

1.0 PROJECT FACT SHEET

1.1 Background of the Project

Project Name:	CBNC Expansion Project (Tailing Storage Facility No.3 establishment and Increase in Co annual production limit)
Nature of Project:	Resource Extractive Industry (Mineral Processing)
Total Area and Volume of TSF3:	111 hectares 18.6 million cubic meters
Site Location:	Rio Tuba Export Processing Zone (RTEPZ), Barangay Rio Tuba, Bataraza, Palawan

1.2 Profile of the Proponent

Name of Proponent:	Coral Bay Nickel Corporation (CBNC)
Office Address:	Rio Tuba Export Processing Zone (RTEPZ), Barangay Rio Tuba, Bataraza, Palawan
Contact Person:	Engr. Arturo Manto <i>Vice President – Environmental Management</i>
Tel No.:	+632 5487110 / +632 8563930

1.3 Profile of the Preparer

EIA Preparer:	Gaia South, Inc.
Office Address:	7 th Floor Montepino Bldg., Adelantado cor. Gamboa St., Legaspi Village, Makati City
Contact Person:	Liezyl S. Liton-Rellea <i>Project Director</i>
Tel No.:	(02) 893-5661

1.4 Project Background

Major Project Components

Table ES1 shows the comparative components of the existing operations of CBNC and its proposed expansion.

Table ES1. Comparative components of plant operations

Project Features	Existing Operations (Lines 1 and 2) ECC 0701-002-3721	Proposed Expansion	Combined Features
Approved area for operation	<ul style="list-style-type: none"> Area of Plant Site: 44 hectares Area of Pier Site: 19 hectares TSF1: 90 hectares TSF2: 207 hectares Gotok Quarry: 13 ha 	TSF3: 111 hectares	471 hectares
Capacity	25,000 DMT Ni per year 1,875 DMT Co per year	same 625 DMT Co per year	same 2,500 DMT Co per year
Gotok Limestone Quarry (Capacity)	372,000 MT per year	Not Applicable (covered under separate ECC application)	
No. of Tailings Storage Facility	2	1	3
Tailings dam capacity	40 M m ³	18.6 M m ³	58.6 M m ³
Area of Tailings Storage Facility	<ul style="list-style-type: none"> Tailings dam 1: 90 hectares Tailings dam 2 : 207 hectares 	Tailings dam 3: 111 hectares	408 hectares
Total Ore Requirement	2-2.5 Million DMT	same	same
Manpower	<ul style="list-style-type: none"> During Operation: Permanent: 600 Contractual: 1,500 	During Construction: <ul style="list-style-type: none"> Contractors: 62 Sub-con: 332 	During Operation: <ul style="list-style-type: none"> Permanent: 600 Contractual: 1,550
Water Source	<ul style="list-style-type: none"> Intake dam at the East Ibelnan River for Lines 1 and 2 water supply Upper Togpon siltation pond and a 300,000 m³ water reservoir as alternative sources of water 	Same as existing	Same as existing
Water Requirement	30,000 cubic meters/day	Same as existing	Same as existing
Power Source	Maximum of 14.5 MW Coal-fired boiler and turbine power plant per Line <ul style="list-style-type: none"> Breakdown for Line 1: <ul style="list-style-type: none"> 11 MW Coal-fired boiler and turbine power plant Back-up: two (2) units 1.5 MW each diesel generators, or 3 MW total Breakdown for Line 2: <ul style="list-style-type: none"> 11 MW Coal-fired boiler and turbine power plant Back-up: Two (2) units of 1.64 MW each diesel generator, or 4.92 MW total Additional: two (2) units of 0.072 MW each diesel generators, or 0.144 MW total installed at the pier site and 1.5 MW Diesel Generator installed at HPP Line 2 used as back-up power supply for the townsite 	Same as existing	Same as existing
Power Requirement	*About 135 Million kw-hrs/year	Same as existing	Same as existing
Causeway	380 m long, 3.5 m high, 14 m wide road and 17 m base width, concreted	Same as existing	Same as existing

