	34	10.5
Native	289	89.5
<u>Previous Residence</u>		
Abo-Abo	1	0.3
Adorawon Caliagon Village	1	0.3
Batangas	1	0.3
Berong	3	0.9
Caliagon	1	0.3
Calumpang	1	0.3
Española	2	0.6
Iloilo City	1	0.3
Lamane	3	0.9
Malatgao Tabon	1	0.3
Negros Occidental	2	0.6
Pagadian City	1	0.3
Puerto Princesa	1	0.3
Pulot	1	0.3
Quezon	1	0.3
Rizal	1	0.3
Samar	1	0.3
Taytay	2	0.6
Not Specified	9	2.8
Not Applicable	289	89.5
<u>Reason for moving</u>		
1. Schooling of children	11	3.4
2. Schooling of children and looking for work	1	0.3
3. Schooling of children, looking for work, and start a new job	1	0.3
4. Look for work	11	3.4
5. Look for work and start a new job	1	0.3
6. Start new job	6	1.9
7. Escape war/violence	1	0.3
8. Escape a family conflict	1	0.3
9. Conducted Missionary work	1	0.3

Not applicable	289	89.5
<u>Had relatives in the area before settlement</u>		
Yes	26	8.0
No	8	2.5
Not applicable	289	89.5
<u>Was helped with settlement</u>		
Yes	11	3.4
No	17	5.3
Not applicable	295	91.4
<u>Was settlement easy</u>		
Yes	21	6.5
No	13	4.0
Not applicable	323	89.5
<u>Difficulties during settlement</u>		
Yes	17	5.3
No	17	5.3
Not applicable	289	89.5

3.2.4 Livelihoods of Households in Barangays Berong and Aramaywan, Quezon

The primary livelihoods in Barangay Berong and Aramaywan, Quezon, Palawan as claimed by respondents were farming (30.7%) and working as employees (19.4%). Being workers is also considered a secondary occupation by a majority of 20.8%. This must be because the mining operations of BNC opened employment opportunities to a considerable number of residents in the barangays with its “local first” policy.

3.2.4.1 Primary and Secondary Occupations of Household Members

An inventory of the household member’s primary and secondary occupation was made as shown in Table 8. Among the respondents, 136 or 30.7% are primarily engaged in farming. Respondents also reported that farming is the secondary occupation of 19 or 23.2% of respondents. Being a worker was considered the primary occupation of 19.4% or 86 respondents. It is likewise the secondary occupation of a small majority of 26.8 % or 22 respondents followed by fishing (11.1%). The secondary data gathered from BNC showed that 84.93% of the 2,847 employees are from Barangays Berong and Aramaywan. Moreover, focused group discussion

(FGD) attended by barangay officials, household members and representatives from the health, education, livelihood, socio-cultural and Information Education and Communication (IEC) sectors, confirmed that around 80% of the workforce are employed in the company. Majority of the respondents at 53.5% reported to have their own business, and 17.6% said they are employed in small or medium enterprises.

Table 8. Primary and secondary occupation of sample household members in the impact areas of BNC, Quezon, Palawan (n= 443).

Occupational Characteristic	Primary Occupation		Secondary Occupation	
	Frequency	%	Frequency	%
<u>Occupation</u>				
Farmer	136	30.7	19	23.2
Worker	86	19.4	22	26.8
Fisherman	49	11.1	6	7.3
Craftsman	37	8.4	8	9.8
Heavy Equipment Operator	20	4.5	1	1.2
Carpenter/Construction Worker	18	4.1	4	4.9
Merchant	17	3.8	2	2.4
Civil Servant	15	3.4	3	3.7
Teacher	12	2.7		
Seaweed Farmer	8	1.8	7	8.5
Driver	7	1.6	2	2.4
Doctor	1	0.2		
Retired	1	0.2		
Livestock Breeder			8	9.8
Others	36	8.1		
<u>Employer</u>				
Own Business	237	53.5	237	53.5
Family Business (w/ wage)	37	8.4	37	8.4
Family Business (unpaid)	14	3.2	14	3.2
Small enterprise	59	13.3	59	13.3
Medium or large enterprise	78	17.6	78	17.6
Government	18	4.1	18	4.1

3.2.4.2 Subsistence Production of Households

Respondents were asked whether they are engaged in subsistence production of farm goods as source of monthly income. The survey resulted in that the respondents do not earn from subsistence production i.e., fruits and vegetables (85.8%), milk and milk products (99.4%), and meat (99.4%), since most of their produce are mainly used for their personal consumption. Only 9.6% claimed they earn PhP 1,000 or less yearly from fruits and vegetables. During the focus

group discussion (FGD), additional information was gathered that backyard gardening is rarely practiced in Berong because of the iron-rich lateritic soil in the area that makes it not suitable for farming activities. Oppositely, FGD participants from Aramaywan claimed that there are many who engage in backyard farming but their products are not sold in the market.

Table 9. Subsistence production of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Subsistence Production	Frequency	%
<u>Fruits/vegetables</u>		
No income	277	85.8
PhP 0-1,000	31	9.6
PhP 1,001-2,000	9	2.8
PhP 2,001-3,000	1	0.3
PhP 3,001 and above	5	1.5
<u>Egg, milk and milk products</u>		
No income	321	99.4
PhP 50	1	.3
PhP 250	1	.3
<u>Meat</u>		
No income	317	98.1
PhP 0-1,000	4	1.2
PhP 1,001-2,000	1	0.3
PhP 2,001-3,000	1	0.3

3.2.4.3 Average Income of Households

The average monthly income is PhP 3,500 earned by 41.5% of the household respondents followed by 28.2% who claimed to earn a monthly income of PhP 3,501-7,000 and 20.1% who earns PhP 7,001-10,500 monthly. Consistent with their declared average yearly income: 43.4 % earned PhP 0-40,000 income, 25.1% reported PhP 40,001-80,000 income and 21.4% declared PhP 80,001-120,000 annual income.

Table 10. Average income of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Average income	Frequency	%
<u>Average monthly income</u>		
PhP 0-3,500	134	41.5
PhP 3,501-7,000	91	28.2
PhP 7,001-10,500	65	20.1
PhP 10,501-14,000	11	3.4
PhP 14,001-17,500	9	2.8

PhP 17,501-21,000	8	2.5
PhP 21,001 and above	5	1.5
<u>Average yearly income</u>		
PhP 0-40,000	140	43.3
PhP 40,001-80,000	81	25.1
PhP 80,001-120,000	69	21.4
PhP 120,001-160,000	10	3.1
PhP 160,001-200,000	12	3.7
PhP 200,001-240,000	7	2.2
PhP 240,001 and above	4	1.2

3.2.5 Self-rated Economic Status of Households

The sample households were asked to classify their family's economic status ranging from "very poor" to "very rich". The 34.7% of the household respondents self-rated themselves to belong to the middle-income level. This was closely followed by 33.1% who classified themselves as poor. On the other hand, 33.1% percent rated themselves as very rich. This implies that with approximately one-third of the respondents perceiving themselves to be in the middle-income level, the other two-thirds had extremely high and low perceptions about their own economic status which are either "very poor" or "very rich." The FGD generated some clarifications of 'very poor' self-assessment of a portion of the respondents which according to the FGD participants, either these respondents mismanaged their income; they are living beyond their means; or they have many dependents and expenses and their low income cannot support their needs. On the other hand, those who self-declared "very rich" are, according to the FGD participants, businessmen, or those who are now employed who have no earnings before BNC's hiring them.

Table 11. Self-rated economic status of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Self-rated Economic Status	Frequency	%
Very poor	27	8.4
Poor	107	33.1
Lower middle-income level	76	23.5
Middle-income level	112	34.7
Higher middle-income level	1	0.3
Rich	27	8.4
Very rich	107	33.1

3.2.6 Household Expenditures

The expenditures of households in the research site were asked. The 27.6% of the respondents reported that PhP 2,001-3,000 is spent monthly for food expenses. More than half of the respondents at 69.3% use solar power, thus they have none to minimal electricity expenses. Table 12 shows that 15.2% of the respondents pay PhP 500 pesos or less for electricity. For healthcare and medicine, 63.2% reported their expenses at PhP 0-2,000 monthly. Expenses for education was asked on an annual basis and more than half (51.4%) of the respondents reported that only PhP 0-4,000 is spent yearly for their children's education. However, 7.4% of the respondents claimed to spend more than PhP 32,000 yearly.

Table 12. Expenditures of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Household Expenditure	Frequency	%
Food (monthly)		
PhP 0-1,000	32	9.9
PhP 1,001-2,000	49	15.2
PhP 2,001-3,000	89	27.6
PhP 3,001-4,000	31	9.6
PhP 4,001-5,000	51	15.8
PhP 5,001-6,000	29	9
PhP 6,001-7,000	15	4.6
Above PhP 7,000	27	8.4
Electricity (monthly)		
Solar Power	224	69.3
PhP 0-500	49	15.2
PhP 501-1,000	12	3.7
PhP 1,001-1500	12	3.7
PhP 1,501-2,000	7	2.2
PhP 2,001-2,500	5	1.5
PhP 2,501-3,000	3	0.9
Above PhP 3,000	11	3.4
Healthcare and medicine (monthly)		
PhP 0-2,000	204	63.2
PhP 2,001-4,000	25	7.7
PhP 4,001-6,000	33	10.2
PhP 6,001-8,000	16	5
PhP 8,001-10,000	12	3.7
PhP 10,001-12,000	9	2.8
PhP 12,001-14,000	7	2.2
Above PhP 14,000	17	5.3
Education (yearly)		
PhP 0-4,000	166	51.4
PhP 4,001-8,000	46	14.2
PhP 8,001-12,000	23	7.1
PhP 12,001-14,000	15	4.6

PhP 14,001-16,000	11	3.4
PhP 16,001-20,000	9	2.8
PhP 20,001-24,000	7	2.2
PhP 24,001-28,000	10	3.1
PhP 28,000-32,000	12	3.7
Above PhP 32,000	24	7.4

3.2.6.1 Top Household Expenditures

The priority items of expenditures in the past four to five years up to present of the household respondents were determined (Tables 13). Results show that food, education, and healthcare and medicine are the priority household expenditures of the respondents in the past four to five years, up to the present. This implies that the household incomes are mostly spent for the members' physiological needs and social services. Only four consider grocery/household necessities (14.2%), clothing (7%), and baby needs (6.2%) to be among the top three expenditures. Interestingly, same expenditures with the same ranking happened to be claimed as priorities when asked about their household expenditures (Table 14) at present.

Table 13. Top Expenditures in the past four to five years of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Household Expenditure	Rank 1	Rank 2	Rank 3	Total	%
1. Food	132	8	2	142	44
2. Education	27	60	12	99	30.7
3. Healthcare and medicine	26	17	41	84	26
4. House Rental	0	1	1	2	0.6
5. Fuel	0	0	9	9	2.8
6. Bills for utilities	0	2	1	3	0.9
7. Clothing	0	5	18	23	7.1
8. Baby needs	4	4	12	20	6.2
9. Construction/repair of house	1	2	2	5	1.5
10. Electricity/lighting	1	1	2	4	1.2
11. Agricultural inputs	1	0	11	12	3.7
12. Fishing inputs/equipment	1	2	2	5	1.5
13. Loan payment	1	2	0	3	0.9
14. Cable connection payment	0	0	0	0	0
15. Materials for livelihood	0	1	0	1	0.3
16. Construction of boat	0	0	0	0	0
17. Drinking water/water supply	0	0	1	1	0.3
18. Personal expenses	1	4	15	20	6.2
19. Grocery/household necessities	4	18	24	46	14.2
20. Savings	1	2	2	5	1.5
21. Other expenses	2	1	0	3	0.9

Table 14. Top Expenditures at present of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Household Expenditure	Rank 1	Rank 2	Rank 3	Total	%
1. Food	166	11	0	177	54.8
2. Education	30	82	14	126	39
3. Healthcare and medicine	22	21	53	96	29.7
4. House Rental	0	0	2	2	0.6
5. Fuel	1	2	12	15	4.6
6. Bills for utilities	0	1	3	4	1.2
7. Clothing	0	4	19	23	7.1
8. Baby needs	2	3	11	16	5
9. Construction/repair of house	1	2	3	6	1.9
10. Electricity/lighting	1	1	3	5	1.5
11. Agricultural inputs	1	1	9	11	3.4
12. Fishing inputs/equipment	2	3	2	7	2.2
13. Loan payment	2	2	0	4	1.2
14. Cable connection payment	0	0	1	1	0.3
15. Materials for livelihood	1	0	0	1	0.3
16. Construction of boat	0	0	0	0	0
17. Drinking water/water supply	0	0	0	0	0
18. Personal expenses	0	4	12	16	5
19. Grocery/household necessities	4	17	23	44	13.6
20. Savings	3	1	2	6	1.9
21. Other expenses	8	2	3	13	4

3.2.7 Material Style of Life and Other Household Assets

According to Pomeroy et al (2000), it is considered that the material style of life may indicate the relative social status of a community and is also often used to indicate wealth. The assessment of house construction materials, household furnishings, and some household amenities is used as a socioeconomic proxy variable. Savings and investments of households were also asked as these may be used as a rough measure of the economic status of the households.

3.2.7.1 Household Residence Ownership and House Infrastructure

On the subject of the ownership of the sample households' residential lot and dwelling, a high percentage of 78.9% of respondents own their residential houses which could reflect that residents place a high value on houses as an investment. The main building material of houses is made of wood (76.2%) while a small percentage of 16.1% have concrete houses. Thus, house infrastructure may be categorized as semi-permanent. On the other hand, 51.7% or more than

half of the respondents' houses have two rooms and 31.9% have three rooms. This number of rooms of houses are reflective of the number of household members as shown earlier in Table 3, where majority are comprised of 3-4 followed by 5-6 members that are just enough to be accommodated by two to three rooms.

Table 15. Housing and Infrastructure of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Housing and Infrastructure Characteristic	Frequency	%
<u>Ownership status</u>		
Owner of the house	255	78.9
Renter	13	4.0
Provided by employer	4	1.2
User not paying rent	47	14.6
Other	4	1.2
<u>Main building material</u>		
Brick	7	2.2
Concrete	52	16.1
Wooden	246	76.2
Stone	1	0.3
Soil	2	0.6
Other	5	1.5
<u>Number of rooms</u>		
1	19	5.9
2	167	51.7
3	103	31.9
4	28	8.7
5	3	0.9
6	2	0.6

3.2.7.2 Savings and Investments of Households

The sample households were asked of their yearly savings. The 80.8% of the respondents do not have savings (**Table 16**). This shows that the income of most households in Barangays Berong and Aramaywan are either just enough or not enough to support for their daily needs. In the FGD, same results were gathered that residents of the two barangays do not have savings mainly because their income is just enough for the daily sustenance. Only a small portion of households (20 households or 6.2%) said they have yearly savings of PhP 1,000 or less. This explains why a very negligible highest percentage of 5.3% claim to invest in immovable properties (**Table 17**).

Table 16. Yearly savings of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Savings	Frequency	%
No Savings	261	80.8
PhP 0-1,000	20	6.2
PhP 1,000-2,000	13	4
PhP 2,001-3,000	10	3.1
PhP 3,001-4,000	8	2.5
PhP 4,001 and above	11	3.4

Table 17. Investments from Savings of sample households in the impact communities of Berong Nickel Corporation, Quezon (n= 323).

Investment	Frequency	%
1. Buy piece of land	38	11.8
2. Buy other immovable properties business	28	8.7
3. Bank or Cooperative	10	3.1
4. Invest in Business	9	2.8
5. Others	15	4.6
6. Not applicable	261	80.8

3.2.7.3 Household's Electric Supply

The electricity provider Palawan Electric Cooperative (PALECO) services the center of Barangays Berong and Aramaywan. The electricity supply is accessible to 62.8 % respondents, however 47.3% of the respondents experience problems with electric supply because of low voltage (**Table 18**). More than a third (37.2%) of the household respondents do not have electric supply.

Table 18. Electric Supply of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Electric Supply Characteristic	Frequency	%
<u>Has electric supply n = 323</u>		
Yes	203	62.8
No	120	37.2
<u>Experienced problem/s with electric supply n= 323</u>		
Yes	167	51.7
No	156	48.3
<u>Problem/s experienced with electric supply n = 156</u>		
Electric cuts	20	6.2
	140	43.3

Low voltage	22	6.8
Changing voltage	18	5.6

2.2.7.4 Household's Cooking Fuel

As reflected in Table 19, the fuel used for cooking by most households is wood (65.3%) and charcoal (33.4%). Liquefied petroleum gas (LPG) is used by only 1.2% of respondents. Data shows that there may be a big demand for wood and charcoal fuels in the area that may result in the extortion of mangrove and terrestrial forests.

Table 19. Cooking fuel of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Type of Cooking Fuel	Frequency	%
1. Fuel wood	211	65.3
2. LPG	4	1.2
3. Charcoal	108	33.4

3.2.8 Water and Sanitation Amenities of Households

3.2.8.1 Household's Access to Water and Location of Drinking Water

More than half (55.4%) of the respondents use water pump as domestic water source, while only 24.1% use plumbing inside the house, and 11.1% use deep well. Results as shown in Table 20, confirm that the research area has high ground and surface water potential. Results are consistent with the claims of the 76.5% of the respondents who said that they do not have problems when it comes to domestic water supply nor the use of domestic water for drinking purposes.

Table 20. Water source of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Water Source Characteristic	Frequency	%
<u>Water source</u>		
Plumbing inside the house	78	24.1
Water pump	179	55.4
Deep well	36	11.1
Village fountain	4	1.2
Water tank	12	3.7

Plumbing outside the house	11	3.4
Streams or Rivers	3	0.9
<u>Experienced problem/s with domestic water supply</u>		
Yes	105	32.5
No	217	67.2
<u>Problem/s experienced with domestic water supply</u>		
Water Cuts	42	13.0
Not clean	14	4.3
Expensive	2	0.6
Difficult to access	13	4.0
Low quality	5	1.5
None	247	76.5
<u>Use domestic water for drinking purposes</u>		
Yes	232	71.8
No	91	28.2
<u>Experienced problem/s with drinking water supply</u>		
Yes	91	28.2
No	232	71.8
<u>Problem/s experienced with drinking water supply</u>		
Not clean	25	7.7
Expensive	3	0.9
Difficult to access	49	15.2
Low quality	10	3.1
Other	8	2.5

3.2.8.2 Household Sanitation Facility

Among the households respondents, 187 (57.9%) use exterior toilet facility without flush tank while only 59 (18.3%) use interior toilet facility without flush tank (**Table 21**). This non-use of flush tanks could be attributed to the earlier claim that while the households have reliable water source, no water systems are installed inside their houses that would make filling up flush tanks or flushing toilets laborious as users will need to fetch water from a nearby pump or water source.

Table 21. Sanitation Facility of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Sanitation Facility	Frequency	%
1. Interior WC with toilet flush tank	20	6.2
2. Exterior WC with toilet flush tank	32	9.9
3. Interior toilet without flush tank	59	18.3
4. Exterior toilet without flush tank	187	57.9
5. Public WC	19	5.9
6. Other	6	1.9

3.2.8.3 Household Wastewater System

According to 154 (47.7%) respondents, their wastewater goes into a septic tank disposed regularly while 93 (28.8%) said it goes into the common sewerage system. Unfortunately, 51 (15.8%) of the respondents discharge wastewater directly to a river or land, which could contribute to environmental pollution now or in the future (**Table 22**).

Table 22. Wastewater System of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan, November 2020 (n = 323).

Wastewater System	Frequency	%
1. Common sewerage system	93	28.8
2. Septic tank disposed regularly by municipality	9	2.8
3. Septic tank disposed regularly by him/herself	154	47.7
4. Discharged directly to a river or land	51	15.8
5. Other	15	4.6
6. Does not know	1	0.3

3.2.8.4 Household Solid Waste Disposal Method

As shown in Table 23, a third (34.4%) of the respondents reported that solid wastes are disposed through burying. A significant number of 33.7% dispose solid waste through burning and another 16.7% of the households use a combination of burying and burning. The same issue on solid waste disposal in the two barangays was mentioned during the focus group discussion. This reflects that there may be a need to improve solid waste management in the barangays so as not to contribute to pollution.

Table 23. Solid Waste Disposal of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan, (n = 323).

Solid Waste Disposal	Frequency	%
1. Municipality collects regularly	1	0.3
2. Disposed to a predefined landfill	17	5.3
3. Disposed to a wild disposal area	2	0.6
4. Buried	111	34.4
5. Disposed to the river/lake	2	0.6
6. Burning	109	33.7
7. Using waste as compost	4	1.2
8. Other	1	0.3
9. Disposed to a predefined landfill and Burning	3	0.9
10. Disposed to a wild disposal area and Burning	2	0.6
11. Buried and Burning	54	16.7

12. Buried and Using waste as compost	1	0.3
13. Burning and Using waste as compost	10	3.1

3.2.9 Agriculture and Other Sources of Livelihood

Despite earlier data that farming is the majority's means of earning in Berong, Quezon, 52.9% of the respondents claimed to have not engaged in farming (**Table 24**). Data also show that land areas owned by respondents are mostly acquired through inheritance (32.2%), and only 11.5% is acquired land through purchase. Majority at 48.9% answered "not applicable" which means they have not acquired land at all. Most of those who have lands own 1-3 hectares only (28.8%). A third of the respondents, 35.9%, said that they cultivate the land they own. However, the 40.9% have reported that their farmlands have no irrigation. As to farmland ownership status, 21% of the farmers have no title/deed and most (25.7%) cultivate their land for subsistence. The approximate value of products harvested was estimated by many (54 or 16.7%) to be less than PhP 10,000.

Table 24. Agriculture Livelihood of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan, (n= 323).

Agriculture Livelihood Characteristic	Frequency	%
<u>Engaged in Farming as livelihood</u>		
Yes	152	47.1
No	171	52.9
<u>Land acquisition</u>		
Purchased	37	11.5
Inheritance	104	32.2
Comprehensive Agrarian Reform Program	8	2.5
Rights/Waiver of rights	1	0.3
Agreements w/ Bgy. Official or Chieftain	5	1.5
Others	10	3.1
Not applicable	158	48.9
<u>Parcel of land</u>		
Less than a hectare	51	15.8
1 – 3 has	93	28.8
4 – 6 has	19	5.9
7 – 10 has	7	2.2
More than 11 has	2	0.6
<u>Ownership Status</u>		
Owned and cultivated	116	35.9
Owned but not cultivated	22	6.8

Renting to cultivate	6	1.9
Rented for cultivation	1	0.3
Other	3	0.9
<u>Irrigation</u>		
Has irrigation	27	8.4
No irrigation	132	40.9
<u>Farmer</u>		
Self	10	3.1
Relative	15	4.6
<u>Title/Deed Status</u>		
With title	30	9.3
With rights/tax declaration	32	9.9
Without title/deed	68	21.1
Customary	2	0.6
Other	1	0.3
<u>Product use</u>		
1.For subsistence	83	25.7
2.Selling at internal markets	12	3.7
3.Selling at external markets	22	6.8
4.For subsistence and Selling at internal markets	18	5.6
5.For subsistence, Selling at internal markets, and Selling at external markets	2	0.6
6.Other	2	0.6
<u>Approximate value of product</u>		
PhP 0-10,000	54	16.7
PhP 10,001-20,000	23	7.1
PhP 20,000-30,000	15	4.6
Above PhP 30,000	9	2.8

3.2.9.1 Status of Livelihood Sources

To have a better understanding on the livelihood sources of households in Barangays Berong and Aramaywan, respondents were asked about its status on the sources of livelihood in the last five years. Results show that majority of the respondents (21.4%) indicated that there has been no employment had not improved (**Tables 25-27**). Most reasons cited for no improvement were lack of labor, low product prices and not enough fertilizers and pesticides (**Table 27**). For those who said that status did improve, “better seed quality” was cited by many as the reason.