Project Features	Existing Operations (Lines 1 and 2) ECC 0701-002-3721	Proposed Expansion	Combined Features
	surface		
Trestle	1,080 m long, 5 m high from sea level and 2.5 m wide.	Same as existing	Same as existing
Other facilities	<ul style="list-style-type: none"> Effluent discharge facilities Pier site (land-based operations) Coal, ore and other raw materials, and finished products stockpiles 	Same as existing	Same as existing
Shared Facilities with RTNMC and Unichamp Mineral Philippines, Inc. (UMPI)	<ul style="list-style-type: none"> Access Roads (RTEPZ) Macadam Road 	Same as existing	Same as existing
Investment cost (Php)	22.9 B	7.3 B	30.2 B

*Note: *Average of five (5) years power consumption as indicated in the Compliance Monitoring Report (CMR)*

2.0 PROCESS DOCUMENTATION

2.1 The Environmental Impact Assessment (EIA) Report

The proposed CBNC Expansion Project as per Environmental Management Bureau (EMB) Memorandum Circular 005-2014, is classified as Category A or Environmentally Critical Projects (ECP). The ECC application for an existing and to be expanded project under Category A, shall be applied to the EMB Central Office. An EPRMP shall be submitted as its documentary requirement. The EPRMP shall contain the following:

- Project Description;
- Assessment of Environmental Impacts;
- Environmental Management Plan;
- Environmental Risk Assessment (ERA) & Emergency Response Policy and Guidelines;
- Social Development Plan/Framework and IEC Framework;
- Environmental Compliance Monitoring;
- Decommissioning/Abandonment/Rehabilitation Policy; and
- Institutional Plan for EMP Implementation.

For the preparation of the EPRMP, CBNC contracted the services of Gaia South Inc., a third party Environmental Consultancy firm. To guide both the proponent and its preparer in the conduct of the Environmental Impact Assessment (EIA) and writing of the EPRMP, a Technical Scoping Meeting was conducted on July 7, 2016 at the CBNC Project Site. List of attendees of the meeting is provided in the Technical Scoping Report attached as **Annex ES1**. During the meeting, the EMB Case handlers, Review Committee Members, CBNC and Gaia South Inc. representatives agreed on the coverage of the Technical Scoping Checklist (**Annex ES2**).

2.2 Limitation of the Study

The Technical Scoping Checklist served as guide in limiting the imperative information needed in this EPRMP. Experts from different field of interest prepared this comprehensive report based on primary data gathered through actual fieldwork and secondary data sourced from the barangay and municipal offices and other related agencies such as the National Mapping and Resource Information Authority (NAMRIA), Palawan Council for Sustainable Development (PCSD), Philippine Institute of Volcanology and Seismology (PHIVOLCS),

Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Bureau of Soils and Water Management (BSWM), and Mines and Geosciences Bureau (MGB), among others.

2.3 The Project Team

Table ES2 shows the roster of Gaia South team of experts who participated in the conduct and preparation of this report. Gaia South Inc. is a registered Firm Preparer of EIA Reports under the Philippine Environmental Impact Statement (EIS) System as per EMB MC 2013-003 with registration no. FPCO-006. The Certificate of Registration given to Gaia South Inc. is presented as **Annex ES3**. **Annexes ES4** and **ES5** are the Accountability Statements of CBNC and Gaia South, Inc., respectively.