Table 25. Status on the sources of livelihood in the last five years of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan.

Sources of Livelihood	Improved		Did not improve		Did not Change	
	Frequency	%	Frequency	%	Frequency	%
Lowland Agriculture	45	13.9	31	9.6	69	21.4
Agroforestry	10	3.1	8	2.5	29	9.0

Fishery	13	4.0	13	4.0	46	14.2
Skill-based employment	13	4.0	14	4.3	13	4.0

Table 26. Reasons for improvement in the last five years on livelihood of sample households of the impact communities of Berong Nickel Corporation, Municipality of Quezon, Province of Palawan.

Reason for improvement	Frequency	%
Better seed quality	52	16.1
Usage of chemical fertilizers and pesticides	28	8.7
Usage of organic fertilizers	22	6.8
Improved irrigation	22	6.8
Attended related training and seminar from BNC's SDMP	18	5.6
Road access/transportation	14	4.3
Agricultural vehicle	2	0.6
Member of household availed BNC's SDMP for livelihood	6	1.9
Other	11	3.4

Table 27. Reasons for no improvement in the last five years on livelihood of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Reason for no improvement	Frequency	%
Erosion	4	1.2
Lack of agricultural or farm inputs and vehicles	20	6.2
Not using enough fertilizer/pesticide	34	10.5
Lack of labor	50	15.5
Low product prices	43	13.3
Lack of assistance from any concerned institution	15	4.6
Other	24	7.4

3.2.10 Educational Related Characteristics

Both barangays Berong and Aramaywan, were reported to have children aging 6-15 years old and 71.8% are studying. Only 5.6% of the above mentioned are enjoying scholarship and 76.8% do not. The 3.7% are scholars of Berong Nickel Corporation. This is supported by secondary data which shows that from 2011, the company's SDMP scholarship program has benefitted a total of 181 scholars. Public schools are still the most attended by students (55%). Other school assistance are from 4Ps (10.2%) and BATA (6.5%) while some students (4.6%) are being supported by their relatives. Most of the respondents (65%), reported that they are satisfied with

the education facilities in their schools. For those who do not go to school, the common reason for not attending school was lack of financial support (**Table 28**).

Table 28. Education of children in sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan.

Education-Related Characteristic	Frequency	%
<u>Has children 6-15 years old</u>		
Yes	191	59.1
No	124	28.4
<u>All children are studying</u>		
Yes	232	71.8
No	91	28.2
<u>Has children enjoying scholarship</u>		
Yes	19	5.9
No	248	76.8
Not applicable	56	17.3
<u>Type of scholarship/provider</u>		
COMREL Allowance	1	0.3
BATA Scholarship	3	0.9
BNC Scholarship	12	3.7
CHED Scholarship	1	0.3
HMC Scholarship	1	0.3
Open Heart Foundation	1	0.3
Not applicable	19	5.8
<u>School being attended</u>		
Public School Basic Education	178	55.1
Public Higher Education	17	5.3
Private School	3	0.9
<u>Other school assistance/provider</u>		
4Ps	33	10.2
Allowance from BATA	21	6.5
From relatives	15	4.6
<u>Reason for not attending school</u>		
Lack of financial support	12	3.7
Lack of motivation	3	0.9
Handicap	3	0.9
Already working	10	3.1
<u>Satisfied with education facilities in the area</u>		
Yes	210	65
No	103	35

3.2.11 Health-Related Characteristics

3.2.11.1 Household Health Situation

Respondents were asked about their household health situation. As shown in Table 29, majority of household members (74.3%) do not have household members with permanent/chronic disease

and they did not face health problem which required treatment within the last 12 months (78.3%). A big majority of 93.2% do not have household members who suffered from contagious diseases within the last 12 months, and 92.3% do not have household members who suffered from water-borne diseases within the last 12 months. The Barangay Health Center (48%) and BNC clinic (41.2%) are the health facilities that usually attend to members of the community. Among the respondents, 216 or 66.9% said that they are satisfied with the health facilities in the area. Respondents indicated that the common problem in the attending health facilities is lack of medicine.

An assessment on the current household health situation compared to that of four to five years ago was elicited from the household respondents (**Table 30**). A small majority of 43.7% indicated that their household health condition is “better now than 4-5 years ago,” and 13% said that their health situation is “much better now than 4-5 years ago”. On the other hand, 19.8% indicated that their health is neither better nor worse. Some 8% of respondents said that their health is “worse now,” while 3.7% said that their health situation is now “much worse than 4-5 years ago.”

Table 29. Health situation of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan, (n= 323).

Health-Related Characteristic	Frequency	%
<u>Has household members with permanent/chronic disease/health problem</u>		
Yes	62	19.2
No	240	74.3
<u>Has household members who faced health problem which required treatment within the last 12 months</u>		
Yes	49	15.2
No	253	78.3
<u>Has household members who suffered from contagious diseases within the last 12 months</u>		
Yes	4	1.2
No	301	93.2
<u>Has household members who suffered from water-borne diseases within the last 12 months</u>		
Yes	8	2.5
No	298	92.3
<u>Attending health facility</u>		
BNC Clinic	133	41.2
Barangay Health Center	155	48
Adventist Hospital	4	1.2
Quezon Municipal Hospital	28	8.7

<u>Satisfied with health facilities in the area</u>		
Yes	216	66.9
No	56	17.3
<u>Experienced problem/s related to health care facilities or health providers in the area</u>		
Lack of medicine	22	6.8
No available doctor	6	1.9
Vehicle has no fuel	2	0.6

Table 30. Health situation assessment of sample households of the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Comparison of Household Health Situation Now and Four to Five years ago	Frequency	%
Much worse now than 4-5 years ago	12	3.7
Worse now than 4-5 years ago	26	8.0
Neither better nor worse now than 4-5 years ago	64	19.8
Better now than 4-5 years ago	141	43.7
Much better now than 4-5 years ago	42	13.0

Better health condition of the sampled households (**Table 31**) is mostly attributed to better healthcare services available in the community, more capable community health workers, capacity of household to afford better healthcare services either in the community or in another location, medical services provided by civil society groups, BNC's health and nutrition program and better sanitation. For those who said they have worse health situation, this was attributed to their inability to access healthcare services in the community or barangay due to costs and unsanitary conditions (**Table 32**).

Table 31. Contributory factors to better health situation of sample households, impact communities of Berong Nickel Corporation, Quezon, Palawan.

Contributory Conditions	FREQUENCY	%
Better health care services are now available in the community.	198	61.3
I can afford to get better health care services either in the community or in another location.	131	40.6
Drinking water supply is cleaner and better.	106	32.8
Sanitation (toilets, etc.) is cleaner and better.	96	29.7
The drainage systems and village surroundings is cleaner and better.	81	25.1
Have access to better information on healthy lifestyle practices.	124	38.4
BHWs are more capable community health workers.	181	56.0
Availed of medical services provided by civil society groups, e.g. Rotary Medical Mission, etc.	118	36.5

At least one household member benefitted from the BNC's health and nutrition program.	116	35.9
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Table 32. Contributory factors to worse health situation of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Contributory Conditions	FREQUENCY	%
Unable to access health care services in the community or barangay due to costs.	112	34.7
Drinking water supply is not safe and worse.	50	15.5
Sanitation (toilets, etc.) is dirty and worse.	25	7.7
The drainage system and village surroundings is dirty and worse.	39	12.1
BHWs are not capable of providing health assistance services.	18	5.6

3.2.11.2 Community Health Services

To further elaborate how the household health situation has improved in the research area, respondents were asked on the provided health services in their community. Health services mentioned were improvement of health facilities, conduct of medical mission and nutrition program for undernourished children (**Table 33**).

Table 33. Health-related activities or programs present in the barangays of the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Health-related Activities or Programs	Frequency	%
Improvement of health facilities/infra	127	39.3
Capacity building for health workers	67	20.7
Conduct of medical mission	99	30.7
Distribution of medical supplies	86	26.6
Nutrition program for undernourished children	98	30.3
Health awareness campaign	43	13.3
Health education training/seminar	60	18.6
Establishment of source of alternative medicines	63	19.5
Other	16	5.0

3.2.11.3 Household's Social Security

The social security of the household members was also asked, and as shown in Table 34, most of the household members have social security from PAG-IBIG (44.3%) and PhilHealth (43.3%).

Additionally, some household members have social security from SSS (29.7%) and GSIS (28.5%).

Table 34. Social Security of sample household members in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Social Security	Frequency	%
GSIS	92	28.5
SSS	96	29.7
PRIVATE INSURANCE	20	6.2
PAG-IBIG	143	44.3
PHIL-HEALTH	140	43.3

3.2.12 Household Income Status

The current income status and standard of living of the sample households were compared to that of five years ago. Almost half of the respondents (161 or 49.8%), indicated that their income status and standard of living are the same; 72 or 22.3% said that they have better living standards; while 56 or 17.3% said that their living standards are worse (**Table 35**). Meanwhile, participants of the focus group discussion claimed that income status and standard of living in the barangays have improved in the last five years through the help of Berong Nickel Corporation.

There was a significant increase in the population, buying capacity, businesses and social services. However, participants also said that there is no price control, and goods sold in the area are expensive because it is supplied from other barangays. This could also be a reason why household respondents claimed that there is no improvement in their income status and others claim that they have worse living standards. FGD participants, however, claimed that some are just not contented and are constantly looking for more.

Table 35. Income status of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Comparison of Household Income Status and Standard of Living to Five years ago	Frequency	%
Better	72	22.3
The same	161	49.8
Worse	56	17.3

3.2.13 Household's Experience and Degree of Hunger

The respondents were asked of any incidence of hunger for the last three months. A majority of 57.3% said that they did not experience hunger during the past three months. Some 38.7% of the sample households said that they experienced moderate hunger while a small portion of the respondents 6.5% said that they experienced severe hunger (Table 36).

Table 36. Sample households' experience of and degree of hunger in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Experience of & Degree of Hunger	Frequency	%
Did not experience hunger during the past 3 months	185	57.3
Yes, experienced moderate hunger	104	32.2
Yes, experienced severe hunger	21	6.5
Missing/no answer	13	4.0

3.2.14 Community Level Concerns and Issues

The top community issues and concerns identified by household respondents as shown in Table 37 are: access to or supply of electricity (64.4%), access to potable drinking water (39.9%), lack/limited employment opportunities (38.7%), access to healthcare (37.5%), unemployment/livelihood (35%) and lack of roads/transportation problem (33.1%.) These results were verified in the focus group discussion, where participants said that their top community level concern is the lack of power supply because this is felt by the education and health sectors. Other issues mentioned during the FGD were forest and marine protection and construction of roads.

Table 37. Current community-level concerns, problems and issues present in the barangays of the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Community Concerns, Problems & Issues	Presence in Community		
	Frequency	%	Rank
Access to potable drinking water	129	39.9	2
Access to health care	121	37.5	4
Access to or supply of electricity	208	64.4	1

Access to natural resource as an alternative/supplementary livelihood source	103	31.9	7
Limited educational opportunities	81	25.1	8
Peace and order situation	7	2.2	
Lack of roads/transportation problem	107	33.1	6
Food security	64	19.8	9
Garbage and waste management	38	11.8	10
Disasters: floods, typhoons, etc.	14	4.3	
Unemployment/livelihood	113	35	5
Juvenile delinquency	3	0.9	
Illegal drugs	3	0.9	
Lack/limited employment opportunities	125	38.7	3
Residents' undesirable behavior, attitude & values	9	2.8	
Residents' lack of cooperation and sense of community	10	3.1	

3.3 Chapter Summary

The first-class municipality of Quezon is a coastal areal in the Southwest of Palawan Province, with a total land area of 94,921 has. Quezon is comprised of 14 barangays namely, Berong, Aramaywan, Isugod, Maasin, Kalatagbak, Tabon, Alfonso VIII, Pinanglabanan, Panitian, Malatgao, Sowangan, Tagusao, Calumpang and Quinlogon.

The study site is the impact communities of Berong Nickel Corporation (BNC), Barangays Berong and Aramaywan. Barangay Berong is the largest barangay in Quezon occupying a total land area of 16,827 has. while Barangay Aramaywan has a total land area of 9,941 has. Topography in the project area is generally characterized as rugged and terraced, but sufficiently low in relief with gentle to moderate slopes in adjoining areas. The soil nature is iron-rich lateritic which is not favorable for agriculture, except for the low-lying areas in the north that are mainly agricultural and settlement areas.

The household interview was conducted to 323 household respondents chosen through stratified sampling in Barangays Berong and Aramaywan, Quezon, Palawan. The average household size is composed of 3-4 members and half of the sampled household members are 20 years old or younger. This could explain why the 59.3% of the population is single and only 38.78% are

married. Results show that majority of the household members (86.8%) are literate, in terms of educational attainment, 38.8% have at least attended primary education 26.1% have attended secondary education, 8.8% have gone to college, and only 2.4% have attended vocational courses.

Farming (30.7%) and working as employees (19.4%) are the primary livelihoods in the research areas. Being workers is also considered a secondary occupation by a majority of 20.8% as a result of employment opportunities from BNC's mining operations. The declared average yearly income of 43.4% household respondents is PhP 0-40,000 income, 25.1% reported PhP 40,001-80,000 income and 21.4% declared PhP 80,001-120,000 annual income.

On their perception of economic status, approximately one-third (34.7%) of the sampled households rated themselves to belong to the middle-income level. This was closely followed by the other two-thirds, 33.1% who classified themselves as poor and 33.1% percent rated themselves as very rich. In terms of their household expenditures, the priority items in the past four to five years up to present are food, education, and healthcare.

A high percentage of 78.9% of respondents own their residential houses which implies that residents in the research area place a high value on house ownership as an investment. Majority of the household respondents (80.8%) claimed that they do not have savings. This shows that the income of most households in Barangays Berong and Aramaywan are just enough for the daily sustenance.

The electricity provider Palawan Electric Cooperative (PALECO) services the center of Barangays Berong and Aramaywan. Almost half (47.3%) of the respondents experience problems with electric supply because of low voltage and 37.2% do not have electric supply. The common sources of domestic water in the barangays are water pump, plumbing inside the house and deep well. With regard to household toilet facility, majority of the households have exterior toilet facility without flush tank while some have interior toilet facility without flush tank.

Wastewater mostly goes into a septic tank disposed regularly while some goes into the common sewerage system and unfortunately, 15.8% of the respondents discharge wastewater directly to a river or land. An issue on solid waste disposal in the two barangays was also revealed as respondents reported that solid wastes are disposed through burying, burning and a combination of both.

Household respondents were asked also about status on the sources of livelihood in the last five years. Results show that majority of the respondents indicated that there has been no significant change in the following sources of livelihood: lowland agriculture, agroforestry and fishery, and skill-based employment. A majority of 71.8% of the household respondents' children aging 6-15 years old are studying, with only 5.6% enjoying scholarship. The 3.7% are scholars of Berong Nickel Corporation. Most of the respondents reported that they are satisfied with the education facilities in their schools. For those who do not go to school, the common reason for not attending school was lack of financial support.

The current household health situation of respondents compared to that of four to five years ago was also assessed and most respondents indicated that they have better health condition that can be attributed to better healthcare services available in the community, more capable community health workers, capacity of household to afford better healthcare services either in the community or in another location, medical services provided by civil society groups, BNC's health and nutrition program and better sanitation. Those few who indicated that their health is worse can be attributed to their inability to access healthcare services in the community or barangay due to costs and unsanitary conditions.

Compared to that of five years ago, the current income status and standard of living of the sample households was claimed by the majority to be the same (49.8%). Some 22.3% said that they have better living standards, while 17.3% said that their living standards are worse.

The top community issues and concerns identified by household respondents in Barangays Berong and Aramaywan are: access to or supply of electricity, access to potable drinking water, lack/limited employment opportunities, access to healthcare, unemployment/livelihood, and lack of roads/transportation problem.

CHAPTER 4. COMMUNITY RESIDENTS' AWARENESS OF BERONG NICKEL CORPORATION AND ITS SOCIAL DEVELOPMENT AND MANAGEMENT PROGRAM

4.1 Introduction

The study area is comprised of 18 Sitios from Barangays Berong and Aramaywan, the host and neighboring community of Berong Nickel Corporation's mining operations in Quezon, Palawan. The host Barangay Berong has eight sitios namely, Badlisan, Caliagon, Catuayan, Pinagtapian, Proper, Tagbalante, Talabongan and Tungib. Meanwhile, the neighboring barangay of Aramaywan has 10 sitios: Apduhan, Barucan, Bitas, Capisaan, Ibat-ong, Labuan, Lamane, Marnok, Proper and Suring.

4.2 Awareness of BNC

As shown in Table 38, only 25 or 7.7% of household respondents do not know of anyone who works at Berong Nickel Corporation (BNC). The residents were generally aware of BNC's existence and its operation in the area. Majority knows of someone who works at BNC who are either a relative (49.5%), a neighbor (41.5%), a friend (39%) or a family member (27.6%). Asked whether they were aware of BNC's Social Development and Management Program (SDMP), data shows that majority (76.5%) are aware of SDMP, particularly its education (60.7%), livelihood (55.1%), and health and nutrition program (42.1%). However, some 76 or 28% of the respondents were not aware of BNC'S SDMP. Data also show that the least known among the SDMP component programs are the Mine Technology and Geosciences (MTG) Program and Information, Education and Communication (IEC) Program. This is probably because MTG Program is intended for BNC's own personnel involved in the mine operations. It also appears that BNC needs to improve in its IEC program that is intended for promotion, increase of public

awareness and knowledge on responsible mining through public fora, seminars, training or other face-to-face gatherings that may help the public understand the value of responsible mining in their area.

The important sources of knowledge of the sample households (**Table 39**) are barangay officials/leaders, relatives, friends/acquaintances and village meetings. The result of the study indicates that the IEC materials and programs of BNC do not have enough reach on its impact communities.

Table 38. Awareness of BNC of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Knows someone who works in BNC	Frequency	%
Does not know anyone from BNC	25	7.7
Him/Herself	21	6.5
A family member	89	27.6
A relative	163	49.5
A friend	126	39.0
A neighbor	134	41.5
A former/current government official	15	4.6
Any combination of the above	24	7.4
Others	76	23.5
Awareness of programs of BNC's SDMP	Frequency	%
Not aware of programs of BNC's SDMP	76	23.5
Aware of programs of BNC's SDMP	247	76.5
Education Program	196	60.7
Livelihood Program	178	55.1
Health and Nutrition Program	136	42.1
Socio-cultural Development Program	87	26.9
Information, Education and Communication (IEC) Program	48	14.9
Mine Technology and Geoscience Program	57	17.6

Table 39. Important sources of knowledge of BNC in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Source of Knowledge	Rank 1	Rank 2	Rank 3	Not Rank 1 to 3	Overall Importance
1. Television	2	0	0	1	3
2. Radio	4	0	0	0	
3. Relative	101	4	12	3	
4. Provincial leaders		1		1	
5. Municipal leaders	2	1	1		4
6. BNC information and education materials	34	1	1	1	
7. Friend/acquaintance	82	11	7	12	

8. Immediate family members	29	1	3	4	
9. Barangay Captain/Leaders	108	6	1	3	2
10. Village meeting	64	18	7	6	5
11. Barangay Captain and Barangay Officials	117	2	2	23	1
12. Purok Leader/Village Chieftain	47	0	3	12	
13. Berong Nickel Corporation Personnel	45	1	4	3	
14. Neighbors/friends	41	1	4	15	
15. Other	4	0	0	0	

4.3 Perceived Benefits derived from BNC

Berong Nickel Corporation allocates an estimated amount of PhP 78,485,931.75 for the implementation of projects, programs and activities for its five-year SDMP. Table 40 shows that to the respondents, BNC's SDMP generally have benefits to their households and the barangay (60.1%) while only 15.5% believe the SDMP of the Corporation do not generally have benefits. Asked about the degree of benefit of the BNC programs, most of the respondents (37.8%) said the program has big benefit while (29%) said it has little benefit. Table 41 also shows that there is a considerable portion of 18.9% and 14.2% who answered "none" or "no benefit" and chose not to answer, respectively. As to the benefit to the barangay, still a small majority of 29.1% answered SDMP has benefit followed by "little benefit" as claimed by 27.2% of the respondents. A considerable portion of 87 respondents (26.9%) answered there is no benefit while another 49 (15.2%) did not answer.

Table 40. Sample Household's perceived benefits of BNC SDMP, in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Has BNC's SDMP Benefitted you and the Barangay	Frequency	%
Yes	194	60.1
No	50	15.5
Missing/No Answer	79	24.5

Table 41. Sample households' experience of and perceptions on degree of benefit on BNC programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Area/Locale Deriving Benefit	Degree of Benefit (frequency , %)				
	Big	Little	None	Don't Know	No Answer
Family	122 (37.8)	94 (29.1)	61 (18.9)	0 (0)	46 (14.2)
Sitio/Barangay	94 (29.1)	88 (27.2)	87 (26.9)	4 (1.2)	49 (15.2)
Municipality	83 (25.7)	86 (26.6)	73 (22.6)	9 (2.8)	62 (19.2)
Province/Country	89 (27.6)	55 (17)	63 (19.5)	13 (4)	83 (25.7)

Note: Figures enclosed in parentheses are the corresponding percentages.

4.3.1 Perceived Benefits derived from Education Programs

The respondents were also asked about their perceived benefits of specific SDMP projects, programs and activities. Table 41 reflects the benefits derived from the programs to the family, sitio/barangay and municipality as perceived by the sample households. Data show that it is in the barangay level that the SDMP is most perceived as beneficial where 50.8% said that the benefits are seen in the scholarship program, educational assistance and support to school (48.6%) and education facilities and support infrastructures (45.8%). Data derived from the key informant interview conducted with school heads and some teachers in both Berong and Aramaywan reflected the same benefits where educational assistance and support to school, education facilities and support infrastructures that were seen as very beneficial. Key informants cited that among the facilities donated by BNC were generator set, desktop computer, amplifier, weighing scale, office tables, and office supplies. Also mentioned were construction materials for the school's handwashing project, and a school bus which had been deemed very useful to help bring students from far flung areas to school. Among the infrastructure projects cited to have been sourced out from BNC's SDMP were mini library, covered gym, classrooms, school stage and perimeter fence. These donations are deemed very helpful to the schools in both barangays. Key informants also mentioned that BNC allocate teacher aide funds for teachers' training and provide salaries for para teachers.

The key informants also revealed that the education program's share from BNC's SMDP is 45% which is distributed to the schools in the barangay by the respective barangay officials. Representatives from the education sector are also included in the planning session for the budget of SDMP as claimed by the key informants. This they said is done every October and is normally implemented the following year.

More than half of the respondents (57.9%) indicated that BNC's education programs have a positive effect, while a considerable number of 73 or 22.6% perceived that the programs have no effect (**Table 42**). Some 39 or 12% did not answer.