Table ES2. List of EIA team members, their respective field of expertise and their preparer registration number

Consultant/Researchers	Module/Position	Registration No.
Liezyl S. Liton-Rellea	Project Director	IPCO-064
Ernesto Dela Cruz, PhD	Team Leader/Air Quality/Water Quality/ Technical Reviewer	IPCO-308
Emmanuel G. Ramos, PhD	Geology	IPCO-117
Perfecto Evangelista, PhD	Soils and Land use	IPCO-179
Edwino Fernando, PhD	Terrestrial Flora	-
Judeline Dimalibot, MSc	Terrestrial Fauna	IPCO-176
Davee Drake Medina, MSc	Hydrogeology	IPCO-174
Emeterio Hernandez, MSc	Flood Modelling and Sediment Transport Modelling	IPCO-244
Katherine Escalona, MSc	Marine Ecology Assessment	IPCO-180
Melanie Manaoag, MSc	Technical Writer	IPCO-177
Thelma D. Dela Cruz, MSc	Environmental Risk Assessment	-
Merlyn Carmelita Rivera, PhD	Socio-economics	IPCO-298
Monette Bato, PhD	Public Health	-
Hanna Bermillo-Arriaga, MSc	Technical Associate/Team Coordinator	IPCO-181
Danica Dela Rosa	Technical Associate	IPCO-175

2.4 The EIA Study Schedule and Area

The proposed expansion project will cover the construction of additional Tailings Storage Facility (TSF3) and increase the annual cobalt production limit of the current Hydrometallurgical Processing Plant (HPP). TSF3 and the HPP plant are located inside the Rio Tuba Export Processing Zone (RTEPZ) in Barangay Rio Tuba, Municipality of Bataraza, Province of Palawan. Specifically, TSF3 will be constructed at the northeastern side of the existing GP-4 Rehabilitation Area of the Rio Tuba Nickel Mining Corporation (RTNMC). Its location will fall within the boundaries of Barangays Rio Tuba and Ocayan. **Figures ES-1** and **ES-2** depict the location and vicinity maps of the proposed project, respectively. The proposed expansion area is within the “multiple-use zone” based on the Environmentally Critical Areas Network (ECAN) Map of the Palawan Council for Sustainable Development (PCSD) as illustrated in **Figure ES-3**. The site development plan is also included as **Figure ES-4** showing the major and auxiliary facilities of CBNC while the geographic coordinates including the proposed expansion area is listed in **Table 1.2.1**.

Table ES3 shows the study schedule for this particular EIA starting from fieldwork activities to the finalization of the EPRMP.

Table ES3. EIA study schedule

Activity	Period
Environmental and Social fieldwork	August to September 2016

Activity	Period
Date gap analysis	October 2016
Draft EPRMP writing	September to November 2016
Submission of EPRMP to EMB for 1st technical screening	December 2016
Submission of EPRMP to EMB for 2nd technical screening	April 2018
Submission of EPRMP to EMB for substantive review	April 2018
Finalization of EPRMP	<i>To be finalized</i>

2.5 The EIA Methodology

Various studies for land, water, air as well as the social aspects were conducted in such a way that all the technical, environmental and regulatory requirements dictated in the Technical Scoping Checklist were satisfied. Furthermore, this report is a product of the professional and scientifically acceptable methodologies and procedures by the DENR.

2.6 Public Participation

CBNC has been conducting its Information, Education, and Communication Campaign (IEC) as seen in Annex 5.2.1. During these meetings, the issues raised were concerns about the operation of the HPP and the proposed TSF3. Please refer to **Annex ES6** for the summary of issues during the IEC and FGD, as well as the MMT findings.

In the matrix of issues and concerns (**Annex ES6**), several items related to the operation of CBNC can be categorized into various aspects. Foremost is the implementation of the SDMP. According to the community members, there should be a separation of procurement needs for the SDMP to avoid delays in the implementation of Project, Program, and Activities (PPAs). Furthermore, to be able to be assured of sustainability of projects, appropriate trainings on financial management and other tools to attain profitability and good leadership must be pursued. Also, the identification of projects must be done by the members of the barangays who are definitely knowledgeable and aware of their needs. This must be implemented with the assistance and guidance of the ComRel and other experts.

The activities undertaken by the ComRel were also pointed out by the community members. There are times that the ComRel allegedly controlled all SDMP projects - even the purchase of materials and/or other supplies needed in the implementation of the PPAs. Moreover, IEC on project accomplishments and environmental protection must be conducted regularly according to the residents of the barangay.

Hiring by the company must give priority to the members of the community. Even women weighed in on the issue that more males are hired compared to females. It was likewise suggested that the company must be more transparent in reporting accident incidences.

The bad smell emanating from the CBNC plant site was a concern forwarded. Issues on water and soil pollution, and fish kill allegedly caused by CBNC must continuously be taken into consideration during regular IECs to explain to the residents how the company complies with the environmental standards.

The fear of water from the dam being washed out during strong rains has been broached by the residents. In this regard, a suggestion to conduct trainings on safety and disaster preparedness was forwarded.

There was also an issue that the IPs are given priority and preference in extending benefits and privileges by the company. The Muslims felt that they have been disregarded and left out.

Barangay Sapa SDMP fund is allegedly managed not by the barangay officials but by a certain person. The barangay feeding program and assistance to high school students have been held in abeyance to give way to the other projects led by a certain person. As reported, this has caused frustration on the part of the barangay official.

There were concerns aired out regarding the proposed TSF3. Foremost of this is the fear of the residents concerning the integrity and strength of the TSF3. They inquired whether the structure will not crack given the inclement weather conditions. Furthermore, the fear of landslides as a result of soil movement was stated. There were also concerns that water pumps might be adversely affected as a result of the proposed project.

The residents of Barangay Ocayan were concerned about the possibility of being relocated as a result of the project. Moreover, the Ocayan residents suggested if possible, to locate TSF3 in Barangay Sumbiling. According to them, Sumbiling has a lot of trees compared to their barangay. The trees, they said, will filter the dust and other emissions that may arise.

There were two (2) barangays that expressed frustration for being left out in the endorsement of the project. Representatives from Barangay Taratak mentioned that distance should not be the only basis in determining direct impact barangays. Other criteria, such as the degree of impacts should also be considered. They feel that they will be severely affected by the proposed project as well as Barangay Sandoval.

Table ES4 provides the summary of the EIA methodology.

Table ES4. The EIA methodology

Component	Description
Soil and Land Use	<ul style="list-style-type: none"> • Use of Comprehensive Land Use Plan (CLUP) of the Municipality of Bataraza for 2013 to 2023; Environmental Critical Areas Network (ECAN) Map; National Mapping and Resource Information Authority (NAMRIA) Map and Google Earth Imagery as references.
Geology and Geomorphology	<ul style="list-style-type: none"> • Use of available reports, geology literature and information to describe site's existing condition; Use of geological and seismological data lifted from publicly available international and local sources.
Pedology	<ul style="list-style-type: none"> • Soil characterization was made through a 30-cm borings in the representative sites of the soil mapping units of the soil type within the project area. • Eight soil sampling sites were established. • For each soil unit, erosion susceptibility was determined based on a contributing factor taken at a time. Food and Agriculture Organization (FAO) guidelines was used as reference. • Among the parameters considered were pH, total organic matter, total nitrogen, total organic carbon, and particle size) and heavy metal content such as cadmium (Cd), chromium (Cr), copper (Cu), Iron (Fe), manganese (Mn), potassium (K), and zinc (Zn). • The Final Erosion Susceptibility Rating, Soil Suitability Classification, and Erosion Susceptibility were also determined.