Table 42. Benefits derived from BNC's Education Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Benefit Derived by Family from BNC's Education Programs	Frequency	%
Scholarship Program	46	14.2
Educational facilities and support infrastructures	40	12.4
Educational assistance and support to school	32	9.9
Informal Education and support to school activities	32	9.9
Benefit Derived by Sitio/Barangay from BNC's Education Programs	Frequency	%
Scholarship Program	164	50.8
Educational facilities and support infrastructures	148	45.8
Educational assistance and support to school	157	48.6
Informal Education and support to school activities	55	17.0
Benefit Derived by Municipality from BNC's Education Programs	Frequency	%
Scholarship Program	0	0.0
Educational facilities and support infrastructures	66	20.4
Educational assistance and support to school	57	17.6
Informal Education and support to school activities	65	20.1

Table 43. Perceived effect of BNC's Education Programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Perceived Effects	Frequency	%
No effect	73	22.6
Don't know	19	5.9
Positive effect	187	57.9
Negative effect	5	1.5
Missing/no answer	39	12.1

To verify the data gathered related to the perceived effects of SDMP's education program, key informants were also asked whether there is to them a significant change in the quality of facilities they have in school on in their barangay. The informants' answers ranged from few to many changes, and some explained that it is also because aside from the donated facilities from BNC, they also receive funds from the local government units. To some, enrollees have increased due to the provision of scholarships, allowance assistance from BNC, and the availability of school bus. However, to some others, especially the informants from Aramaywan, their enrollees have decreased because many students transferred to Berong when their students' parents got employed by BNC. In terms of improvement in school performance, some key informants claimed SDMP's school program does have positive effects as students from far flung areas now have more time to study and do their school requirements.

Asked about their perceived success level of BNC's education programs (Table 43), 105 or 32.5% said that it is successful; 76 or 23.5% said that it is somewhat successful; while 53 or 16.4% deemed it as failure. To elicit some more information on the matter, similar question was asked during the key informant interview with some teachers and school heads in both barangays as participants. Asked what they can suggest to improve the education program of BNC's SDMP, one suggested that BNC improve its procurement process because according to the informant, it is quite slow. She pointed out that donated school materials that come on time can be used to the maximum if these come on time. Also mentioned is the need for a school dormitory for students who live in distant places which the respondent said had been planned to be procured before but was eventually set aside because the barangay officials opted for a school bus. Other suggestions were scholarship program for teachers who want to grow professionally and provision of electrification project for the barangay. In some areas, particularly in Aramaywan, do not have electricity yet.

During the focus group discussion, aside from asking for more SDMP scholarship programs, participants raised the need to provide a scholarship for those who want to take medicine-related

courses because this could be a long term solution for the barangays' need of health workers. Another suggestion is to implement projects related to senior high school technical vocational courses such as mechanics, electrical and bread and pastry to open more employment opportunities among senior high school graduates who can no longer afford to attend tertiary education. Participants also asked to provide PTA contribution to less fortunate families who are not 4Ps beneficiaries, however, they acknowledged the fact that this is not a sustainable project.

Table 44. Success Level of BNC's Education Programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Success Level	Frequency	%
Failure	53	16.4
Somewhat failure	9	2.8
Neither Successful nor failure	29	9.0
Somewhat Successful	76	23.5
Successful	105	32.5
Don't know	9	2.8
Missing/no answer	42	13.0

4.3.2 Perceived Benefits derived from Livelihood Programs

Table 45 reflects the perceived benefits of BNC's livelihood programs to the respondent's family, sitio/barangay and municipal level. In the barangay level where the programs were deemed most beneficial, it is considered by slightly more than half of the respondents (51.4%) that BNC's livelihood programs have a positive effect on development of agroforestry. Another 51.1% said that it has contributed to development of aquaculture and fishing, and 38.1% said it helped in the identification of potential eco-tourism development program.

The key informant interview conducted with barangay councilmen, head of agriculture units, and head and members of livelihood associations in Barangays Berong and Aramaywan as participants reflected similar results where key informants said that they benefitted in the agroforestry development through training on crop budding, provision of seedlings and gardening materials, and banana and coconut plantation projects. Aquaculture and fishing was also improved through the establishment of balatan and agar culture, and provision of fishing

equipment. In Barangay Aramaywan, Taraw Cave was improved as part of BNC's eco-tourism development program while Berong Women's Association benefitted from the construction of a multi-purpose building for the association. In addition, key informants also saw the construction of roads and bridges in the barangays as very beneficial to the livelihood sector for the easier transportation of produce. A majority of 51.7% household respondents considered the BNC's livelihood programs to have positive effect, however, there were almost a quarter (24.8%) of respondents who said that the programs had no effect (**Table 46**).

Table 45. Benefits derived from BNC's Livelihood Programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Benefit Derived by Family from BNC's Livelihood Programs	Frequency	%
Development and enhancement of existing viable livelihoods	48	14.9
Development of agroforestry	18	5.6
Improvement of lowland agriculture and fishery including post-harvest facilities	13	4.0
Identification of potential eco-tourism development program	5	1.5
Competency for skill-based employment opportunities	13	4.0
Benefit Derived by Sitio/Barangay from BNC's Livelihood Programs	Frequency	%
Development and enhancement of existing viable livelihoods	39	12.1
Development of agroforestry	166	51.4
Improvement of lowland agriculture and fishery including post-harvest facilities	165	51.1
Identification of potential eco-tourism development program	123	38.1
Competency for skill-based employment opportunities	92	28.5
Benefit Derived by Municipality from BNC's Livelihood Programs	Frequency	%
Development and enhancement of existing viable livelihoods	57	17.6
Development of agroforestry	43	13.3
Improvement of lowland agriculture and fishery including post-harvest facilities	52	16.1
Identification of potential eco-tourism development program	30	9.3
Competency for skill-based employment opportunities	26	8.0

Table 46. Perceived effect of BNC's Livelihood Programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Perceived Effects	Frequency	%
No effect	80	24.8
Don't know	28	8.7
Positive effect	167	51.7
Negative effect	6	1.9
Missing/no answer	42	13.0

Table 47 shows that key informants also perceived that the livelihood programs of BNC are beneficial, claiming that these have improved the lives of people in the research area. On the success level of BNC's livelihood programs, 92 or 28.5% perceived it as somewhat successful, and another 64 or 19.8% said it is successful. A small majority of 19.8% said that it is a failure (Table 48).

Table 47. Perceived effect of BNC's Livelihood Programs, key informants in the impact communities of Berong Nickel Corporation, Quezon, Palawan.

Perceived effect of BNC's Livelihood Programs
<p>"Most of the members of barangay have been given the opportunity to be involved in livelihood projects for business start-ups."</p> <p>-Balatan Culture Beneficiary and Fisherfolk</p>
<p>"As compared before, the lives of the people have improved."</p> <p>-Head, Berong Women's Association</p>
<p>"People were able to have improved lives through the construction of roads and bridges that made it easier for the members of the community to transport their product."</p> <p>-Barangay Kagawad</p>
<p>"SDMP have provided lots of opportunities through their share to the barangay for improving our community."</p> <p>-Head of Agriculture</p>

Table 48. Success Level of BNC's Livelihood Programs in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n= 323).

Success Level	Frequency	%
Failure	64	19.8
Somewhat failure	17	5.3
Neither Successful nor failure	35	10.8
Somewhat Successful	92	28.5
Successful	64	19.8
Don't know	8	2.5
Missing/no answer	43	13.3

4.3.3 Perceived Benefits derived from Health Programs

The respondents' perception as to the benefits of the Health Programs of BNC to the family, sitio/barangay and municipality are shown in Table 49. Like the other programs, most respondents regarded it as most beneficial at the sitio/barangay level than in the family and municipal levels. More than half found it to have contributed to the capacity building for

barangay health workers at 61.3% and in the improvement of health facilities and support infrastructures (55.4%). Key informants' assessment on the performance of BNC health program is "very good". Its perceived effect presented in Table 50, also shows that a large portion (63.2%) of the household respondents consider BNC's health programs to have positive effect while only 18.9% said it has no effect. The programs were rated as successful (**Table 51**) by 29.1% of respondents, and another 28.2% rated it as somewhat successful.

Table 49. Benefits derived from BNC's Health Programs, impact communities of Berong Nickel Corporation, Municipality of Quezon, Province of Palawan, November 2020, n = 323.

Benefit Derived by Family from BNC's Health Programs	Frequency	%
Improvement of health facilities and support infrastructures	69	21.4
Capacity building for barangay health workers (BHW)	66	20.4
Support for preventive health care and disaster or emergency preparedness e.g. medical mission, distribution of medical supplies, awareness campaign, etc.	61	18.9
Benefit Derived by Sitio/Barangay from BNC's Health Programs	Frequency	%
Improvement of health facilities and support infrastructures	179	55.4
Capacity building for barangay health workers (BHW)	198	61.3
Support for preventive health care and disaster or emergency preparedness e.g. medical mission, distribution of medical supplies, awareness campaign, etc.	151	46.7
Benefit Derived by Municipality from BNC's Health Programs	Frequency	%
Improvement of health facilities and support infrastructures	47	14.6
Capacity building for barangay health workers (BHW)	59	18.3
Support for preventive health care and disaster or emergency preparedness e.g. medical mission, distribution of medical supplies, awareness campaign, etc.	68	21.1

Table 50. Perceived effect of BNC's Health Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Perceived Effects	Frequency	%
No effect	61	18.9
Don't know	14	4.3
Positive effect	204	63.2
Negative effect	0	0
Missing/no answer	44	13.6

Table 51. Success Level of BNC's Health Programs of the impact communities of Berong Nickel Corporation, Municipality of Quezon, Province of Palawan (n = 323).

Success Level	Frequency	%
Failure	52	16.1

Somewhat failure	8	2.5
Neither Successful nor failure	28	8.7
Somewhat Successful	91	28.2
Successful	94	29.1
Don't know	7	2.2
Missing/no answer	42	13.0

In the focus group discussion, participants were asked if there are improvements in the health services in Barangays Berong and Aramaywan, and they said that it has improved through the help of BNC's SDMP. They are satisfied with the health programs in the barangays but they also said that it still needs improvement. When asked for their suggestions to further improve BNC's health programs, participants from Berong mentioned the need to provide additional medicines and equipment, hire a community doctor and conduct medical mission in the barangay at least once a month. While in Aramaywan, participants sought to construct a better health facility in the Barangay.

4.3.4 Perceived Benefits derived from Socio-Cultural Development Programs

Perception about the implementation of BNC's Socio-Cultural development programs, their perceived benefits to the family, sitio/barangay and municipality are shown in Table 50. Still, respondents find it more beneficial at the barangay level where 71.2% said it helped in the enhancement of socio-cultural processes that promote community cohesion. Another 64.7% said it helped in the improvement of community facilities and skills that enhance the state of community and social well-being.

Meanwhile, a majority of the respondents (59.1%) perceived that the programs had a positive effect in their community while 21.1% said that it had no effect (**Table 51**). The determined success level of the programs for 26.9% of respondents is "successful", 24.1% say it is "somewhat successful", while 17.6% say it is a "failure" (**Table 52**).

Table 52. Benefits derived from BNC's Socio-Cultural Development Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Benefit Derived by Family from BNC's Socio-Cultural Development Programs	Frequency	%
Enhancement of socio-cultural processes that promote community cohesion e.g. related to community or organizational values, norms, and practices, decision-making	43	13.3
Improvement of community facilities and skills that enhance the state of community and social well-being	24	7.4
Benefit Derived by Sitio/Barangay from BNC's Socio-Cultural Development Programs	Frequency	%
Enhancement of socio-cultural processes that promote community cohesion e.g. related to community or organizational values, norms, and practices, decision-making	230	71.2
Improvement of community facilities and skills that enhance the state of community and social well-being	209	64.7
Benefit Derived by Municipality from BNC's Socio-Cultural Development Programs	Frequency	%
Enhancement of socio-cultural processes that promote community cohesion e.g. related to community or organizational values, norms, and practices, decision-making	71	22.0
Improvement of community facilities and skills that enhance the state of community and social well-being	68	21.1

Table 53. Perceived effect of BNC's Socio-Cultural Development Programs of the impact communities of Berong Nickel Corporation, Quezon, Province of Palawan (n = 323).

Perceived Effects	Frequency	%
No effect	68	21.1
Don't know	20	6.2
Positive effect	191	59.1
Negative effect	2	0.6
Missing/no answer	42	13.0

Table 54. Success Level of BNC's Socio-Cultural Development Programs, of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Success Level	Frequency	%
Failure	57	17.6
Somewhat failure	18	5.6
Neither Successful nor failure	31	9.6
Somewhat Successful	78	24.1
Successful	87	26.9
Don't know	10	3.1
Missing/no answer	42	13.0

4.3.5 Perceived Benefits derived from Information, Education and Communication Programs

The benefits derived by the respondent from the Information, Education and Communication (IEC) Programs particularly to the family, sitio/barangay and municipality were asked and reflected in Table 53. As shown, respondents found the IEC programs most beneficial in the sitio/barangay level where 55.4% said access to print materials, public service announcements, websites, displays, materials and equipment helped most while 46.1% said public consultations, fora, seminars, training and other face-to-face gatherings were most helpful. More than half of the respondents (55.7%) believe that the programs have positive effect (Table 54). On the respondents' perceived success level for the IEC programs of BNC (Table 55), 26.9% said it was "successful", 23.5% said it was "somewhat successful", while 18.6% believed that it was a "failure". The focus group discussion also revealed that there is really a need to improve BNC's IEC Programs particularly in Barangay Aramaywan where participants were not well-informed about the company's operations and SDMP sharing.

Table 55. Benefits derived from BNC's Information, Education and Communication Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Benefit Derived by Family from BNC's Information, Education and Communication Programs	Frequency	%
Public consultations, fora, seminars, training and other face-to-face gatherings	46	14.2
Access to print materials, public service announcements, websites, displays, materials and equipment	21	6.5
Benefit Derived by Sitio/Barangay from BNC's Information, Education and Communication Programs	Frequency	%
Public consultations, fora, seminars, training and other face-to-face gatherings	149	46.1
Access to print materials, public service announcements, websites, displays, materials and equipment	179	55.4
Benefit Derived by Municipality from BNC's Information, Education and Communication Programs	Frequency	%
Public consultations, fora, seminars, training and other face-to-face gatherings	53	16.4
Access to print materials, public service announcements, websites, displays, materials and equipment	59	18.3

Table 56. Perceived effect of BNC’s Information, Education and Communication Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Perceived Effects	Frequency	%
No effect	71	22
Don’t know	21	6.5
Positive effect	180	55.7
Negative effect	6	1.9
Missing/no answer	45	13.9

Table 57. Success Level of BNC’s Information, Education and Communication Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Success Level	Frequency	%
Failure	60	18.6
Somewhat failure	18	5.6
Neither Successful nor failure	31	9.6
Somewhat Successful	76	23.5
Successful	87	26.9
Don’t know	5	1.5
Missing/no answer	46	14.3

4.3.6 Perceived Benefits derived from Mine Technology and Geosciences Programs

The Mine Technology and Geosciences (MTG) Programs of BNC are intended for the company’s personnel who are involved in the mining operations. Data gathering was done with the 43 BNC personnel only as respondents, particularly those in the engineering, safety and health, and mine departments. The instrument was a 2-page key informant interview (KII) questionnaire (**Appendix 3**).

The MTG program of BNC has significant positive effect as perceived by 88.4% of the BNC personnel respondents (**Table 58**). In terms of the perceived success level of the BNC’s SMDP for Mine technology and Geosciences, the program is “successful” as expressed by 51.2% of the respondents. This was followed by 41.9% who perceived it to be “somewhat successful” (**Table 59**).

Table 58. Perceived effect of BNC's Mine Technology and Geosciences Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 43).

Perceived Effects	Frequency	%
No effect	0	0
Don't know	2	4.6
Positive effect	38	88.4
Negative effect	2	4.6
Missing/no answer	1	2.4

Table 59. Success Level of BNC's Mine Technology and Geosciences Programs of the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 43).

Success Level	Frequency	%
Failure	0	0
Somewhat failure	0	0
Neither Successful nor failure	1	2.2
Somewhat Successful	18	41.9
Successful	22	51.2
Don't know	2	4.7
Missing/no answer	0	0

To elicit more information, a key informant interview with officers of the concerned departments involved in the mining operation was also conducted. According to key informants, BNC provides opportunities to its rank-and-file employees to develop their skills through trainings. One of the trainings that the company provides is the training for backhoe operators participated in by women and Indigenous People (IP) who work as laborers, checkers, and spotters. There were trainees who are now backhoe operators, and to these respondents, this raised their income which enable them to support and provide for their families' needs. Moreover, those who were not employed at BNC, increased their opportunity to secure work outside the mining industry. For instance, after BNC operations suspension, the trained workers were able to secure work as backhoe operators in construction companies, and public works and highways.

Key informants also shared that BNC sends its personnel to the National Mapping and Resource Information Agency (NAMRIA) for basic and advance trainings on geographic information system (GIS). These trainings result in the workers' ability to generate maps that aid the BNC

operators in making informed decisions. Maps are used to identify the specific area to be mined, which minimizes environmental disturbance and lessens the operational costs. Moreover, the monitoring of the air and water quality and noise level in the whole area (mine site and roads) of operation are enhanced through the GIS maps.

4.4 Social Integration and Cohesion of Households

Respondents were asked questions to determine their social integration and cohesion. The survey results as reflected in Table 60 show that most of the household respondents (75.2%) have a good relationship with project implementers of BNC. Asked about circumstances that affect their relations with BNC project implementers, most answers were “lack of programs conducted in their place” as mentioned by 15 or 4.6%, and their “inability to avail of livelihood programs” as claimed by 10 or 3.1%. Also mentioned by respondents was that BNC had delivered no tangible programs (7.7%), there is visible corruption among the implementers (4.6%) and there is unfair distribution of benefits (3.1%). Furthermore, when asked if they had disputes with other households in the past, only 25 or 7.7% responded affirmatively. Disputes, according to 32%, were resolved through the barangay officials and intervention of tribal leaders (28%).

Table 60. Social integration and cohesion of sample households in the impact communities of Berong Nickel Corporation, Quezon, Palawan (n = 323).

Social Integration and Cohesion Characteristic	Frequency	%
<u>Has good relations w/ people implementing BNC projects</u>		
Yes	243	75.2
No	40	12.4
Depends on circumstances	8	2.5
<u>Circumstances that affect good relations w/ people implementing BNC projects</u>		
No beneficial program conducted	6	1.9
Not good relationship with their employees	3	0.9
The residents was not able to avail any programs	3	0.9
No programs conducted in their place	15	4.6
Was not able to avail livelihood program	10	3.1
<u>Reasons for bad relations w/ people implementing BNC projects</u>		
Unfair distribution of the benefits	10	3.1

Unaware of the programs	6	1.9
No tangible programs delivered by BNC	25	7.7
Unfulfilled promises	7	2.2
Visible corruption of the people implementing	15	4.6
Not applicable		
<u>Had disputes with another household in the past</u>		
Yes	25	7.7
No	259	80.2
<u>How disputes were resolved, n = 25</u>		
Diplomatic resolution	5	20
Intervention of the tribal leaders	7	28
Resolving it through family members	5	20
Resolving through the barangay officials	8	32

4.5 Summary

Residents of the host and neighboring community of Berong Nickel Corporation (BNC), Barangays Berong and Aramaywan, Quezon, Palawan are generally aware of BNC's mining operations and its Social Development and Management Program (SDMP), particularly its education, livelihood and health and nutrition program. Household respondents are least aware of the Mine Technology and Geosciences (MTG) Program and Information, Education and Communication (IEC) Program components of BNC SDMP. The residents' sources of information about the company are barangay officials/leaders, relatives, friends/acquaintances and village meetings.

Majority of the sampled households perceived SDMP as most beneficial in the barangay level particularly through the scholarship program, educational assistance and support to school. The sampled households believe that BNC's education programs have a positive effect. On its success level, 56% of household respondents perceive that it is between successful or somewhat successful while 16.4% deemed it as failure. The suggested improvements and additional projects for the education program are faster procurement process, construction of school dormitory, scholarship program for teachers, electrification project, scholarship for medicine-related courses, support to senior high school technical vocational courses and allocation from PTA contribution for non4P members.

Livelihood programs under BNC's SDMP is also perceived to be most beneficial in the barangay level with the implementation of programs or projects for the development of agroforestry, aquaculture and fishing. Taraw cave, a potential eco-tourism site in Barangay Aramaywan was also developed through the program. The household respondents' majority considered the projects to have positive effect. BNC's success level was perceived to be between successful and somewhat successful by 48.3% of household respondents while 19.8% said that it is a failure.

Like the other programs, household respondents regarded the health programs of BNC to be most beneficial at the barangay level because of its contribution to the capacity building of barangay health workers and improvement of health facilities and support infrastructures. BNC's health programs are considered by most respondents to have positive effect, 57.3% also perceive its success level to be between successful and somewhat successful. The suggested improvements for the health programs in Berong are provision of additional medicines and equipment, hiring of community doctor, and conduct of medical mission in the barangay at least once a month. For Barangay Aramaywan, the construction of a better health facility was suggested.

The implemented socio-cultural development programs of BNC helped on the enhancement of socio-cultural processes that promote community cohesion, and in the improvement of community facilities and skills that enhance the state of community and social well-being, most particularly in the barangay level. Majority of household respondents' perception on the programs is that it had a positive effect in their community (59.1%) while some 21.1% said it had no effect. The program's success level is determined to be between successful and somewhat successful by 57.3% of respondents while 17.6% perceived it as failure.

Benefits derived by the respondents from the Information, Education and Communication (IEC) are access to print materials, public service announcements, websites, displays, materials and equipment, and public consultations, fora, seminars, training and other face-to-face gatherings, which were said to be most helpful in the barangay level. More than half of the respondents

believe that the programs have positive effect. On the perceived success level for the IEC programs of BNC, 50.4% said it was between successful and somewhat successful, while 18.6% believed that it was a failure.

The Mine Technology and Geosciences (MTG) Programs of BNC benefits the company's employees involved in its mining operations particularly women and Indigenous Peoples through training for backhoe operators and, basic and advance trainings on geographic information system. The programs were perceived to be somewhat successful and useful for responsible mining.

In their social integration and cohesion, majority of household respondents have a good relationship with project implementers of BNC. The said circumstances that affect their relations with BNC project implementers are lack of programs conducted in their community, inability to avail of livelihood programs, no tangible programs delivered, visible corruption among implementers and unfair distribution of benefits. Only 7.7% of household respondents said that they had disputes with other households in the past which were resolved through the barangay officials and intervention of tribal leaders.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Conclusions

State of development in the BNC's impact areas and the priority development needs of the communities

- Results of the study show that majority of the household members of the impact areas of Berong Nickel Corporation are literate having at least primary education and having attended secondary education. Majority of their children are studying, 5.6% of whom are enjoying scholarship, and 3.7% are scholars of Berong Nickel Corporation. While the most number claimed that they are satisfied with the school facilities, the common reasons for those who do not attend school was lack of financial support.
- Farming and working as employees were the top primary and secondary livelihoods of the people in the impact areas. With the majority claiming to have no savings, the respondents' top household expenditures in the past four to five years up to present are food, education, and healthcare which basically belong to the most basic level in the hierarchy of needs. With most number of respondents declaring average yearly income of less than P40,000, many live below the poverty line.
- Only the central areas of the impact barangays of Berong and Aramaywan have electricity which is not very reliable due to low voltage and frequent power outage. With domestic water accessed through water pumps, plumbing outside the house and deep well, most households have exterior toilet facility without flush tanks. Wastewater mostly goes into a septic tank disposed regularly while some goes into the common sewerage system and few others discharging wastewater directly to a river or land. Solid wastes are disposed through burying, burning and a combination of both.
- Development needs as identified by household respondents in the impact areas are access to reliable electricity supply, potable drinking water, alternative employment and livelihood opportunities, better healthcare, better roads and transportation services.