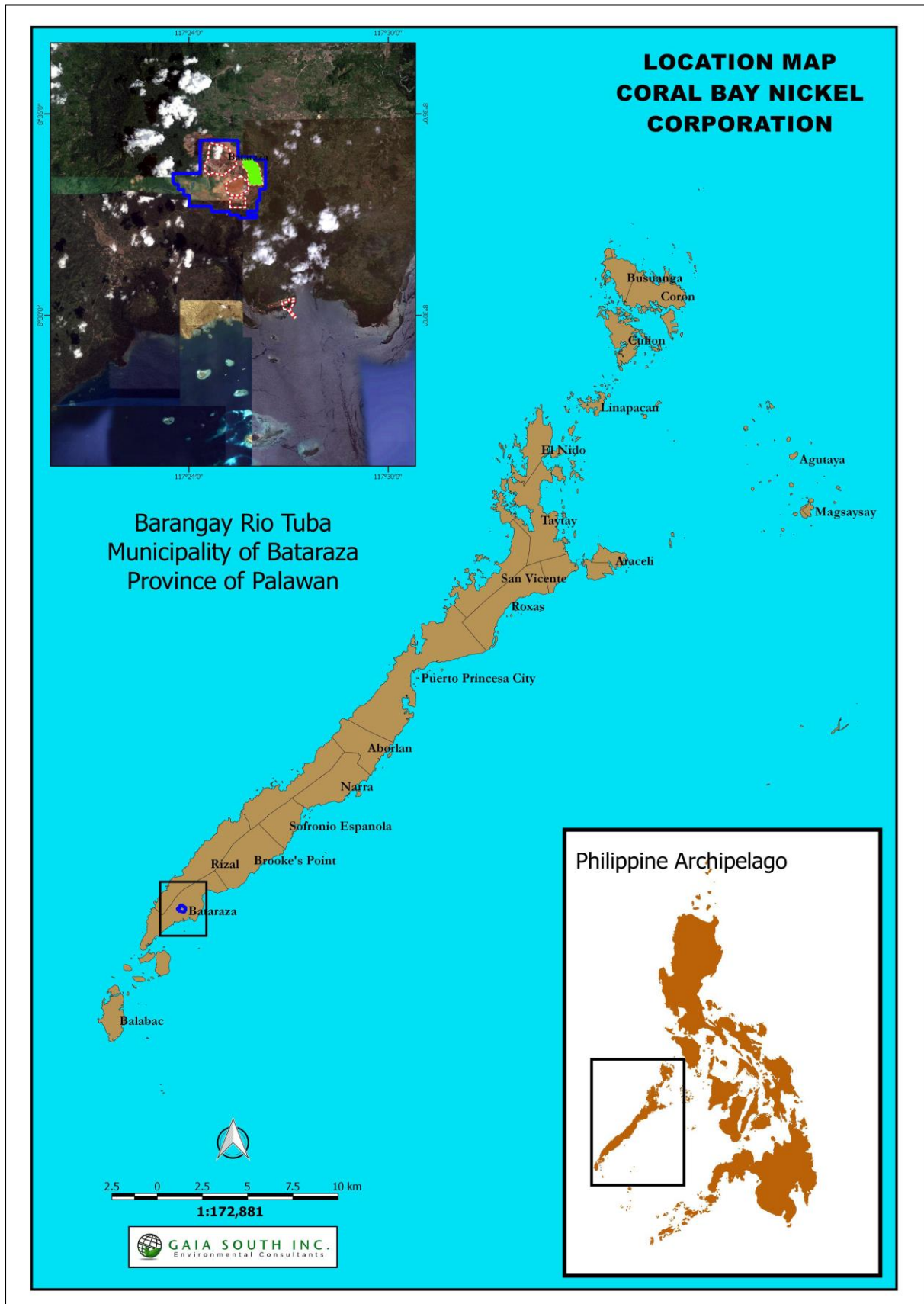


Figure ES-1. Location map of the proposed CBNC expansion project