Socio-economic impact of SDMP on the lives of the residents in the impact communities in its 5 years of implementation

- Compared to five years ago, majority claimed to have the same income status and standard of living and that there has been no significant changes in the following livelihood sources: lowland agriculture, agroforestry and fishery, and skill-based employment. With basic physiological needs and social services as top household expenditures in the past 4 to 5 years up to present and with the claim to have no savings, it appears that that improvements brought about by BNC's livelihood programs have not impacted much economically. The economic impact of the SMDP program will understandably take much longer time to appear than social impacts.
- Respondents, however, claimed to "have better health condition" compared to 5 years ago attributed to better healthcare services available in the community, more capable community health workers, better capacity of household to afford better healthcare services in the community, better medical services provided by civil society groups, to BNC's health and nutrition program, and better sanitation. The few who claimed their health is worse attributed the situation to their inability to access healthcare services in the community or barangay due to costs and unsanitary conditions.
- Study results shows that of the small majority of 19 respondents (5.9%) who claimed to be enjoying scholarships at present, majority of 12 (____%) are BNC scholars, giving the education program some degree of prominence to the impact communities. Secondary sources also showed that since 2011, there has been 181 scholarships granted by the BNC through the education program.

Perceptions of respondents regarding the performance and impacts of the projects of the BNC's SDMP in the past five years;

- Residents of the impact communities of the Berong Nickel Corporation are generally aware of the mining operations and its Social Development and Management Program (SDMP), particularly its education, livelihood, health and nutrition, socio-cultural and information, education and communication programs which they perceived to have positive effects with level of success of “somewhat successful” to “successful”. The analysis of the respondents’ perceived performance of the SMDP shows that majority of the respondents identify with BNC and are proud to work in the Corporation; appreciate the changes brought about by the BNC’s SMDP initiatives; are satisfied with the better image of their barangays; welcome the higher comfort levels brought about by the programs; and are positive about the SMDP programs because of perceived overall social and economic benefits. Respondents generally value the SMDP programs because they help brought about improvements in the barangays and help enhance the sense of place and quality of life.

Best practices on SDMP programs and projects that need to be scaled up and replicated in other areas

- One best practice of Berong Nickel Corporation is addressing the social dimension through stakeholder commitment. Needless to say, getting stakeholders involved is the first step towards making a commitment, and making a commitment makes people more likely to act. This is seen in the effort to involve barangay leaders who are given the privilege and power to determine and prioritize specific programs and activities for an allocated budget from BNC for the implementation of its various programs and disburse funds. Afterall, it is the barangay and sitio leaders who will liaise and network with other members of the community to help ensure acceptability of the project and social response.
- The practice of SDMP project implementers in conducting trainings for capacity building on small groups or by sectors are more effective than a convention-type gathering of

participants having varied needs and interests. Moreover, trainings held on the beneficiaries respective communities are well preferred as it is cost and time efficient, and encouraged more community participation.

- Assessing program impacts and the beneficiaries' attitudes towards it through socio economic studies by commissioning third parties is very helpful, although this would largely depend on the method chosen. Interviews conducted by a third party encourages more truthful answers than when interviews or studies are conducted by project implementers themselves.
- The support of BNC to schools, particularly its provision of generators and solar power system, educational infrastructure and facilities, supplies and materials, may have played an important role in the enhancement of instructional delivery especially during the pandemic.
- Provision of on-the-job training and employment opportunities to BNC scholars gives more value and impact to SDMP's education program.

Recommended social development programs and projects to address development needs of the mining impact communities which the BNC may pursue in the future.

- The program's livelihood component, done in coordination with barangay and municipal LGUs, can be maximized by capacitating the community in designing support programs for alternative livelihood. This is to help the community sustain some sources of living after the decommissioning of the mining operations in the place. This is especially considering that income of most households in Barangays Berong and Aramaywan are presently just enough to satisfy their daily needs and income from farming which happens to be still the major source of income of most southern Palawan communities is very

minimal. Capacitating the community with a supplementary livelihood early on will help improve household income and save for the future.

- As there are expressions of disillusionment in some sitios, BNC may consider looking into their situations that may need more livelihood and capacity building assistance so these areas may also avail of livelihood opportunities and prosper along with the others.
- Improper solid waste disposal and direct discharge of wastewater to the bodies of water or land as practiced by some households will pose environmental risks in the future if left uncorrected. Development of a comprehensive plan for sewage treatment facility/system, and solid waste management may be one project the BNC wants to pursue in coordination with the barangay and munisipal LGUs.
- As the IEC component of SDMP is intended to conduct public consultations, fora, seminars, training and other face-to-face gatherings and make IEC materials accessible to the impact communities, the program implementation may be improved to play a vital role in:
 - a) making the community understand and appreciate better the BNC's mining operations and practices geared towards environmental and sustainable development; and
 - b) help address acceptance issues (e.g. feeling of disempowerment, disillusionment or being distrustful of disseminated information and services) that would have been identified earlier so the BNC can start adapting the project activities or taking these aspects into account for future improvement of the program.

- Provision of technical assistance for farmers to identify suitable crops and products with high economic value along with the basic farm inputs through schemes that will make their venture self-sustaining in the future (e.g. loans) will help farmers maximize the use of their lands and make farming a worthwhile source of main or additional income for their families.
- Market linkage for communities' produce/products other than capacity building for income generation;
- Taking from the suggestions of the participants in the FGD, scholarship may be allocated for medicine-related courses because this could be a long term solution to the barangays' need of health workers.
- Conduct of trainings, provision of scholarships or support for technical vocational courses (e.g. mechanics, electric wiring, bread and pastry making, dressmaking, etc.) will open more employment opportunities to those who can no longer afford to attend tertiary education;
- BNC may also consider planting suitable plant species in the roadsides where there is considerable volume of dust generation from its activities to help abate air pollution.

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Appendix 2

SOCIO-ECONOMIC IMPACT ASSESSMENT OF BERONG NICKEL CORPORATION'S IMPLEMENTATION OF THE SOCIAL DEVELOPMENT AND MANAGEMENT PROGRAM (SDMP)

EBALWASYON NG EPEKTO SA LIPUNAN AT EKONOMIYA NG IPINATUTUPAD NA MGA PROGRAMA PARA SA KAUNLARAN NG LIPUNAN (SDMP) NG BERONG NICKEL CORPORATION (BNC)

SURVEY QUESTIONNAIRE *Paniyasat na mga Katanungan*

Dear Respondent:

I am a researcher of Palawan State University, which has been commissioned by the Berong Nickel Corporation (BNC) to do SOCIO-ECONOMIC IMPACT ASSESSMENT of the Implementation of its Social Development and Management Program (SDMP). As you know, SDMP and CRDP have been implemented by BNC in your barangay. This survey seeks to explore the socio-economic impact of the programs related to education, health, livelihood, socio-cultural, information, education and communication, and mine technology and geoscience program. It will also seek to get the opinions of resident in your barangay with the aim of identifying potential social impacts. Your contribution will help us assess the relevance and potential social impacts of the programs and improve implementation of the programs that people may find wanting. Thank you very much for your honest answers and contribution to this survey.

The Researcher

Ako po ay mananaliksik ng Palawan State University na naatasan ng Berong Nickel Corporation na magsagawa ng Ebalwasyon sa Epekto sa Lipunan at Ekonomiya (Socio-Economic Impact Assessment) ng Ipinatutupad na mga Programa Para sa Kaunlaran ng Lipunan at Ang Pangangasiwa ng mga Programa Para sa Kaunlaran (Social Development and Management Program/SDMP). Ang SDMP ay programang ipinatutupad ng Berong Nickel Corporation (BNC) sa inyong barangay. Nilayon ng pananaliksik na ito na alamin o tuklasin ang epekto sa lipunan at ekonomiya ng mga na programang may kaugnayan sa edukasyon, kalusugan, kabuhayan, kultura, impormasyon/kabatiran, edukasyon at komunikasyon, teknolohiya, agham, at heyograpiya. Ninanais din nitong alamin ang inyong opinyon na mga naninirahan sa barangay na ito sa layuning matukoy ang mga kapaki-pakinabang na epekto nito sa inyo, sa komunidad, at lipunan. Ang inyong pakikiisa sa pamamagitan ng pagsagot sa mga katanungan ay labis na makatutulong sa amin upang magkaroon ng tumpak at wastong ebalwasyon sa kahalagahan at kapaki-pakinabang na epekto nito, gayon din upang lalong mapagbuti ang implemetasyon at pagpapatupad ng mga nabanggit na programa para kapakanan ng lahat.

Ang Mananaliksik

HOUSEHOLD NO: _____	DATE: _____
SITIO: _____	BARANGAY _____
NAME OF THE RESPONDENT: _____	
AGE OF THE RESPONDENT: _____	
GENDER: 1 () Male 2 () Female	

1 ()	Interview is administered to the household head
2 ()	Interview is administered to a close family member (Specify: _____)

His or her relationship to household head _____

A. HOUSEHOLD CHARACTERISTICS

PAGKAKAKILANLAN NG MIYEMBRO NG PAMILYA

A1. Total number of household members _____

A2. Member	A3. Name	A4. Gender 1. Female 2. Male	A5 Age	A6. Relationship to Head (See Codes below)	A7. Marital Status (See Codes below)	A8. Is the family member literate or illiterate? 1. Illiterate 2. Literate	A9. What is the current/last school that the family member is attending/has graduated? (See Codes below)
1							
2							
3							
4							
5							
6							
7							
8							
Codes for A6 1. Household Head 2. Wife/Husband 3. Son 4. Daughter 5. Son/daughter In-Law 6. Grandchild		7. Parent 8. Brother/Sister 9. Grandparent 10. Others (Specify) 999. I do not know	Codes for A7 1. Single 2. Married 3. Divorced 4. Widowed 5. Separated 999. I do not know	Codes for A9 1. Below school age 2. Hasn't graduated from any institution 3. Primary School Student	4. Primary School graduate 5. Junior High school Student 6. Junior high school graduate 7. High School student	8. High School graduate 9. Vocational School of Higher Education Student	10. Vocational School of Higher Education Graduate 11. University Student 12. University Graduate 13. Masters Student 14. Masters Graduate 15. Doctorate Student 16. Doctorate Graduate 999. I do not know

Member No (Enter continuing from the above table)	A10. Has the household member worked in an occupation which brings income in the last 3 months? <i>May miyembro ba ng pamilya na nagtatrabaho at siya ang sumusuporta sa pamilya sa nakalipas na tatlong buwan?</i> 1. Yes 2. No 999. I do not know	A11. If household member is not working, please mention the reason. 1. Retired 2. Student 3. Housewife (Only for female spouses) 4. Cannot find a job 5. Pregnant 6. So ill that he/she cannot work 7. Too old 8. Too young 9. Handicapped 10. Does not need to work 11. Looks after house works 12. Looks after elderly 13. Looks after children 14. Not allowed to work (e.g. female members) 15. Does not want o work 16. Other (please specify) 998. Not applicable	A12. What is/are the household members' occupations?		A13. Who is s/he working for?		A14. Does s/he need to live outside the village to do this job? <i>Kailangan niya bang manirahan sa ibang sa lugar upang magawa/pumasok sa trabaho?</i> If yes please state how many months a year, If no please enter zero. 999. I do not know	
			Primary occupation	Secondary occupation	Primary occupation	Secondary occupation	Primary occupation	Secondary occupation
			1	2	3	4	5	6
1								
2								
3								
4								
5								
6								
7								
8								

HOUSEHOLD CHARACTERISTICS (CONTINUED) *PAGKAKAKILANLAN NG MIYEMBRO NG PAMILYA (karugtong)*

LANGUAGES/DIALECTS SPOKEN - MIGRATION *WIKA/DIYALEKTONG GINAGAMIT NG MGA NANDARAYUHAN*

A14. Do household members speak, understand and/or write a language other than Filipino? *Ang mga miyembro ba ng pamilya ay nakapagsasalita at/o nakaiintindi ng ibang wika/diyalekto maliban sa Filipino/Tagalog?*

1. Yes _____ (state which language) _____ 2. No _____

A15. How long have you been living here as household/family? _____ years
Gaano na ba katagal na naninirahan dito ang inyong pamilya?

A16. Have you, as a household, ever lived in another place, such as another village, another town, or abroad, for three or more months at one time? If yes, where have you lived before? *Ang inyo bang pamilya ay nakaranas nang manirahan sa ibang lugar/bayan, o bansa sa nakalipas na tatlong buwan o mahigitpa? Kung oo, saang lugar ito?*

1. Yes _____ (state which city/district/village) _____ 2. No _____ (Go to Section B)

A17. Why did you move here? *Bakit kayo lumipat dito* (Tick as much as relevant)

- 1 () Schooling of children *dahil sa pag-aaral ng anak/mga anak*
- 2 () Look for work *naghanap ng trabaho*
- 3 () Start new job *pumasok ng bagong trabaho*
- 4 () Escape war/ violence *umiwas sa gulo/giyera*
- 5 () Escape drought/ famine *umiwas sa kahirapan/tagtuyot*
- 6 () Escape a family conflict *umiwas sa di-pagkakaunawaan/gulo ng pamilya*
- 7 () Other (specify) *Iba pa, pakibanggit*

A18. Had any of your relatives/friends lived here before you came? *May mga kamag-anak o kaibigan ka bang naninirahan sa lugar na ito bago kayo lumipat dito?*

1. Yes _____ 2. No _____

A19. Did they help you with your settlement? *Tinulungan ba kayo sa inyong paglipat dito?*

1. Yes _____ (state how) _____ 2. No _____

A20. Was it easy to settle here? *Naging madali ba para sa inyo ang paglipat dito?*

1. Yes _____ 2. No _____

A21. Did you experience any difficulty when you came? *Nakaranas ka ba ng hirap nang lumipat dito?*

1. Yes _____ 2. No _____ Please explain if yes.

B. INCOME, EXPENDITURE AND SAVINGS *KITA, GASTOS, AT IPON*

B1. What are the main income sources of your family? *Ano ang pangunahing pinagkakikitaan ng inyong pamilya?*

(Read all the options to the interviewee. 1 important, 2 less important, 3 least important, 0 none)

1. Mahalaga, 2. Di-gaanong mahalaga, 3. Hindi mahalaga, 0. Wala

	Importance
1.Wage/salary <i>Sweldo</i>	
2.Farming <i>Pagsasaka</i>	
3.Husbandry <i>Mahusay na pamamahala ng kabuhasan</i>	
4.Wood and wood products <i>Pagbuo/Paggawa ng mga produktong yari sa kahoy</i>	
5.Tourism <i>Turismo</i>	
6.Trading <i>Negosyo / Pakikipagpalitan ng Kalakal</i>	
7.Rental income <i>Paupahan</i>	

8.Assistance of relatives <i>Tulong ng Kamag-anak</i>	
9.Pensions	
10.Poverty funds <i>Tulong/ayuda para sa mahihirap</i> (Pls. state one_____)	
11.Other governmental aids/assistance (i.e. unemployment wage) . <i>Iba pang tulong/ayuda ng pamahalaan (hal. tulong sa mga walang trabaho)</i>	
12.In kind aids from the government <i>Mga bigay ng pamahalaan (bigas, atbp)</i>	
13. Aids/assistance from NGOs <i>Tulong mula sa mga pampribadong tanggapan/samahan/organisasyon/asosasyon</i>	
14.Allowances for elderly <i>Ayuda/Suporta sa mga matatanda</i>	
15. Other (please specify) <i>Iba pa (pakibanggit)</i>	

B2. What is the average **monthly** income of the household? (Other than subsistence production) *Magkano ang regular/karaniwang kinikita ng inyong pamilya sa isang buwan?* (Maliban sa iba pang pinagkukunan)

B3. What is the average **yearly** income of the household? (Other than subsistence production) *Magkano ang regular/karaniwang kinikita ng inyong pamilya sa isang taon?* (Maliban sa iba pang pinagkukunan)_____

- B4. How do you consider yourself? *Paano mo kinikilala ang iyong sarili?*
- 1

() Very poor *napakahirap*
- 2

() Poor *mahirap*
- 3

() Lower middle income level *mababa ang kinikita sa dapat na kita*
- 4

() Middle income level *katamtaman ang kita*
- 5

() Higher middle income level *mataas sa dapat na kita*
- 6

() Rich *mayaman*
- 7

() Very rich *napakayaman*

B4. Do you do any subsistence production? Please state the approximate equal value of your subsistence production (enter zero if not produced). *Mayroon ba kayong ibang produkto/produksyon mula sa inyong sariling pagsisikap? Pakibanggit ang tinatayang halaga ng inyong kinikita mula sa inyong sariling produkto/produksyon? (Isulat ang sero (o) kung walang produkto/produksyon).*

fruits/ vegetables etc. <i>Prutas/Gulay, atbp.</i>	egg, milk and milk products <i>Itlog, Gatas at mga produktong gawa sa gatas</i>	meat <i>karne</i>	other (please specify)	total (to be filled by the surveyor)
PhP	PhP	PhP	PhP	PhP

B5. How much do spend monthly for food/drinks? *Magkano ang gastos ninyo sa pagkain at tubig sa isang buwan?*_____(PhP)

B6. How much do you spend monthly for electricity? *Magkano ang gastos ninyo sa elektrisidad sa isang buwan?*_____(PhP)

B7. How much your health expenditures cost annually? *Magkano ang gastos ninyo sa pagpapanatili ng inyong mabuting kalusugan sa isang taon?*_____(PhP)

B8. How much your children’s (if exist) schooling expenditures cost annually? *Magkano ang gastos ninyo sa pag-aaral ng inyong mga anak (kung mayroon) sa loob ng isang taon?*_____(PhP)

B9. How much do you save yearly? *Magkano ang inyong naiipon sa isang taon* _____ (PhP) (If the interviewee does not save, write zero and go to Section C)

- B10. How do you invest your savings? *Saan napunta ang inyong mga ipon?* (please tick as much as relevant)
- 1

() buy piece of land *binili ng lupa*
- 2

() buy other immovable properties business *binili ng iba pang di-natitinag na mga ari-arian (hal. bahay, gusali, atbp)*

- 3 () bank or cooperative (with an interest rate) *inilagak sa bangko o kooperatiba (patubuan)*
- 4 () invest in business *pinuhunan sa negosyo* (Please specify):_____
- 5 () Other (please specify) *Iba pa (pakibanggit)*_____

B11. In the past 4 years, and at present (2nd column), which of the following household expenditures cost you the most? With 1 as the highest, rank the following: *Sa nakalipas na apat na (4) taon at sa kasalukuyan, alin sa mga nakatala sa ibaba ang nagkaroon kayo ng pinakamalaking gastusin? Lagyan ng bilang ayon sa pagkakasunod-sunod. Ang bilang isa (1) ang siyang pinakamataas*

Expenditures Past 4-5 Years Ago (Please rank.) <i>Ang mga pinagkagastusan mula sa nakalipas na 4-5 taon</i>	Expenditures At Present (Please rank.) <i>Ang mga pinagkagastusan mula sa kasalukuyan</i>
_____ Food <i>pagkain</i>	_____ Food <i>pagkain</i>
_____ Education <i>edukasyon</i>	_____ Education <i>edukasyon</i>
_____ Health care and medicine <i>kalusugan at gamot</i>	_____ Health care and medicine <i>kalusugan at gamot</i>
_____ House rental <i>upa sa bahay</i>	_____ House rental <i>upa sa bahay</i>
_____ Fuel <i>pangluto o pangsasakyan</i>	_____ Fuel <i>pangluto o pangsasakyan</i>
_____ Bills for utilities <i>bayarin sa ibang mga kagamitan sa bahay</i>	_____ Bills for utilities <i>bayarin sa ibang mga kagamitan sa bahay</i>
_____ Clothing <i>damit</i>	_____ Clothing <i>damit</i>
_____ Baby needs <i>pangangailangan ng sanggol</i>	_____ Baby needs <i>pangangailangan ng sanggol</i>
_____ Construction/repair of house <i>pagpapagawa/pagpapaayos ng bahay</i>	_____ Construction/repair of house <i>pagpapagawa/pagpapaayos ng bahay</i>
_____ Electricity/lighting <i>elektrisidad/kuryente</i>	_____ Electricity/lighting <i>elektrisidad/kuryente</i>
_____ Agricultural inputs <i>puhunan sa pagsasaka/agrikultura</i>	_____ Agricultural inputs <i>puhunan sa pagsasaka/agrikultura</i>
_____ Fishing inputs/equipment <i>puhunan at gamit sa pangangisda</i>	_____ Fishing inputs/equipment <i>puhunan at gamit sa pangangisda</i>
_____ Loan payment <i>bayad sa utang</i>	_____ Loan payment <i>bayad sa utang</i>
_____ Cable connection payment <i>bayad sa koneksyon sa telebisyon</i>	_____ Cable connection payment <i>bayad sa koneksyon sa telebisyon</i>
_____ materials for livelihood <i>kagamitan sa kabuhatan</i>	_____ materials for livelihood <i>kagamitan sa kabuhatan</i>
_____ Construction of boat <i>paggawa ng bangka</i>	_____ Construction of boat <i>paggawa ng bangka</i>
_____ Drinking water/water supply <i>inuming tubig</i>	_____ Drinking water/water supply <i>inuming tubig</i>
_____ Personal expenses <i>personal na gastusin</i>	_____ Personal expenses <i>personal na gastusin</i>
_____ Grocery/household necessities <i>pangangailan sa bahay/grocery</i>	_____ Grocery/household necessities <i>pangangailan sa bahay/grocery</i>
_____ Savings <i>ipon</i>	_____ Savings <i>ipon</i>
_____ Others (pls specify) <i>iba pa (pakibanggit)</i>	_____ Others (pls specify) <i>iba pa (pakibanggit)</i>

B12. What is the reason for the change of household expenditures? State briefly. *Ano ang dahilan sa mga pagbabago ng mga gastusin sa pamamahay. Pakipaliwanag.*

C. AGRICULTURE AND OTHER SOURCES OF LIVELIHOOD
GAMIT NG LUPA/LUPAIN AT AGRIKULTURA

- C1. Do you (or a member of your household) do farming or any other source of livelihood?
Mayroon ka ba (o miyembro ng inyong pamilya) na lupang sinasaka o nagsasaka?

1. Yes _____

2. No _____ (Go to Section D)
- C2. How did you acquire the land? *Paano kayo nagkaroon ng lupa/lupain?*

1 () purchase *binili*

2 () inheritance *minana*

3 () Comprehensive Agrarian Reform Program *galing sa pamahalaan sa pamamagitan ng*

Komprehensibong Programa sa Repormang Pansakahan (Agrarian Reform Program)

- 4 () rights / waiver of rights *pagkakaloob ng karapatan*
- 5 () agreements with barangay official/chieftain as witness *kasunduan sa pagitan ng opisyal ng barangay/ pinuno ng tribo bilang mga saksi*
- 6 () Others *Iba pa (pakibanggit) _____*

C3. How many parcels do you own/cultivate and how large are they? *Ilang lote ang inyong pag-aari/sinasaka at gaano ito kalaki?*

1 () less than a hectare *walang isang ektarya*

2 () 1 – 3 has *1 – 3 ektarya*

3 () 4 – 6 has *4 – 6 ektarya*

4 () 7- 10 has *7 – 10 ektarya*

5 () more than 11 has (please specify) _____ *labis sa 11 ektarya (pakibanggit) _____*

C4. Parça No. <i>Parça Blg.</i>	C5. Ownership status <i>Istatus sa Pag- aari ng lote/ lupain</i> 1. I own and cultivate this land <i>Pag-aari at sinasaka</i> 2. I own but don't cultivate this land <i>Pag-aari ngunit di sinasaka</i> 3. I rent this land from someone else <i>Nag-uupa sa lupain ng iba</i> 4. I rent out this land <i>Pinapaupahann ang lupain</i> 5. I have a shareholder <i>May kasosyo</i> 6. Other (please specify)	C6. Is the land irrigated? <i>May patubig /irigasyon ba ang lote/ lupain</i> 1. Yes 2. No 999. I do not know	C7. The size of the parcel (ha) <i>Sukat ng lote/ lupain (Ilang ektarya)</i>	C8. What do you cultivate on this land? <i>Ano ang inyong itinatanim sa lote/ lupain</i>	C9. Who cultivates the land? <i>Sino ang nagsasaka?</i>	C10. What is the title/deed status of this land? <i>Ano ang istatus ng lote/ lupain?</i> 1. With title <i>Ano ang istatus ng lote/ lupain?</i> 2. With rights/tax declaration <i>May deklarasyon sa buwis/karapatan</i> 3. Without title or deed <i>Walang titulo /walang kasulatan</i> 3. Customary <i>Angkin-angkin lamang</i> 4. Other _____ _____ 999. I do not know	C11. How do you use the products? <i>Ano ang ginagawa ninyo sa inyong mga produkto?</i> 1. For subsistence <i>Para sa sariling pangangailangan</i> 2. Selling at internal markets <i>Ibinibenta sa mga kapitbahay</i> 3. Selling at external markets <i>Ibinibenta sa palengke</i> 4. Other _____ _____ 999. I do not know	C12. What is the approximate value of the product? (PhP) <i>Magkano ang tinatayang halaga ng inyong mga produkto?</i>
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C13. What happened to the following sources of income/livelihood in the last 5 years? Check the appropriate column of those that apply. *Ano ang nangyari sa inyong pinagkikitaan/ pinanggagalingan ng kabuhayan/hanapbuhay sa nakalipas na mga taon? Pakilagyan ng stek (/) ang katapat na naaangkop.*

Sources of Livelihood <i>Pinagkikitaan/ Pinanggagalingan ng Kabuhayan</i>	Status <i>Kalagayan</i>		
	1. Improved <i>Umunlad</i>	2. Did not improve <i>Hindi Umunlad</i>	3. Did not change <i>Hindi Nagbago</i>
Lowland agriculture <i>Produktong pang-agrikultura/Pananim</i>			
Agroforestry <i>Produkto sa gubat/pangngungubat</i>			
Fishery <i>Pangingisda</i>			

Skill-based employment <i>Kasanayan/nakabisaang trabaho</i>			
Others (specify) <i>Iba pa, pakitukoy</i>			

- C14. Why did the source of livelihood improve? (Please tick as much as relevant) *Bakit umunlad ang pinagkukunan/pinanggagalingan ng inyong kabuhayan? Pakilagyan ng stek (/) ang mga naaangkop*
- ☐ the quality of seeds got better *bumuti ang kalidad ng binhi*
 - ☐ Usage of chemical fertilizers and pesticides have increase *paggamit ng pampatabang kemikal at dumami ang kemikal na pamatay-insekto*
 - ☐ Usage of organic fertilizers have increased *dumami ang organikong pampataba*
 - ☐ Irrigation has improved *gumanda at umayos ang patubig/irigasyon*
 - ☐ Attended related training and seminar from BNC's SMDP *dumalo sa mga pagsasanay at seminar ng BNC hinggil sa pagpapaunlad ng kabuhayan*
 - ☐ Road access making transportation of inputs possible *naging maayos ang mga kalsada para sa transportasyon*
 - ☐ I bought agricultural vehicles *bumili ng sasakyang pang-agrikultura*
 - ☐ At least one member of the household availed of BNC's SMDP for livelihood *Magkaroon man lamang ng kahit isa sa mga miyembro ng pamilya ang mapagkalooban ng BNC sa kanilang inilulunsad na programa sa pangkabuhayan*
 - ☐ Other, please specify *Iba pa (pakibanggit)*_____

- C15. Why did the source of livelihood not improve? (Please tick as much as relevant) *Bakit hindi umunlad ang pinagkukunan/pinanggagalingan ng inyong kabuhayan? Pakilagyan ng stek (/) ang mga naaangkop*
- ☐ Erosion *pagguho ng lupa / erosyon*
 - ☐ Lack of agricultural or farm inputs and vehicles *walang transportasyong pang-agrikultura*
 - ☐ Not using enough fertilizer/pesticide *hindi gumagamit ng sapat na pampataba at pamatay insekto*
 - ☐ Lack of labor *walang nagtrabaho*
 - ☐ Low product prices *mababa ang bilihan ng mga produkto*
 - ☐ lack of assistance from any concerned institution *kawalan ng tulong mula sa mga kinaukulang ahensya/institusyon*
 - ☐ Other, please specify *Iba pa (pakibanggit)*_____

D. HOUSING AND INFRASTRUCTURE *PABAHAY AT IMPRASTRAKTURA*

- D1. What is your ownership status of your house? *Ano ang istatus ng inyong pagmamay-ari ng inyong bahay?*
- ☐ Owner of the house *sariling pag-aari*
 - ☐ Renter (If so how much is the rent?)_____ *nag-uupa (magkano ang upa sa isang buwan?)*_____
 - ☐ Provided by employer *ipinagkaloob ng pinapasukan/pinagtrabahuan*
 - ☐ User not paying rent *nakatira ng walang bayad*
 - ☐ Other *Iba pa (pakibanggit)*_____
 - ☐ I do not know *Hindi ko alam*

- D2. What is the main building material? (The surveyor should make observation and confirm it with the interviewee. Tick only one) *Ano ang pangunahing materyales ang ginamit sa inyong bahay/gusali?*
- ☐ Brick *tisa*
 - ☐ Concrete *kongkreto*
 - ☐ Wooden *kahoy*
 - ☐ Stone *bato*
 - ☐ Soil *lupa*
 - ☐ Other (specify) *Iba pa (pakibanggit)* _____
 - ☐ I do not know *Hindi ko alam*

- D3. How many rooms are there in your house (including the living room)? Rooms
Ilan ang silid ng inyong bahay? (Kasama ang sala?) _____*silid*

- D4. What is the domestic water source in your house? *Saan sa mga nakatala sa ibaba kayo kumukuha ng tubig na inyong ginagamit sa loob ng bahay?*
- ☐ Plumbing inside the house (bathroom, kitchen, faucet) *may koneksyon ng tubo sa loob ng bahay (banyo, kusina,gripo)*
 - ☐ Water pump /tubig puso *puso/water pump*

- 3 () Deep Well *balon*
- 4 () Village fountain *bukal para sa lahat sa lugar*
- 5 () Water tank *tangke ng tubig*
- 6 () Plumbing outside the house *may koneksyon ng tubo sa labas ng bahay*
- 7 () streams or rivers *bukal o ilog*
- 8 () Other (please specify) *Iba pa (pakibanggit)* _____

D5. Do you have any problems with water supply? *May problema ba kayo sa suplay/daloy ng tubig?*

1. Yes _____
2. No _____

D6. What are your problems with water supply? (Tick as much as relevant. Can be more than one)

Ano ang problema ninyo sa suplay/daloy ng tubig? (lagyan ng tsek (/) ang naaangkop, maaaring lumabis ng isa)

- 1 () Water cuts. How frequent? *pagkaputol sa suplay/daloy. Gaano kadalas?* _____
- 2 () Not clean *marumi*
- 3 () Expensive *mahal*
- 4 () Difficult to access *mahirap makaugnay*
- 5 () Low quality (hardness) *magaspang / mahirap lunukin*
- 6 () Other (please state) *Iba pa (pakibanggit)* _____

D7. Do you use domestic water for drinking purposes? *Umiinom ba kayo ng tubig na hindi dumaan sa makina o puripikasyon?*

1. Yes _____
2. No _____ (please state your drinking water source)

D8. Do you have any problems with drinking water supply? *May problema ba kayo sa suplay ng inuming tubig?*

1. Yes _____
2. No _____

D9. What are your problems with drinking water supply? (Tick as much as relevant. Can be more than one) *Ano ang inyong problema sa suplay ng inuming tubig?*

- 1 () Not clean *marumi*
- 2 () Expensive *mahal*
- 3 () Difficult to access *mahirap makaugnay*
- 4 () Low quality (hardness) *magaspang / mahirap lunukin*
- 5 () Other (please state) *Iba pa (pakibanggit)* _____

D10. What type of sanitation facility do you have? *Ano bang pasilidad- pangkalinisan mayroon kayo?*

- 1 () Interior WC with toilet flush tank *banyo na may palikuran sa loob ng bahay na may agarang pambuhos (flush) mula sa tangke*
- 2 () Exterior WC with toilet flush tank *banyo na may palikuran sa labas ng bahay na may agarang pambuhos (flush) mula sa tangke*
- 3 () Interior toilet without flush tank *banyo na may palikuran sa loob ng bahay ngunit walang agarang pambuhos (flush) mula sa tangke*
- 4 () Exterior toilet without flush tank *banyo na may palikuran sa labas ng bahay ngunit walang agarang pambuhos mula sa tangke (flush)*
- 5 () Public WC *pampublikong banyo/palikuran*
- 6 () Other (please specify) *Iba pa (pakibanggit)* _____

D11. What type of wastewater system do you have in your house? *Anong sistema ng suplay ng tubig ang inyong pinagkukunan para sa inyong bahay?*

- 1 () Common sewerage system *komon / para sa lahat*
- 2 () Septic tank disposed regularly by municipality *tangke na regular na pinapalitan ng munisipyo*
- 3 () Septic tank disposed regularly by him/herself *tangke na regular kong pinapalitan*
- 4 () Discharged directly to a river / land *daloy mula sa ilog/lupa*
- 5 () Other (please specify) *Iba pa (pakibanggit)*
- 6 () I do not know *Hindi ko alam*

D12. How are the solid wastes disposed? *Paano ba ninyo pinangangasiwaan ang inyong mga basura?*

- 1 () Municipality collects regularl *regular na kinukuha ng mga manggagawa ng munisipyo*
- 2 () Disposed to a predefined landfill *itinatapon lang kahit saan*
- 3 () Disposed to a wild disposal area *itinatapon sa malayong lugar*
- 4 () burried *binabaon sa lupa*

- 5 () Disposed to the river/lake *itinatapon sa ilog/lawa*
- 6 () Burning *sinusunog*
- 7 () using waste as compost *pinapabulok upang gawing*
- 8 () Other*Iba pa (pakibanggit)*_____
- 9 () I do not know *Hindi ko alam*

D13. Do you have electricity in your house? *Mayroon ba kayong koneksyon ng elektrisidad/kuryente sa bahay?*
 1. Yes _____ 2. No _____

D14. Do you experience any problems with electricity supply? *Mayroon ba kayong problemang nararanasan sa daloy ng kuryente?*
 1. Yes _____ 2. No _____

D15. What kind of problems do you experience? (Tick as relevant, you may tick more than one)
Anong problema ang inyong nararanasan sa daloy ng kuryente? (Lagyan ng tsek (/) ang mga naaangkop, maaaring lumabis ng isa)
 1 () Electricity cuts. How frequent?_____ *pagkawala sa daloy ng kuryente*
 2 () Low voltage *mababang boltahe*
 3 () Changing voltage *pabago-bagong lakas ng boltahe*
 4 () Other. Please specify *Iba pa (pakibanggit)*_____

D16. Which fuel do you mainly use for heating? (Tick one) *Ano ba ang karaniwang ginagamit ninyo sa pagluluto? (pumili lamang ng isa)*
 1 () fuel wood *kahoy*
 2 () gas *gas*
 3 () natural gas *ano mang uri ng pampadingas*
 4 () fuel oil *gasolina*
 5 () LPG *Liquified Petroleum Gas (LPG)*
 6 () Charcoal *uling*
 7 () Kerosene *petrolyo*
 8 () Combination of LPG & charcoal/wood *kombinasyon ng LPG at uling/kahoy*
 9 () Other..... *Iba pa (pakibanggit)*

E. EDUCATION *EDUKASYON*

E1. Do you have children 6-15 years old? *May anak ba kayong ang edad ay nasa pagitan ng 6-15 taong gulang?*
 1. Yes (state how many)..... 2. No (Go to section E)

E2. Do all your children go to school? *Lahat ba ng inyong mga anak ay nag-aaral?*
 1. Yes ____ (Go to E5) 2. No ____ (State how many of them do not go, and their genders)

E3. Do you have children enjoying scholarship? Yes_____ None _____
May anak ba kayong nag-aaral na iskolar?

E4. If yes, what kind of scholarship and who is the provider? _____
Kung mayroon? Ano ang uri ang kanyang scholarship? Sino ang nagkaloob? Ibigay ang buong detalye.

E5. Which schools do your children go? *Saan nagsipag-aral ang inyong anak/mga anak?*

E6. What other school assistance do your children enjoy and who provides them? *Ano pa ang ibang tulong sa pag-aaral ang natatanggap ng inyong anak/mga anak at sino ang nagkaloob?*

E7. If some children do not go to school, what is the reason for not going to school? *Kung ang ibang mga anak ay hindi nagsisipag-aral, ano ang dahilan at bakit hindi sila nagsisipag-aral?*

E8. Are you satisfied with the education facilities or infrastructures found in in your barangay/area?
Nasisiyahan/kontento ba kayo sa pasilidad pang-edukasyon at imprastraktura na matatagpuan sa inyong barangay?

1 Yes_____ 2 No _____

E9. Do you have any school or education–related problems/issues? Please explain.
Mayroon ka bang nakikitang problema/usapin/isyu sa paaralan na may kaugnayan sa edukasyon? Pakipaliwanag.

F. HEALTH *KALUSUGAN*

F1. Do any of household members have a permanent/chronic disease/health problem?
Mayroon bang miyembro sa inyong pamilya na may matindi/matagal ng sakit/problema sa kalusugan?

1. Yes _____ (please explain by giving the member code) 2. No _____

F2. Did any of the household members face a health problem which required treatment within the last 12 months? *Mayroon bang miyembro sa inyong pamilya na may problema sa kalusugan sa nakalipas na 12 buwan at kinailangan ang pagpapagamot?*

1. Yes _____ (please explain by giving the member code) 2. No _____

F3. Did any of the household members suffer from any contagious diseases within the last 12 months?
Mayroon bang miyembro sa inyong pamilya na may nakahahawang sakit sa nakalipas na 12 buwan?

1. Yes _____ (please explain by giving the member code) 2. No _____

F4. Did any of the household members suffer from any water borne diseases within the last 12 months? *Mayroon bang miyembro sa inyong pamilya na nakakuha ng sakit sa tubig sa nakalipas na 12 buwan?*

1. Yes _____ (please explain by giving the member code) 2. No _____

F5. When you experience a health problem, which health facility do you go to? *Kapag nagkakaroon kayo ng problema sa kalusugan, saang pasilidad pangkalusugan kayo dumudulog/pumupunta?*

F6. Are you satisfied with the health facilities in your barangay or in your area? Yes _____ No _____
Nasisiyahan ba kayo sa mga pasilidad pangkalusugan na matatagpuan sa inyong barangay?

F7. Do you experience any problem related to health care facilities or health providers in your area?
Nakaranas ba kayo ng problema sa inyong barangay na may kaugnayan sa pasilidad pangkalusugan o sa mga nangangalaga ng kalusugan sa inyong lugar?

Yes ____ Please explain. No_____

F8. If you are to compare your household health situation now and 4-5 years ago, how do you assess it?
Kung ihahambing ang kalagayan sa kalusugan ng inyong pamilya ngayon at sa nakalipas na 4-5 taon, paano mo tatayain?

1. _____ Much worse now than 4-5 years ago *lalong lumala ngayon kaysa nakalipas na 4-5 taon*
2. _____ Worse now than 4-5 years ago *lumala ngayon kaysa nakalipas na 4-5 taon*
3. _____ Neither better nor worse now than 4-5 years ago *di-bumuti di rin lumala ngayon at sa nakalipas na 4-5 taon*
4. _____ Better now than 4-5 years ago *bumuti ngayon kaysa nakalipas na 4-5 taon*
5. _____ Much better now than 4-5 years ago *lalong bumuti ngayon kaysa nakalipas na 4-5 taon*

F9. What do you think are the contributory factors to better household health situation?

Ano sa inyong palagay ang makatutulong upang mapagbuti ang kalagayang pangkalusugan ng pamilya?

1. ☐ Better health care services are now available in the community.
pagkakaroon ng mahusay na serbisyo sa pangangalaga sa kalusugan sa komunidad
2. ☐ I can afford to get better health care services either in the community or in another location.
makakuha nang mahusay na serbisyo ng pangangalaga sa kalusugan ng komunidad o sa ibang lugar.
3. ☐ Drinking water supply is cleaner and better *pagkakaroon ng malinis na inuming tubig*
4. ☐ Sanitation (toilets, etc.) is cleaner and better. *kalinisan ng palikuran, atbp ay lalong mapagbuti*
5. ☐ The drainage system and village surroundings is cleaner and better. *mga kanal at paligid ng komunidad ay maging malinis at ligtas*
6. ☐ Have access to better information on healthy lifestyle practices. *makakuha ng wastong kaalaman tungkol sa pangangalaga ng mabuting kalusugan*
7. ☐ BHWs are more capable community health workers. *ang mga Barangay Health workers sa komunidad ay magkaroon ng mas malawak na kaalaman*
8. ☐ Avail of medical services provided by civil society groups, e.g. Rotary Medical Mission, etc. *magkaroon ng serbisyong medikal na ipinagkakaloob ng mga makalipunang pangkat, hal. Rotary Medical Mission, atbp.*
9. ☐ At least one household member benefitted from the BNC's health and nutrition program *magkaroon ng kahit isa lang sa miyembro ng pamilya ang mapagkalooban ng programa sa kalusugan ng BNC.*

F10. What do you think are the contributory factors to worse household health situation? *Sa inyong palagay, ano ang sanhi ng paglala ng kalagayan sa kalusugan ng inyong pamilya?*

1. ☐ Unable to access health care services in the community or barangay due to costs.
di mabigyan ng pagkakataon na makapakinabang sa serbisyo ng pangangalaga sa kalusugan sa barangay dahil may bayad
2. ☐ Drinking water supply is not safe and worse. *ang suplay ng inuming tubig ay di- ligtas at marumi*
3. ☐ Sanitation (toilets, etc.) is dirty and worse. *ang palikuran, atbp ay napakarumi*
4. ☐ The drainage system and village surroundings is dirty and worse. *mga kanal at paligid ng komunidad ay napakarumi*
5. ☐ BHWs are not capable of providing health assistance services. *mga Barangay Health Worker ay hindi karapat-dapat sa serbisyong kanilang ibinibigay*
6. ☐ Other (specify) *Iba pa (pakibanggit)*

F11. What health-related activities or programs does your barangay have and who provides them other than the government? Please check those that apply and indicate the provider. *Anong mga programa o gawain sa inyong barangay na may kaugnayan sa pangangalaga ng inyong kalusugan kaninong programa ito maliban sa ipinagkakaloob ng pamahalaan? Pakilagyan ng tsek (/) ang naaangkop at ang pinanggagalingan ng pondo para dito.*

- 1 (☐) improvement of health facilities/infra _____
pagsasaayos ng pasilidad pangkalusugan/imprastruktura
- 2 (☐) capacity building for health workers _____
pagpapaunlad ng kaalaman ng mga naglilingkod sa barangay na may kaugnayan sa kalusugan/barangay health worker
- 3 (☐) conduct of medical mission _____
pagsasagawa ng mga midikal misyon
- 4 (☐) distribution of medical supplies _____
pamimigay ng suplay na midikal
- 5 (☐) nutrition program for undernourished _____
Children programa sa kalusugan para sa mga malnutrisyon
- 6 (☐) health awareness campaign _____
kampanya para sa mabuting pangangalaga sa kalusugan
- 7 (☐) health education training/seminar _____
pagsasanay/seminar para mabuting pangangalaga sa kalusugan
- 8 (☐) establishment of source of alternative _____
Medicines Pagkakaroon ng mapagkukunan ng alternatibong medisina/gamut
- 9 (☐) Other (specify) *Iba pa (pakibanggit)* _____

F12. What type of social securities do you and the household members have? *Anong panlipunang paseguruhan/insurance sa lipunan mayroon ang mga miyembro ng Inyong pamilya?*

Member no <i>Bilang ng Miyembro</i>	Government service insurance system (GSIS) (for Government Employees) <i>Paseguruhan ng mga Naglilingkod sa Pamahalaan (GSIS) para sa manggagawa ng pamahalaan</i>	Social security system (SSS) <i>Paseguruhan ng mga Manggagawa sa Pribadong Sektor (SSS)</i>	Private Insurance <i>Pampribadong Paseguraduhan</i>	Other (please Specify) <i>Iba pa (pakibanggit)</i>	Do not Have a Social Security <i>Wala kahit anong paseguraduhan/insurance</i>	999. I do Not know <i>Hindi ko alam</i>
1						
2						
3						
4						
5						
6						
7						
8						

G. PERCEPTIONS AND EXPECTATIONS and BNC PROGRAM-RELATED QUESTIONS
MGA PANANAW, INAASAHAN, AT MGA KATANUNGANG MAY KAUGNAYAN SA MGA PROGRAMANG IPINATUTUPAD NG BNC

G1. In your perception, what are the most important four problems (development) issues in you village?
Sa inyong palagay, ano ang apat (4) na pangunahing problema/isyu na nakahahadlang sa pag-unlad ng inyong lugar?

- a.
- b.
- c.
- d.

G2. How was your income status, standard of living when compared to 5 years ago?
Kumusta ang inyong kita? sapat ba kung ihahambing sa nakalipas na limang (5) taon?
(pakilagyan ng tsek (/) ang mga naaangkop)

1. Better
2. The same
3. Worse

G3. Had you or your family experienced hunger in the past 3 months? 1 Yes _____ 2 No _____
Ang inyong pamilya ba ay nakaranas ng taggutom sa nakalipas na 3 buwan?

G4. If Yes, what do you think is the level of hunger? *Kung oo, ano sa inyong palagay ang antas ng taggutom na inyong naranasan?*
1 Moderate (*Bahagya*) _____ 2 Severe (*Malala*) _____

G5. Are the following concerns, problems and issues present in your community as of the moment?
(Please check those that apply Ang mga sumusunod ba ay problema sa inyong lugar sa kasalukuyan?)
(pakilagyan ng tsek (/) ang mga naaangkop)

- 1 () Access to portable drinking water *suplay ng malinis at ligtas na inuming tubig*
- 2 () Access to health care *malalapitan na ngangalaga sa kalusugan*
- 3 () Access to or supply of electricity *daloy/suplay ng elektrisidad*
- 4 () Access to natural resource as an alternative/supplementary livelihood source
likas na yaman bilang panghalili/ginagamit sa pangkabuhayan
- 5 () Limited educational opportunities *limitado/kulang na oportunidad sa edukasyon*
- 6 () Peace and order situation *katahimikan at kapayapaan*

- 10 () Lack of roads/transportation problems *kalsada at transportasyon*
- 11 () Food security *suplay ng pagkain*
- 12 () Garbage and waste management *pangangasiwa ng basura*
- 13 () Disasters: floods, typhoons, etc. *kalamidad : baha, bagyo, atbp.*
- 14 () Unemployment/livelihood *kawalan ng trabaho/kabuhayan*
- 15 () Juvenile delinquency *napabayaang mga Kabataan*
- 16 () Illegal drugs *ipinagbabawal na gamot/droga*
- 17 () Lack/limited employment opportunities *wala/kulang ang mapapasukang trabaho*
- 18 () Residents' undesirable behavior, attitude & values *di-kanais-nais na pag-uugali at asal ng mga residente*
- 19 () Residents' lack of cooperation and sense of community *walang pakikipagtulungan/kooperasyon ng mga residente sa pamayanan*

G6. To the best of your knowledge, do you know of someone working for Berong Nickel Corporation (BNC)?
Sa abot ng inyong kaalaman, may kakilala ba kayong nagtatrabaho sa Berong Nickel Corporation?