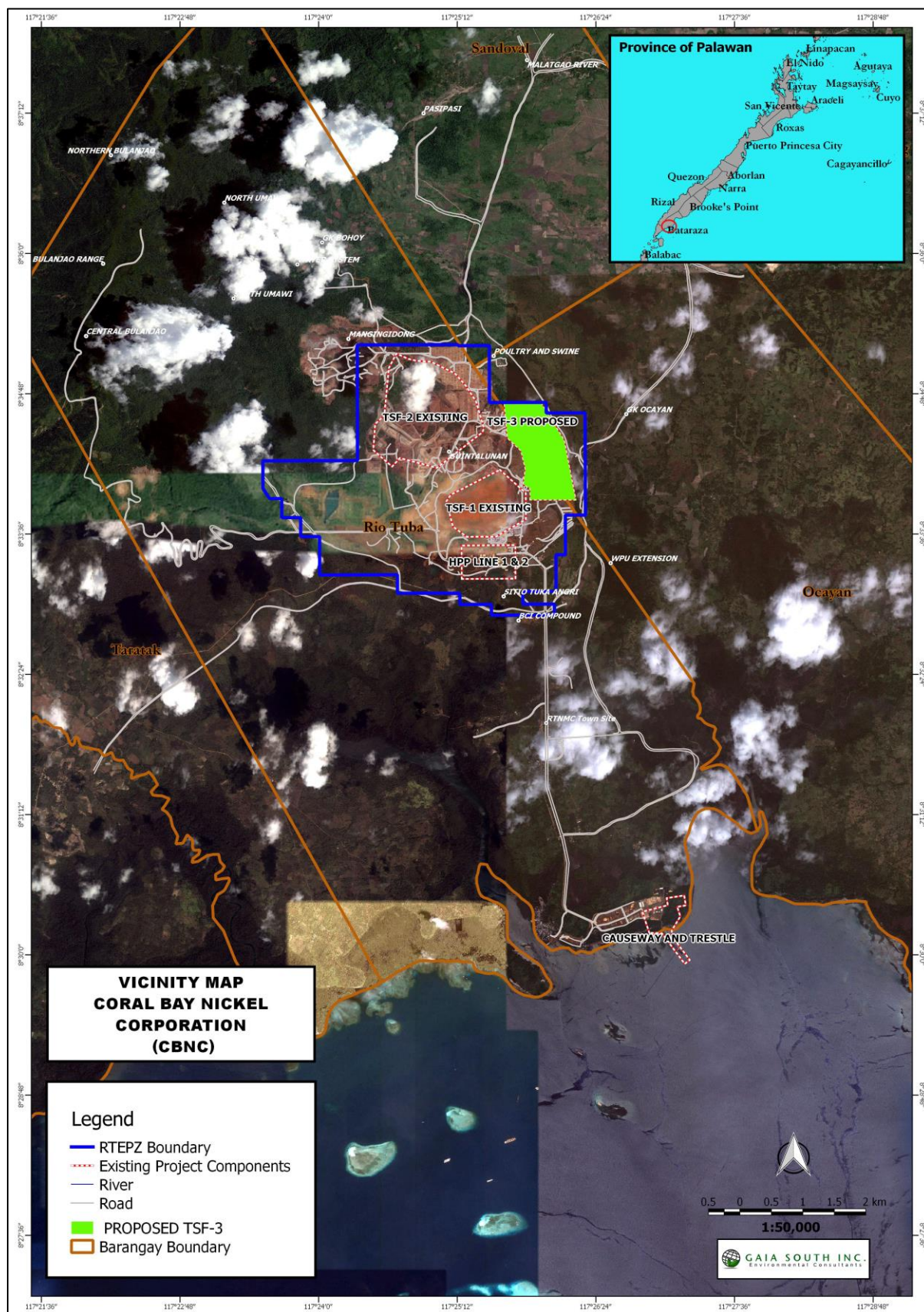


Figure ES-2. Vicinity map of the proposed CBNC expansion project

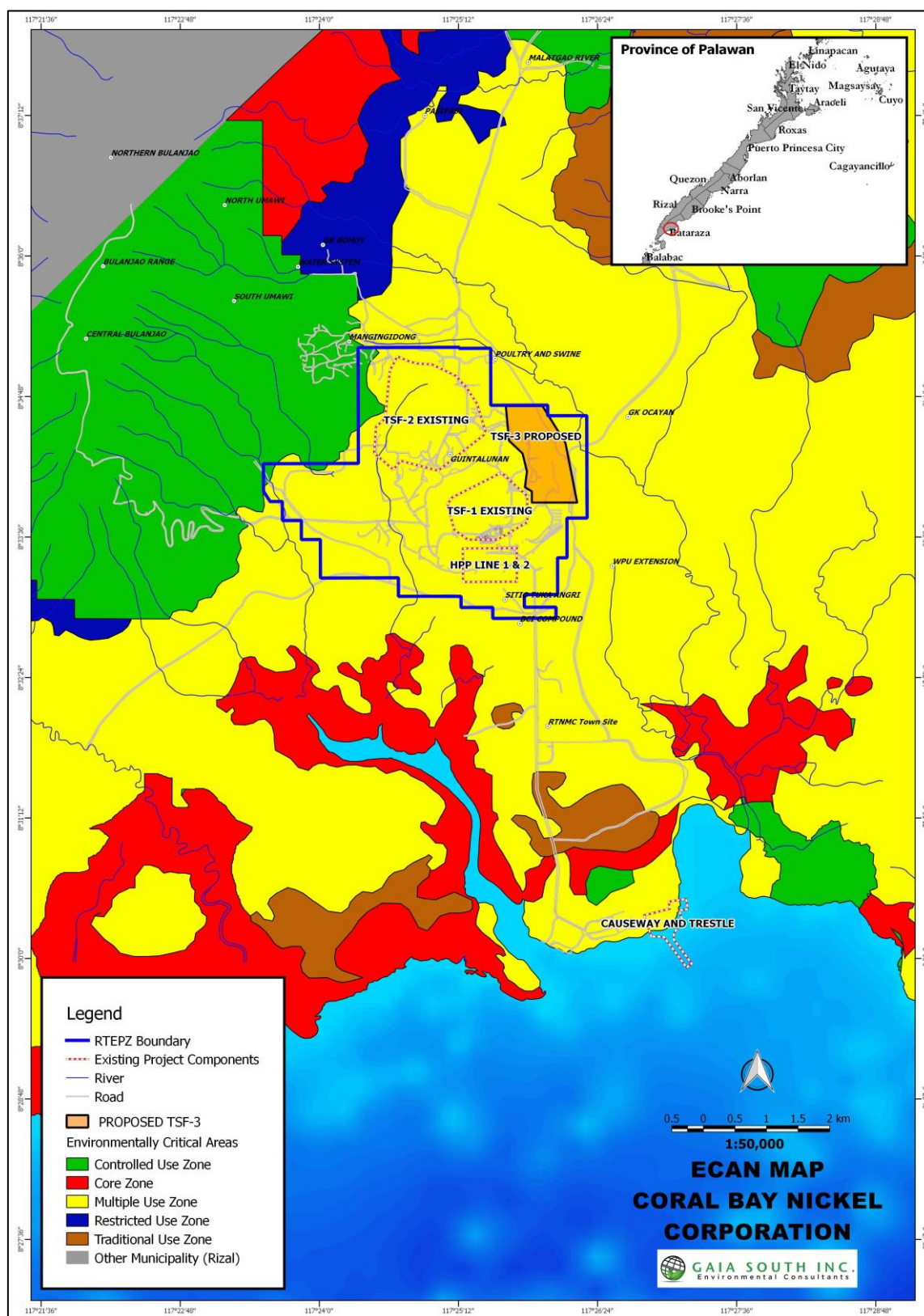


Figure ES-3. ECAN map of PCSD illustrating the location of TSF3 and CBNC HPP in a “Multiple-Use Zone”