1. () Know someone who works in MNGP?
may kakilala na nagtatrabaho sa MNGP
2. () Does not know anyone from MNGP
walang kakilala na nagtatrabaho sa MNGP
3. () Myself *Sarili ko*
4. () A family member *Myembro ng pamilya*
5. () A relative *Kamag-anak*
6. () A friend *Kaibigan*
7. () A neighbor *Kapitbahay*
8. () A former/current government official
dati/kasalukuyang opisyal ng pamahalaan
9. () Any combination of the above
pinagsama ng alinman sa itaas

G7. Are you aware of the programs of the Social Development and Management Program (SMDP) of Berong Nickel Corporation (BNC)? Yes ____ No ____ *Alam ba ninyo ang mga Programang Pangkaunlaran (SMDP) at Pangangasiwa ng mga Programa (SMDP) na ipinatutupad ng Berong Nickel Corporation (BNC)?*

G8. If yes, which of the following programs are you aware of? *Kung oo, alin sa mga nakatala sa ibaba ang inyong nalalaman?*

- 1 () Education Program *Programang Pang-Edukasyon*
- 2 () Livelihood Program *Programang Pang-kabuhayan*
- 3 () Health and Nutrition Program *Programang Pangkalusugan at Nutrisyon*
- 4 () Socio-Cultural Development Program
Programang Pagpapayaman ng Panlipunang Kultural
- 5 () Information, Education and Communication (IEC) Program
Programang Pang-impormasyon, Edukasyon at Komunikasyon (IEC)
- 6 () Mine Technology and Geoscience Program
Programa sa Pagmimina Gamit ang Teknolohiya at Pangangalaga ng Kalikasan

G9. How did you learn about the BNC's SMDP projects? Please state the 5 most important channels in order. *Paano ninyo nalaman ang mga proyekto/programang pangkaunlaran na ipinatutupad ng BNC? Lagyan ng bilang mula 1-5 ayon sa pagkakasunod-sunod na nalaman mo.*

1. () Television *Telebisyon*
2. () Radio *Radyo*
3. () Relative *Kamag-anak*
4. () Provincial leaders *Namumuno sa lalawigan*
5. () Municipal leaders *Namumuno sa bayan/munisipyo*
6. () BNC Information and education materials
babasahin/ polyetong Berong Nickel Corporation
7. () Friend/acquaintance *kaibigan o kakilala*
8. () Immediate family members *malapit na miyembro ng pamilya*
9. () Barangay captain / Leaders *punong barangay/pinuno*
10. () Village meetings *pulong sa pamayanan*

11. () Barangay Captain and barangay officials
punong barangay at mga opisyaes
12. () Purok Leader / Village Chieftain
lider ng purok/pinuno ng mga katutubo
13. () Berong Nickel Corporation Personnel
tauhan/kinatawan ng Berong Nickel Corporation
14. () Neighbors/friends kapitbahay/kaibigan
15. () Other –(please specify) iba pa (pakibanggit)

G10. Do you think the BNC's SMDP have benefits to you and the barangay? Yes _____ No _____
Sa inyong palagay, nakatulong ba ang mga programang pangkaunlaran (SMDP) na ipinatutupad ng BNC sa inyong barangay?

G11. If you are to generally rate the degree of benefit the BNC programs give to your household and the community, how do you rate them? Please check the appropriate column. Sa kabuuan, kung bibigyan mo ng marka ang mga kapakinabangang natamo ng inyong pamilya at komunidad sa mga programang ipinatutupad ng BNC, paano mo ito bibigyan ng marka? Pakilagyan ng tsek (/) ang nauukol.

Area/Locale Deriving Benefit Nakatamo ng mga Kapakinabangan sa BNC	Degree of Benefit Antas ng Kapakinabangan			
	Big	Little	None	Don't know
Family				
Sitio / Barangay				
Municipality				
Province / Country				

G12. What is/are the benefits of the BNC's SMDP, particularly the Education Program? Please check the appropriate box that apply. Ano/ano-ano ang mga kapakinabangan ang inyong natamo sa mga programang pangkaunlaran (SMDP) na ipinatutupad ng BNC lalo na sa pang-edukasyon? Pakilagyan ng tsek (/) ang mga puwang na nauukol.

Social Development Manage Programs Implemented for Education Programang Panlipunan na Pagpapataas sa Antas ng Edukasyon	1.For your family Sa inyong pamilya	2. For the sitio / bgy Sa sitio/barangay	3.For the Municipality Sa bayan/munisipyo
1 () Scholarship Program (cite specific benefits below) mga iskolarship (banggitin ang mga kapakinabangan sa ibaba) _____ _____ _____			
2 () Educational facilities and support infrastructures pasilidad pang-edukasyon at iba pang kaugnay na imprastraktura _____ _____ _____			
3 () Educational assistance and support to school requirements tulong sa pag-aaral at suporta sa pangangailangan sa paaralan _____ _____ _____			
4 () Informal education and support to school activities impormal na edukasyon at suporta sa mga gawain _____ _____ _____			

5 1 () Other (specify) iba pa (pakibanggit)			

G13. In general, what kind of effect has the BNC’s Education Program given? *Sa pangkalahatan, Ano ang epekto sa inyo ng mga programang ipinatutupad BNC?*

- 1. () No effect *Wala*
- 2. () Don’t know *Di ko alam*
- 3. () Positive effect *Mabuti*
- 4. () Negative effect (Specify) *Masama (pakibanggit)*

G14. If you are to rate the success level of the BNC Education Program, what is it? *Kung bibigyan mo ng marka ang naidulot ng programang pang-edukasyon na ipinatutupad ng BNC, paano mo ito mamarkahan?*

- 1. () Failure *di naisakatuparan*
- 2. () Somewhat failure *di lubhang naisakatupara*
- 3. () Neither successful nor failure *di gaanong naisakatuparan at di rin gaanong naisakatuparan*
- 4. () Somewhat successful *naisakatuparan din kahit paano*
- 5. () Successful *naisakatuparan*
- 6. () Don’t know *hindi ko alam*

G15. What is/are the benefits of the BNC Livelihood Program? *Ano/ano-anong kapakinabangan ang inyong natamo sa programang pangkabuhayan (SDMP) na ipinatutupad ng BNC?*

Social Development Manage Programs Implemented for Livelihood <i>Programang Panlipunan na Ipinatutupad para sa Kabuhayan</i>	1.For your family <i>sa inyong pamilya</i>	2. For the sitio / bgy <i>sa sitio/barangay</i>	3.For the Municipality <i>sa bayan/musipyo</i>
1 () Development and enhancement of existing viable livelihoods (specify below) <i>pagpapaunlad at pagpapayaman sa kasalukuyang mga kabuhayan (pakibanggit)</i>			
2 () Development of agroforestry (specify below) <i>pagpapaunlad ng agrikultura (pakibanggit)</i>			
3 () Improvement of lowland agriculture and fishery including post harvest facilities (specify below) <i>pagpapaunlad ng mga sakahan at mga palaisdaan at mga lagakan ng mga ani (pakibanggit)</i>			
4 () identification of potential eco-tourism development program (specify below) <i>pagpapaunlad sa maaaring maging sentro ng programang panturismo (pakibanggit)</i>			

5 () Competency for skill-based employment opportunities (specify below) <i>kasanayan sa mga kasalukuyang trabaho sa lugar (pakibanggit)</i>			

G16. In general, what kind of effect has the BNC Livelihood Program given? *Sa pangkalahatan, ano ang naging epekt*

1. () No effect

wala

2. () Don't know

hindi ko alam

3. () Positive effect

mabuti

4. () Negative effect (Specify)

masama (pakibanggit)

G17. If you are to rate the success level of the BNC's SMDP for Livelihood, what is it? *Kung bibigyan mo ng marka ang naidulot ng mga programang pangkabuhayan na ipinatutupad ng BNC at SMDP, paano ninyo ito mamarkahan?o sa inyo ng mga programang pangkabuhayan na ipinatutupad ng BNC?*

1. () Failure

di naisakatuparan

2. () Somewhat failure

di lubhang naisakatuparan

3. () Neither successful nor failure

di gaanong naisakatuparan at di rin gaanong naisakatuparan

4. () Somewhat successful

naisakatuparan din kahit papano

5. () Successful

naisakatuparan

6. () Don't know

hindi ko alam

G18. What is/are the benefits of the BNC Health and Nutrition Program? *Ano/ano-anong kapakinabangan ang inyong natamo sa programang pangkalusugan at pangnutrisyon na ipinatutupad ng BNC?*

Social Development Manage Programs Implemented for Health and Nutrition <i>Programang Panlipunan na ipinatutupad para sa kalusugan at nutrisyon</i>	1.For your family <i>Sa inyong pamilya</i>	2. For the sitio / bgy <i>Sa Sitio / barangay</i>	3.For the Municipality <i>Sa bayan</i>
1 () Improvement of health facilities and support infrastructures (specify below) <i>pagpapaunlad ng mga pasilidad pangkalusugan at ibang Imprastrakturang kaugnay nito (pakibanggit)</i>			
2 () Capacity building for barangay health workers (BHW) (specify below) <i>pagpapaunlad sa kaalaman ng mga nangangalaga sa kalusugan ng barangay/barangay health worker (pakibanggit)</i>			
3 () Support for preventive health care and disaster or emergency preparedness e.g. medical mission, distribution of medical supplies, awareness campaign, etc. (specify below) <i>tulong para sa pangangalaga ng kalusugan, sakuna o mga biglaang pangangailangan hal. misyong midikal, pamumudmod ng suplay na midikal, pagpapabatid ng mga kaalaman, atbp. (pakibanggit)</i>			

G19. In general, what kind of effect has the BNC Health and Nutrition Program given? *Sa pangkalahatan, ano ang naging epekto sa iyo ng mga programang pangkalusugan at pangnutrisyon na ipinatutupad ng BNC?*

1. () No effect <i>Wala</i>
2. () Don't know <i>Hindi ko alam</i>
3. () Positive effect <i>Mabuti</i>
4. () Negative effect (Specify) <i>Masama (pakibanggit)</i>

G20. If you are to rate the success level of the BNC's SMDP for Livelihood, what is it? *Kung bibigyan mo ng marka ang naidulot ng mga programang pangkabuhayan na ipinatutupad ng BNC at SMDP, paano ito mamarkahan?*

- 1. () Failure *di naisakatuparan*
- 2. () Somewhat failure *di lubhang naisakatuparan*
- 3. () Neither successful nor failure *di gaanong naisakatuparan at di rin gaanong naisakatuparan*
- 4. () Somewhat successful *naisakatuparan din kahit paano*
- 5. () Successful *naisakatuparan*
- 6. () Don't know *hindi ko alam*

G21. What is/are the benefits of the BNC Socio-Cultural Development Program? *Ano/ano-anong kapakinabangan ang natamo sa programang pangkabuhayang ipinatutupad ng BNC?*

Social Development Manage Programs Implemented for Socio-Cultural Development <i>Programang Panlipunan na Ipinatutupad para sa pagpapaunlad ng sosyo-kultural</i>	1.For your family <i>Sa inyong pamilya</i>	2. For the sitio / bgy <i>Sa Sitio / barangay</i>	3.For the Municipality <i>Sa bayan</i>
1 () Enhancement of socio-cultural processes that promote community cohesion e.g. related to community or organizational values, norms, and practices, decision-making (specify below) <i>pagpapayaman ng sosyo-kultural upang maging daan ng pakakaisa hal. may kaugnayan sa lugar, organisasyon, kaugalian, pamantayan, kaugaliyan, pagpapasiya (pakibanggit)</i>			
2 () improvement of community facilities and skills that enhance the state of community and social well-being (specify below) <i>pagpapaunlad ng mga pasilidad at mga kasanayan upang mapagbuti ang kalagayan sa komunidad at ang pagkatao (pakibanggit)</i>			

G22. In general, what kind of effect has the BNC Socio-Cultural Development given? *Sa pangkalahatan, ano ang naging epekto sa inyo ng mga programang pangsosyo-kultural na ipinatutupad ng BNC?*

- 1. () No effect *Wala*
- 2. () Don't know *Hindi ko alam*
- 3. () Positive effect *Mabuti*
- 4. () Negative effect (Specify) *Masama (pakibanggit)*

G23. If you are to rate the success level of the BNC's SMDP for Socio-Cultural Development Program, what is it? *Kung bibigyan mo ng marka ang naidulot na mga programang pangsosyo-kultural na ipinatutupad ng BNC at SMDP, paano ito mamarkahan?*

- 1. () Failure *di naisakatuparan*
- 2. () Somewhat failure *di lubhang naisakatuparan*
- 3. () Neither successful nor failure *di gaanong naisakatuparan at di rin gaanong naisakatuparan*
- 4. () Somewhat successful *naisakatuparan din kahit paano*
- 5. () Successful *naisakatuparan*
- 6. () Don't know *hindi ko alam*

G24. What is/are the benefits of the BNC Information, Education and Communication (IEC) Program Program? *Ano/ano-anong kapakinabangan ang natamo sa programang pang-impormasyon, pang-edukasyon, at pangkomunikasyon ng BNC?*

Social Development Manage Programs Implemented for Information, Education and Communication (IEC) for	1.For your family	2. For the sitio / bgy	3.For the Municipality
---	-------------------	------------------------	------------------------

promotion, increase of public awareness and knowledge on responsible mining <i>Programang Panlipunan na Ipinatutupad para sa pang-impormasyon, pang-edukasyon, at pangkomunikasyon para sa pagpapalawak ng kaalaman sa responsableng pagmimina</i>	<i>Sa inyong pamilya</i>	<i>Sa Sitio / barangay</i>	<i>Sa bayan</i>
1 () public consultations, fora, seminars, training and other face-to-face gatherings (specify below) <i>pampublikong panayam, seminar, pagsasanay, pagpupulong at tuwirang pakikipag-usap (pakibanggit)</i> _____ _____ _____ _____			
2 () access to print materials, public service announcements, websites, displays, materials and equipment (specify below) <i>mapaglilimbagan ng mga babasahin, pampublikong pabatid, websites, paskilan, materyales at kagamitan na may kaugnayan ditto (pakibanggit)</i> _____ _____ _____ _____			

- G25. In general, what kind of effect has the BNC Information, Education and Communication (IEC) given?
Sa pangkalahatan, ano ang naging epekto sa inyo ng mga programang pang-impormasyon, pang-edukasyon, at pangkomunikasyong ipinatutupad ng BNC?
1. () No effect *Wala*
 2. () Don't know *Hindi ko alam*
 3. () Positive effect *Mabuti*
 4. () Negative effect (Specify) *Masama (pakibanggit)*
- G26. If you are to rate the success level of the BNC's SMDP for Information, Education and Communication, what is it? *Kung bibigyan ninyo ng marka ang naidulot na mga programang pang-impormasyon, pang-edukasyon, at pangkomunikasyong ipinatutupad ng BNC at SMDP, paano ito mamarkah*
1. () Failure *di naisakatuparan*
 2. () Somewhat failure *di lubhang naisakatuparan*
 3. () Neither successful nor failure
di gaanong naisakatuparan at di rin gaanong naisakatuparan
 4. () Somewhat successful *naisakatuparan din kahit paano*
 5. () Successful *naisakatuparan*
 6. () Don't know *Hindi ko alam*

H. SOCIAL INTEGRATION AND COHESION

1. Do you think that you are having good relations with the people implementing the BNC projects?
Sa inyong palagay, mabuti ba ang inyong pakikitungo sa mga nagpapatupad ng mga proyekto at programa ng BNC?

1 () Yes

2 () No

3 () Depends on circumstances (please specify)

2. If your answer is "No" please specify the reasons? *Kung ang sagot mo ay "hindi" maaari mo bang banggitin ang mga dahilan?*

3. Did your household have any disputes with another household in the past? *Nagkaroon ba kayo ng kaaway/di pagkakaunawaan ang inyong pamilya sa ibang pamilya sa mga nakalipas na panahon?*

1 () Yes

2 () No

4. If "Yes" what was the reason, how was it resolved? Please specify. *Kung "oo" ano ang dahilan, paano ito nalutas? Pakibanggit.*

Please thank the interviewee for completing the survey.

To be completed by the interviewer.

Z1. Was the interviewee alone?

a. Yes 2. No, who were present?.....

A2. Please fill in the table.

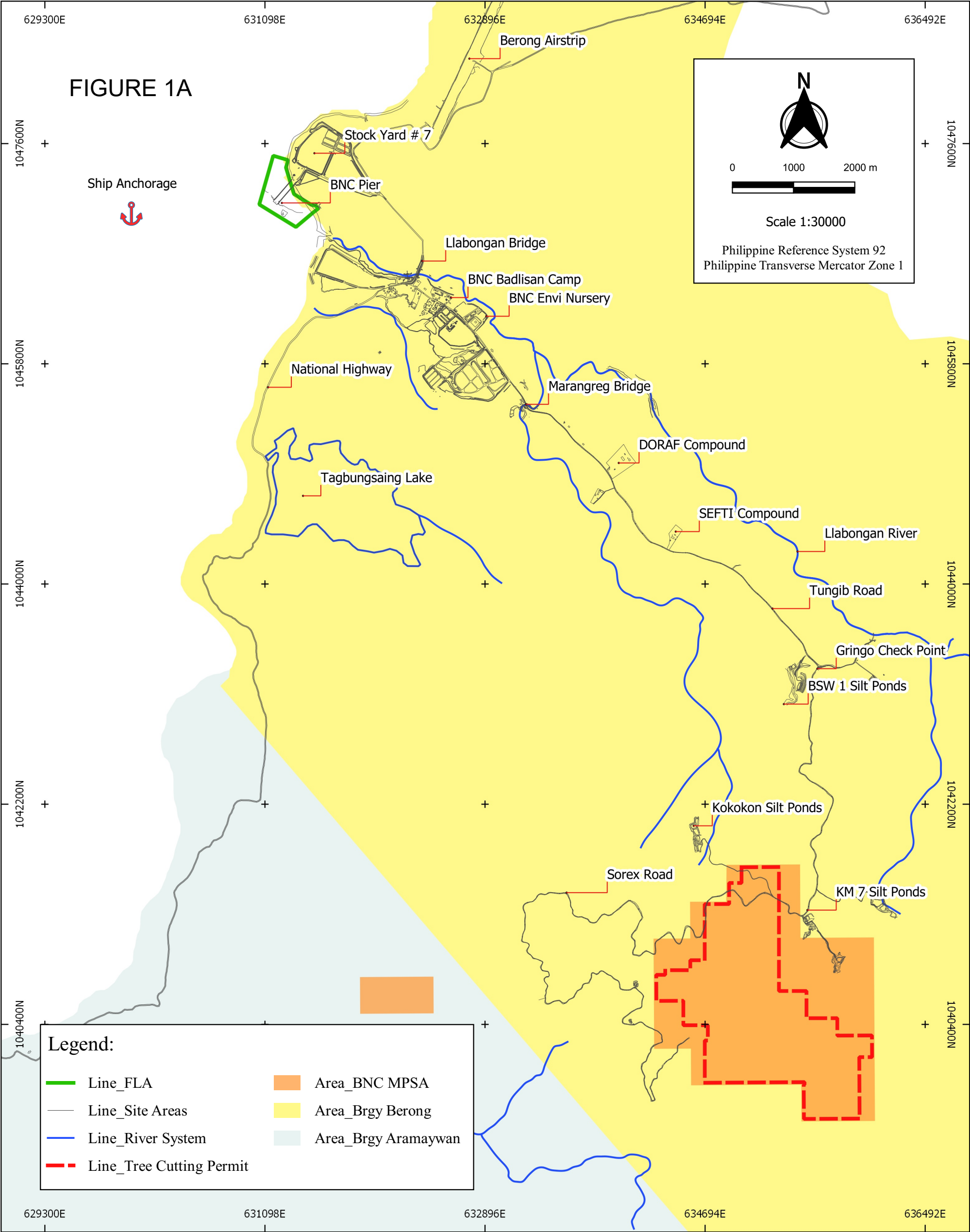
<i>Criteria</i>	<i>Very satisfactory</i>	<i>Satisfactory</i>	<i>Neutral</i>	<i>Unsatisfactory</i>	<i>Highly unsatisfactory</i>
<i>The trustfulness of the interviewee</i>					
<i>The questions that were answered</i>					
<i>The interview environment</i>					


To be filled by the responsible

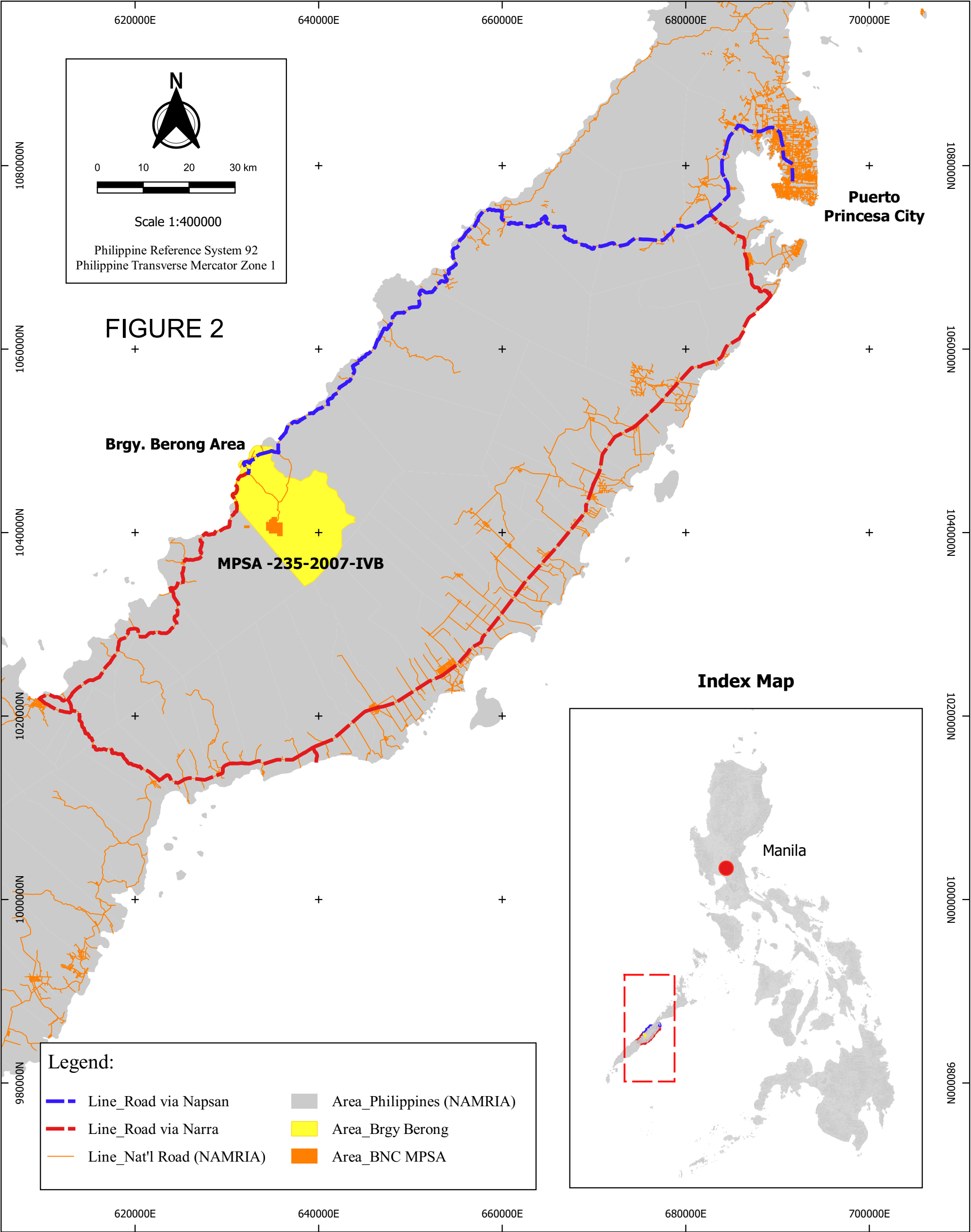
	<i>Name, Surname</i>	<i>Date</i>	<i>Time</i>
<i>Interviewer</i>			
<i>Coordinator</i>			
<i>Data entrance</i>			

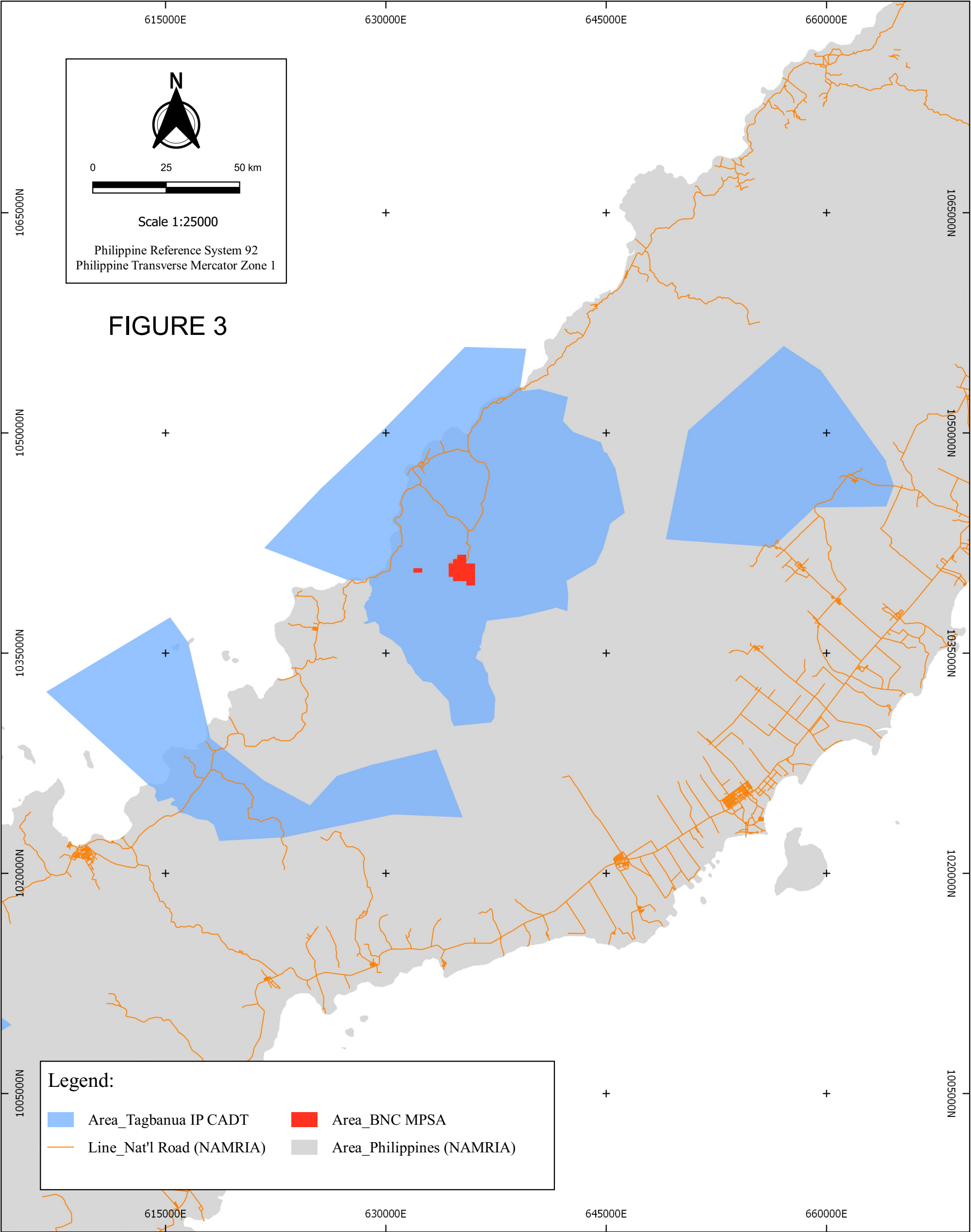
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Appendix 3

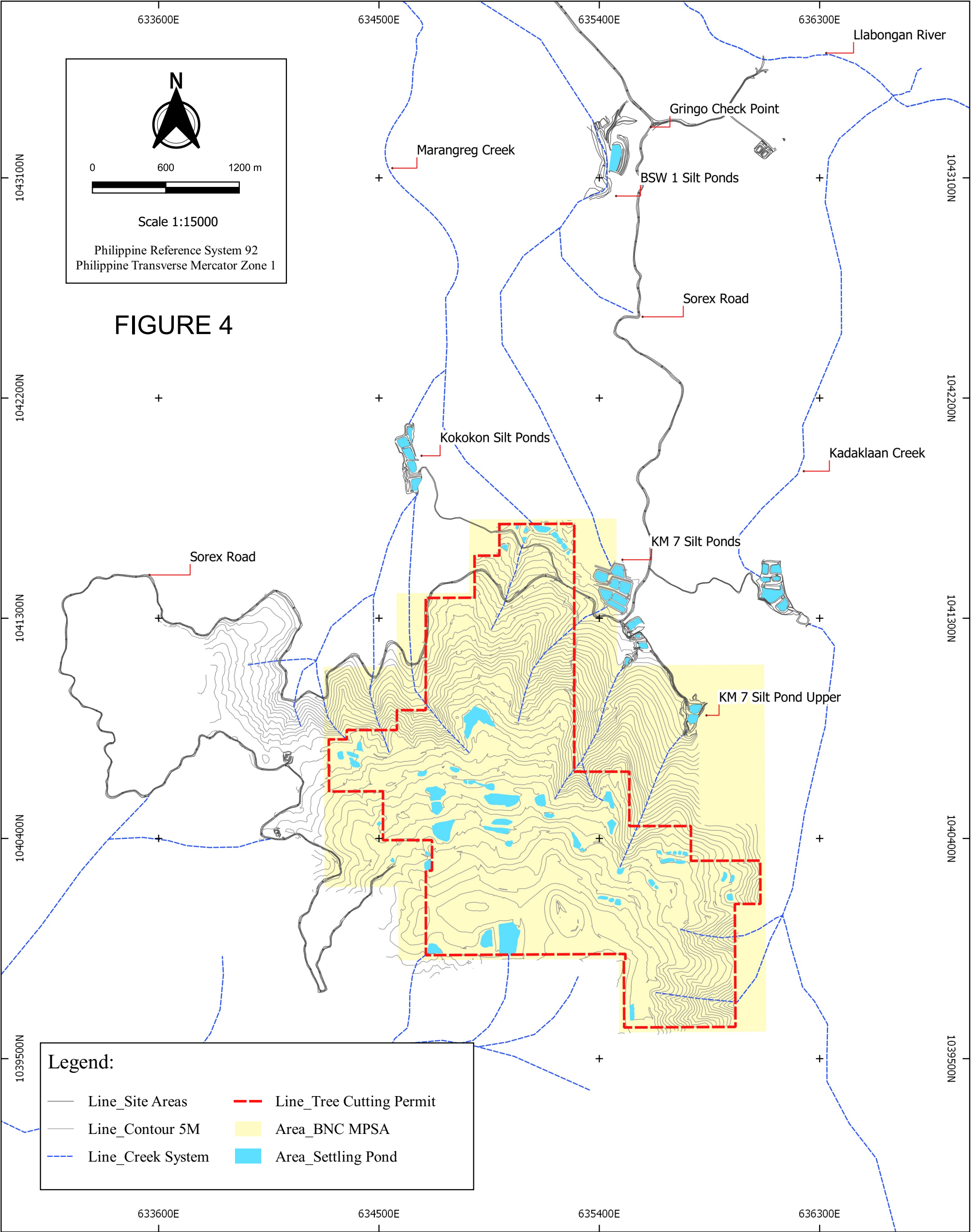


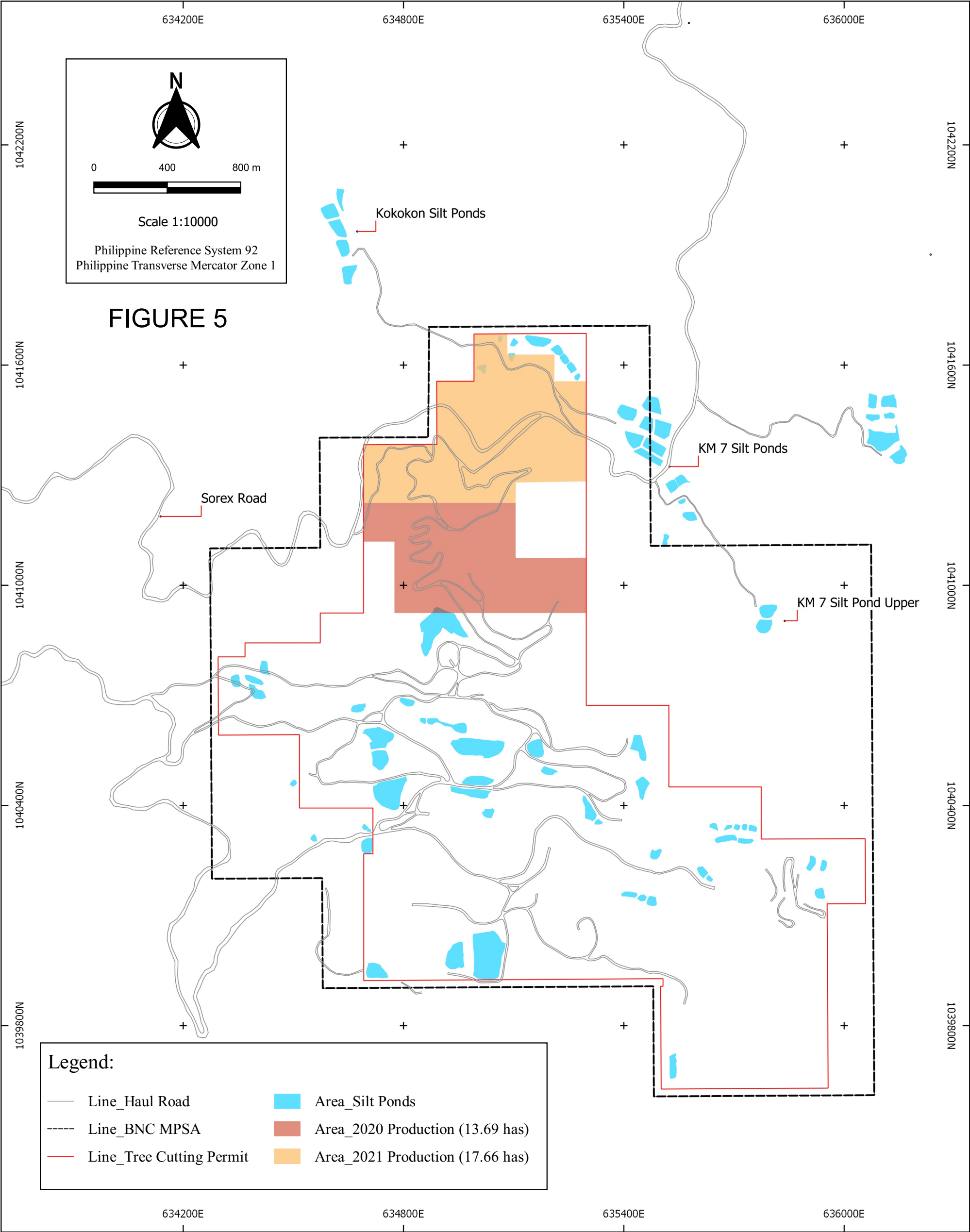
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	Final Mine Rehab and Decomissioning Plan		Drawn	RY SABAT JR.	1 of 1
	Sheet Content:		Modelled	RY SABAT JR.	
			Checked	BM MAGSINO	
			Concurred	JP DELA CRUZ	
			Approved	MRL ZAMORA	
Site Location Map					



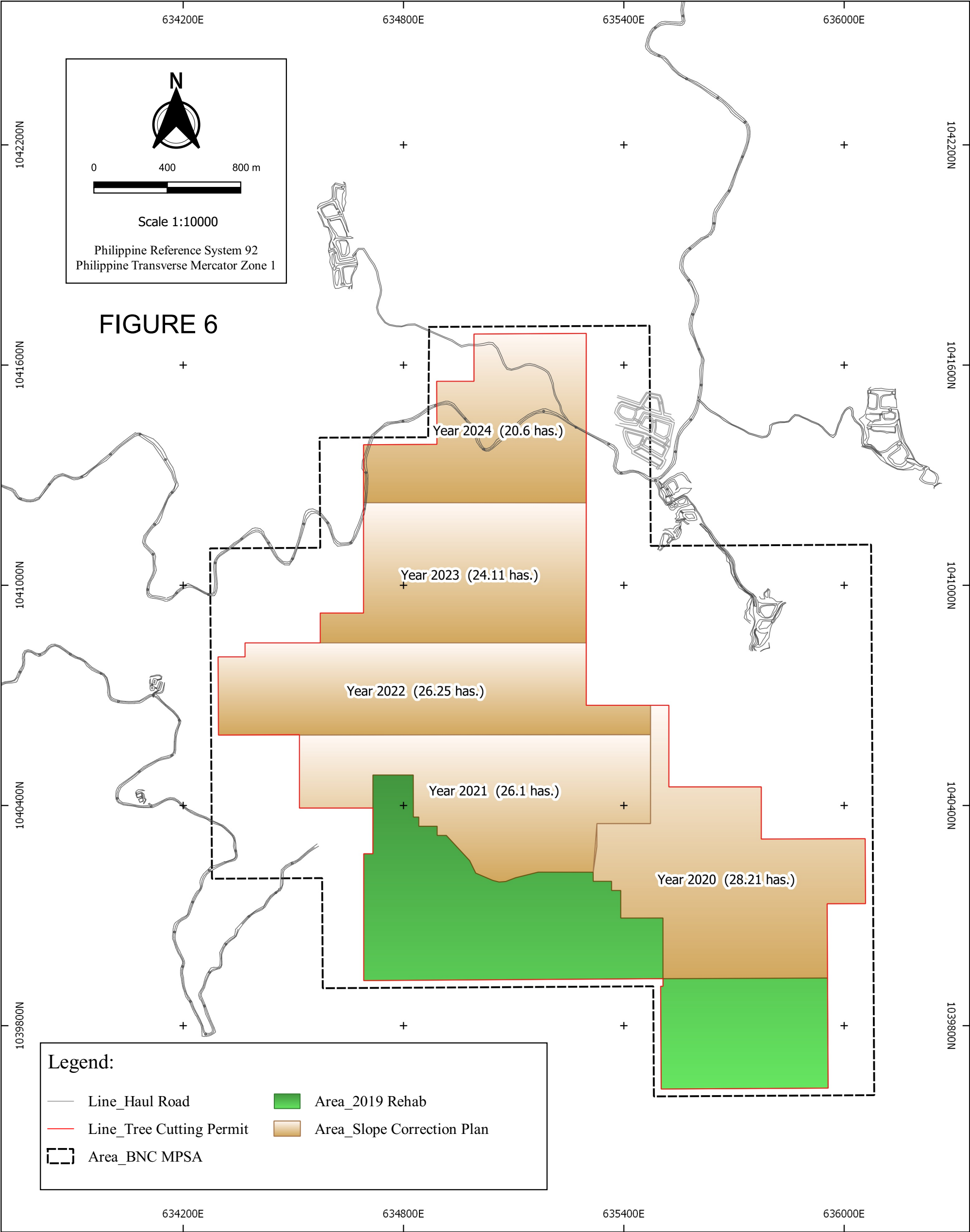



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	Final Mine Rehab and Decomissioning Plan	Drawn	RY SABAT JR.		1 of 1
	Sheet Content:	Modelled	RY SABAT JR.		
		Checked	BM MAGSINO		
		Concurred	JP DELA CRUZ		
		Approved	MRL ZAMORA		
	Ancestral Domain Title Map				





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	Sheet Content:	Modelled	RY SABAT JR.		
		Checked	BM MAGSINO		
		Concurred	JP DELA CRUZ		
		Approved	MRL ZAMORA		
	Production Plan				



 <div>Head Office: 3/F DMCI HOMES Corporate Center, 1321 Aplanario St., Brgy. Bangkal, Makati City, Philippines 1233 Phone : (02) 823 7963 / 831 6237 Fax : (02) 831 6214 / 831 6242</div> <div>Liaison Office: 156 Manalo St., Puerto Princesa City, Palawan Philippines 5300 Phone : (048) 434 9599</div> <div>Mine Site: Sitio Badlisan, Brgy., Berong, Quezon, Palawan, Philippines 5304</div>	Project:		Name(s)	Signature (s)	Sheet No.
	Final Mine Rehab and Decomissioning Plan	Drawn	RY SABAT JR.		1 of 1
	Sheet Content:	Modelled	RY SABAT JR.		
		Checked	BM MAGSINO		
		Concurred	JP DELA CRUZ		
		Approved	MRL ZAMORA		
	Slope Correction Plan				

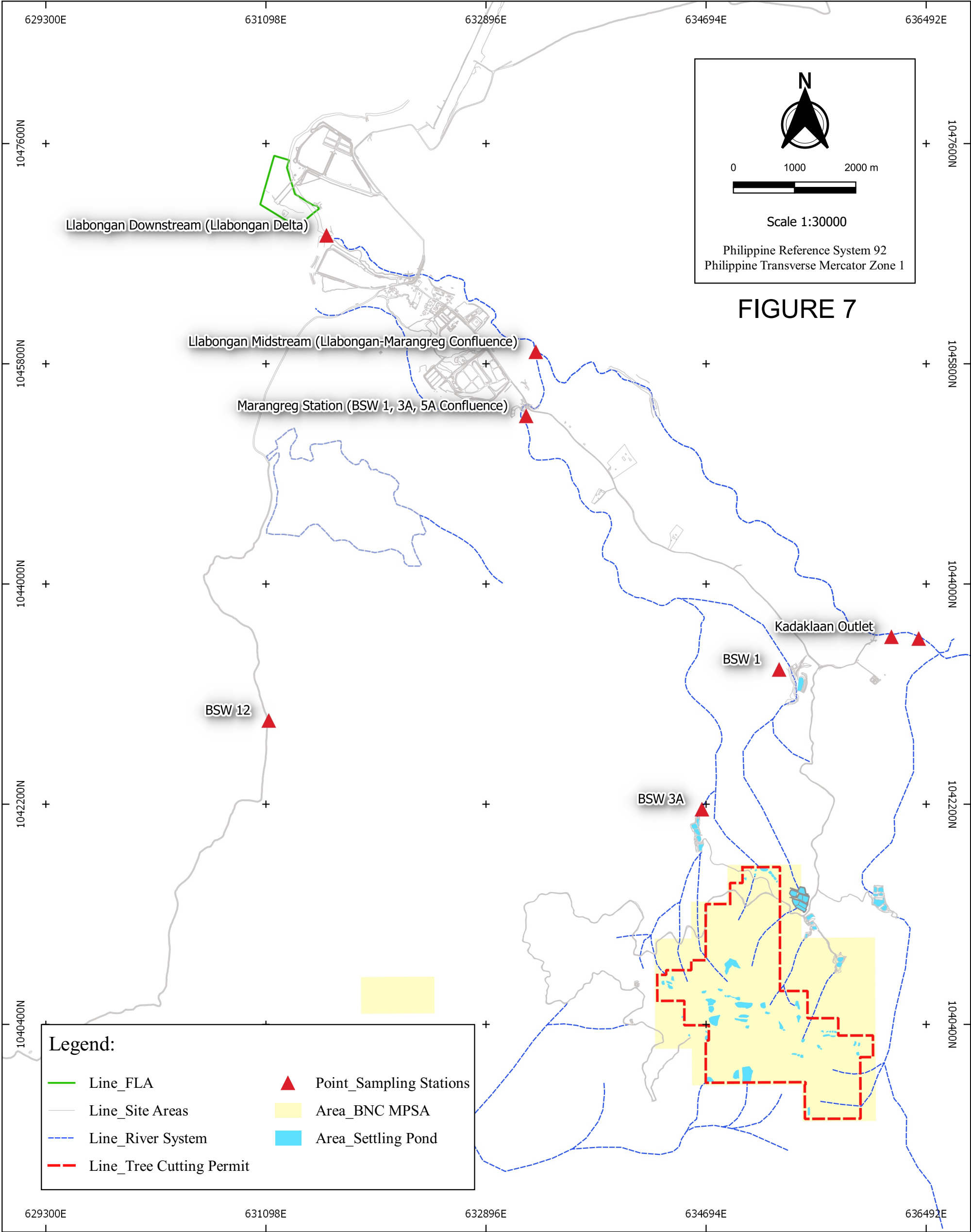

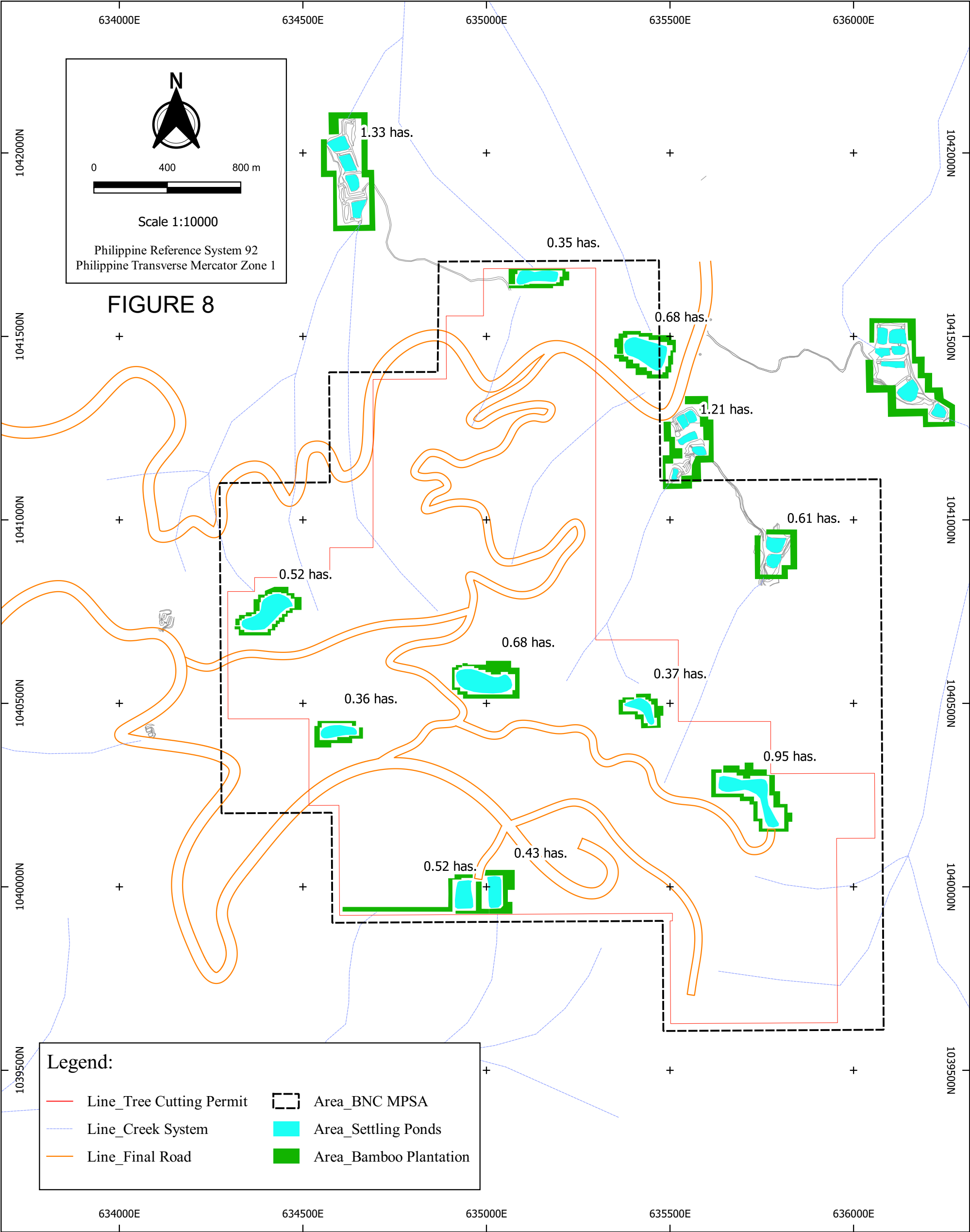


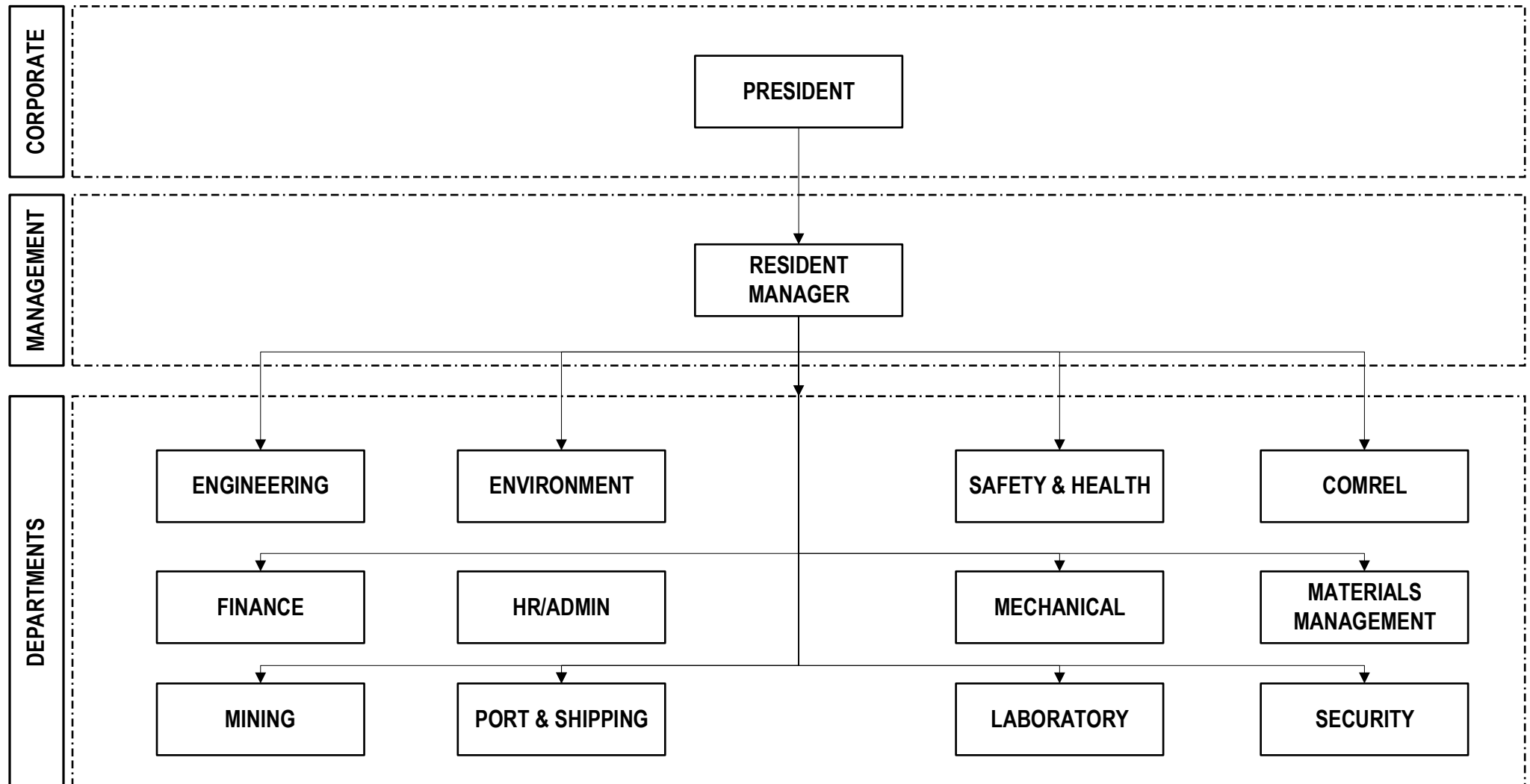
FIGURE 7

 <p>Head Office: 3/F DMCI HOMES Corporate Center, 1321 Aplinario St., Brgy. Bangkal, Makati City, Philippines 1233 Phone : (02) 823 7963 / 831 6237 Fax : (02) 831 6214 / 831 6242</p> <p>Liaison Office: 156 Manalo St., Puerto Princesa City, Palawan Philippines 5300 Phone : (048) 434 9599</p> <p>Mine Site: Sitio Badlisan, Brgy., Berong, Quezon, Palawan, Philippines 5304</p>	Project:		Name(s)	Signature (s)	Sheet No.
	Final Mine Rehab and Decomissioning Plan	Drawn	RY SABAT JR.		1 of 1
	Sheet Content:	Modelled	RY SABAT JR.		
		Checked	BM MAGSINO		
		Concurred	JP DELA CRUZ		
		Approved	MRL ZAMORA		
Water Sampling Stations					





BERONG NICKEL CORPORATION
Berong Quezon, Palawan
TABLE 5. TABLE OF ORGANIZATION
FMRDP IMPLEMENTATION





BERONG NICKEL CORPORATION

Berong Quezon, Palawan

**TABLE 6. TABLE OF ORGANIZATION
FMRDP IMPLEMENTATION**

MINE ENVIRONMENTAL PROTECTION AND ENHANCEMENT OFFICE (MEPEO)

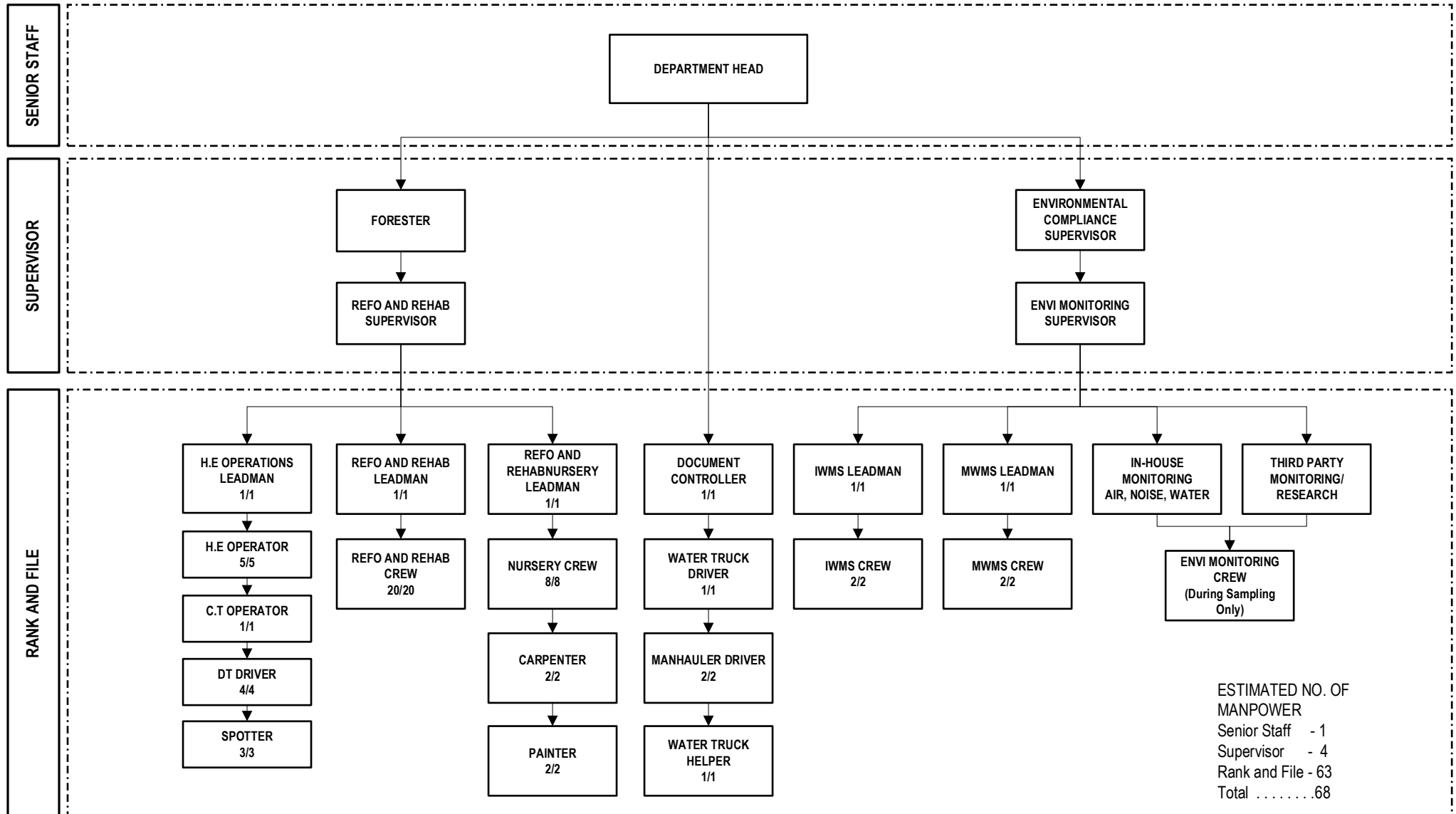




TABLE 7.
Berong Nickel Corporation
Safety and Health Department Organizational Chart

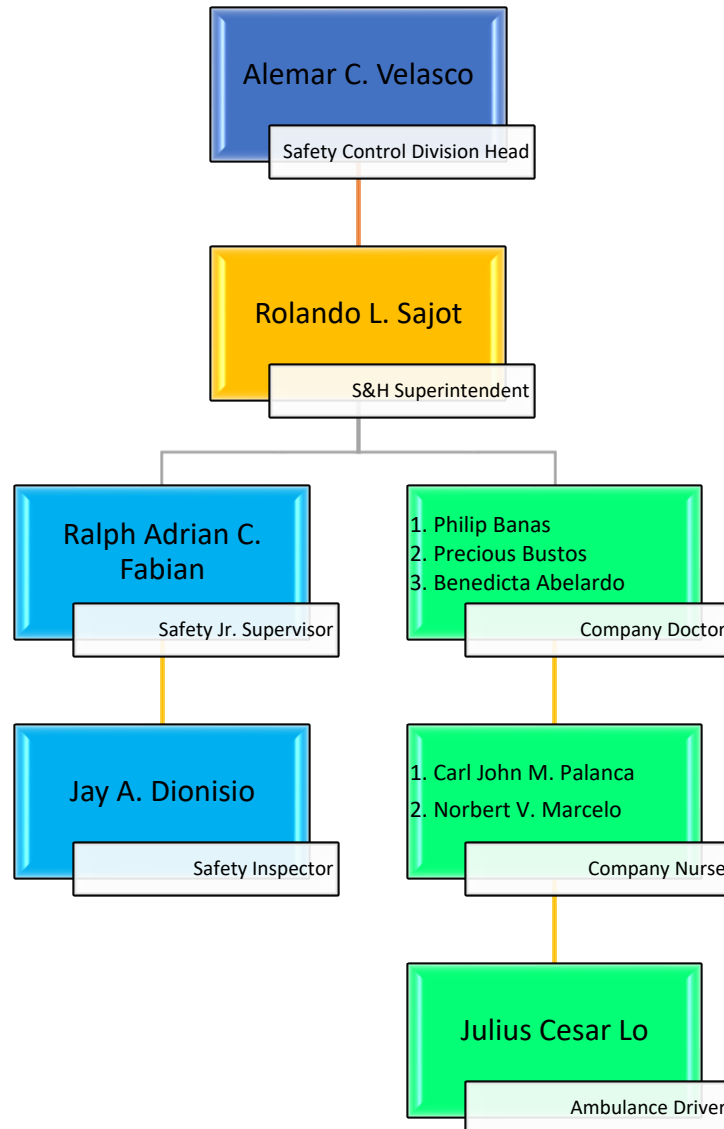
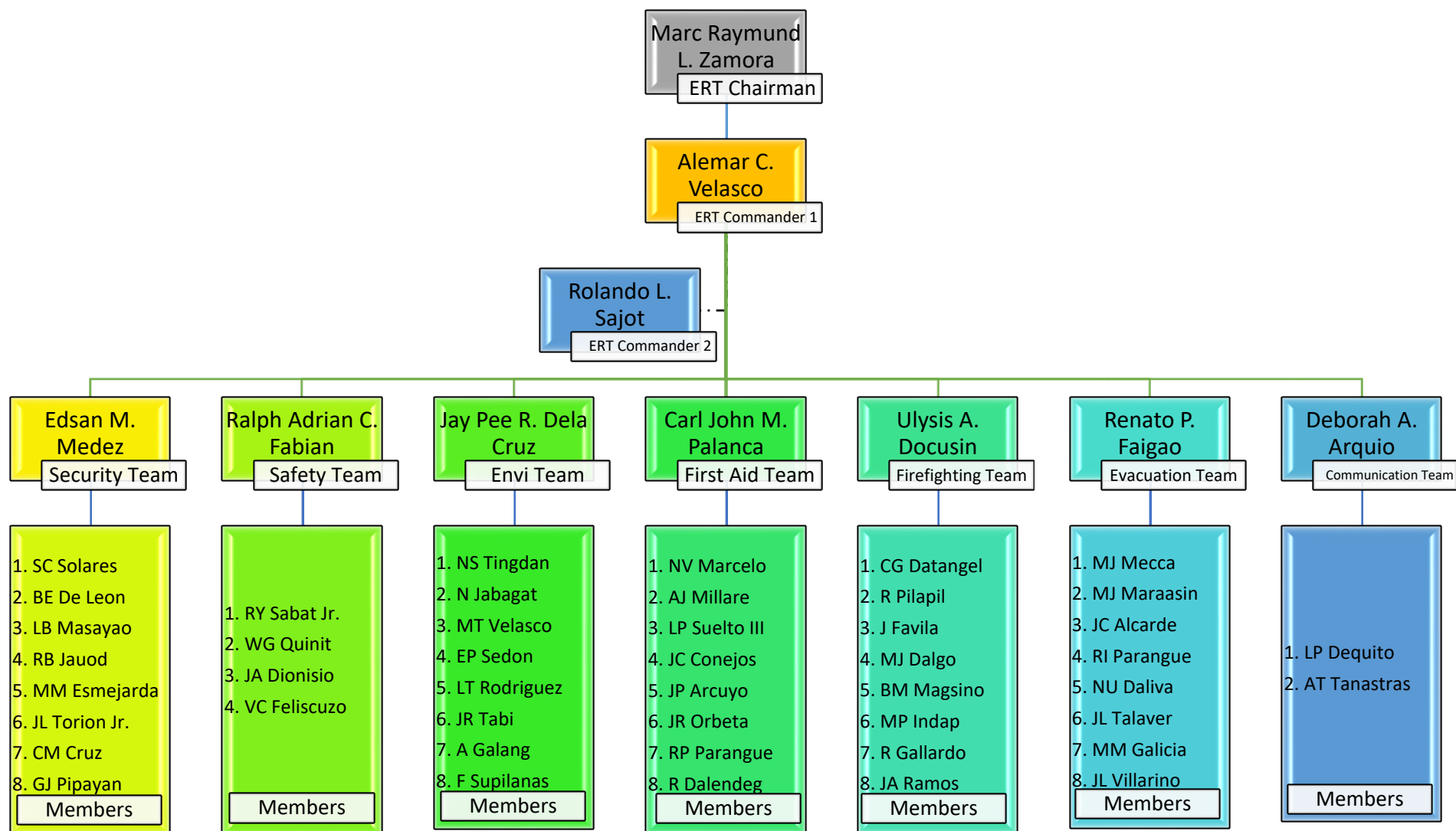


TABLE 8.
Berong Nickel Corporation
Emergency Response Team Organizational Chart



HO: 3/F DMCI Homes Corporate Center,
1321 Apolinario St., Brgy. Bangkal,
Makati City Philippines 1233
Tel Nos. (02) 823-7963/(02) 831-6237
PALAWAN LIASON OFFICE: 156 Manalo Street
Puerto Princesa City, Tel No. (048) 434-9599



TABLE 9. List of Equipment for Decommisioning

Submitted for	Engineering Department	MESR No.	MEC-J703-003
	MEPEO	Date Submitted	March 01, 2021
Report for the Month of	February 2021	Origin	Mechanical Department

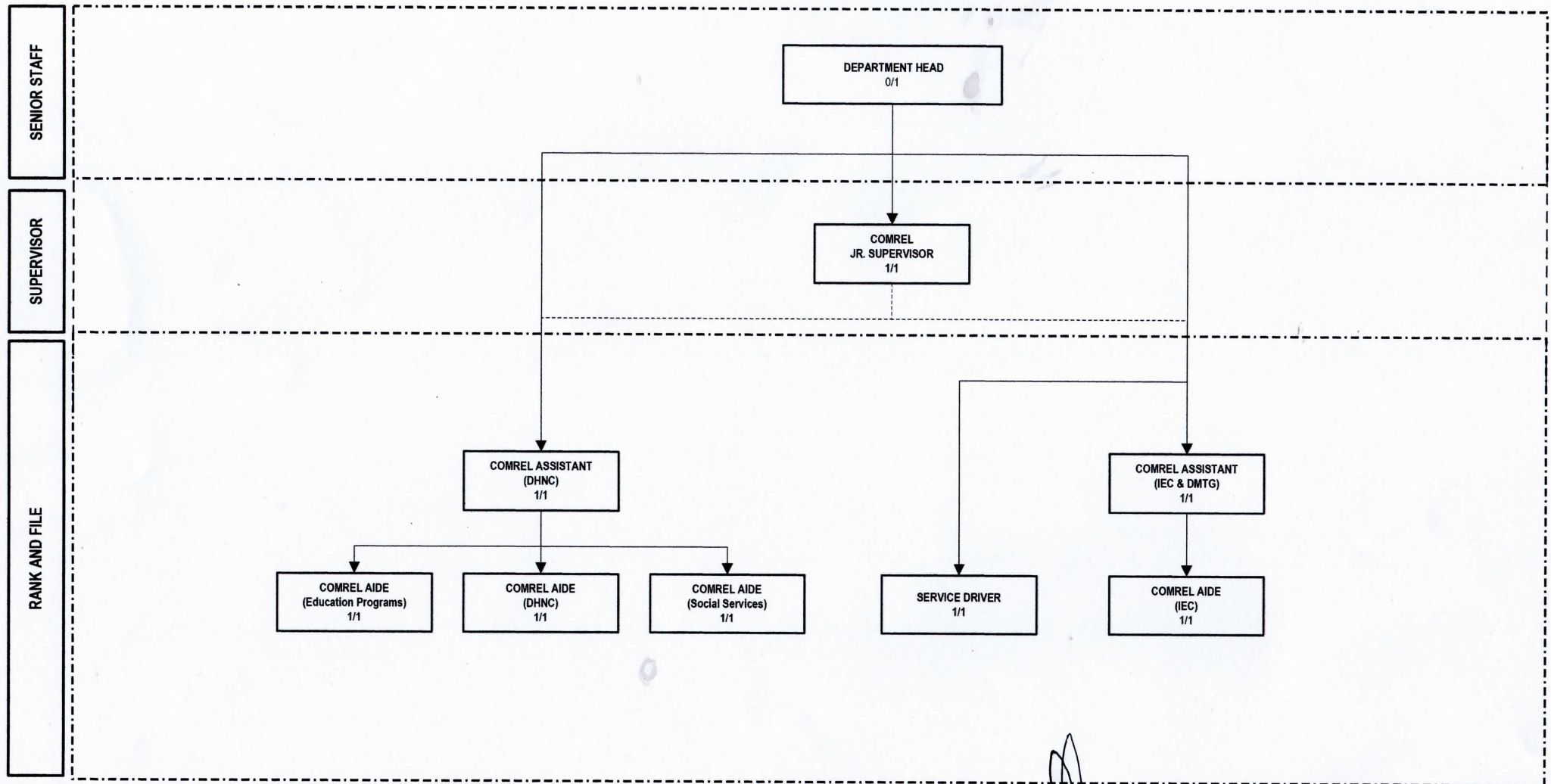
A. EQUIPMENT LIST

Equipment Type	Machine Population	Oper	Down	Availability (%)	Remarks
I. CONSTRUCTION					
Hydraulic Excavator	49	40	9	82%	FMRD implementation: 10 units
Bulldozer	5	4	1	80%	FMRD implementation: 2 units
Wheel Loader	2	2	0	100%	
Road Grader	4	2	2	50%	
Vibratory Compactor	2	2	0	100%	
Total					
II. VEHICULAR					
Boulders Truck	7	0	7	0%	
Dump Truck	37	28	9	76%	FMRD implementation: 10 units
Water Truck	7	4	3	57%	FMRD implementation: 1 unit
Fuel Truck	2	2	0	100%	FMRD implementation: 1 unit
Lube Truck	2	2	0	100%	FMRD implementation: 1 unit
Welding Truck	1	1	0	100%	FMRD implementation: 1 unit
Fire Truck	1	1	0	100%	FMRD implementation: 1 unit
Utility Truck	2	2	0	100%	
Rescue Truck	1	1	0	100%	
Sample Truck	1	0	1	0%	
Hauling Truck	2	2	0	100%	
Man Hauler Truck	12	9	3	75%	FMRD implementation: 3 unit
Service Vehicle	15	13	2	87%	FMRD implementation: 3 unit
Total					
III. SUPPORT					
Hyd. Breaker(Attachment)	3	1	2	33%	
Brush Chipper	1	1	0	100%	
Forklift Truck	1	1	0	100%	
Generator Set	8	5	3	63%	FMRD implementation: 2 unit
Welding Generator	1	1	0	100%	
Tower Light	13	11	2	85%	
Seacraft	2	2	0	100%	FMRD implementation: 1 unit
Total					
OVER TOTAL	181	137	44	75.7%	

BERONG NICKEL CORPORATION

Berong Quezon, Palawan

Table 10. **2020 TABLE OF ORGANIZATION**
COMREL DEPARTMENT



Total Manpower as of January 31, 2020

Senior Staff - 0
Supervisor - 1
Rank and File - 7
Total - 8

Prepared and Submitted by:

DEBORAH A. AQUINO
OIC - COMREL Department Head

Noted by:

HERNANDO D. AGUPITAN
HR/AD Department Head

Recommended by:

MARC RAYMUND L. ZAMORA
Resident Manager

Approved by:

CESAR F. SIMBULAN JR.
President