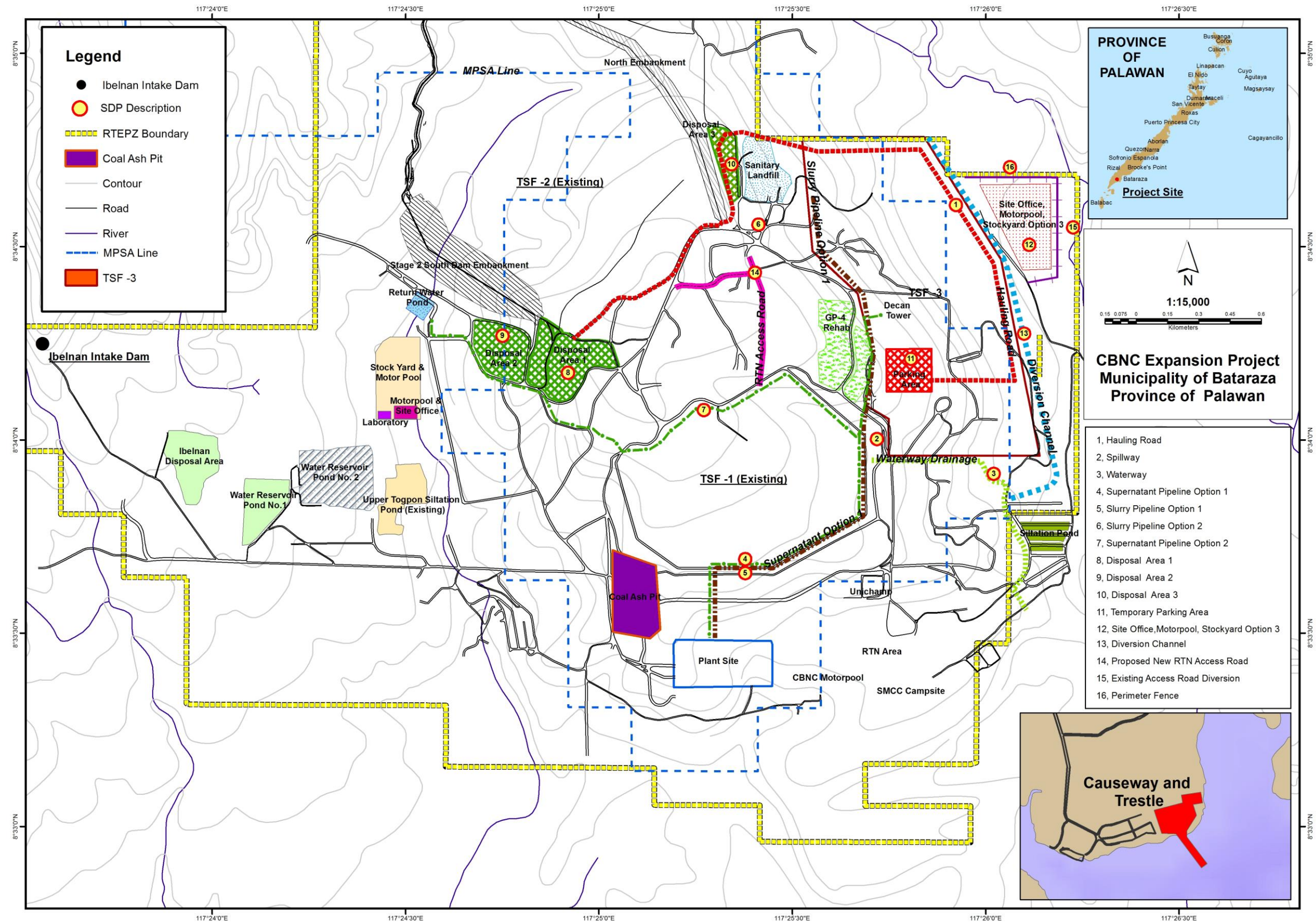


Figure ES-4. Site Development Plan of CBNC Expansion

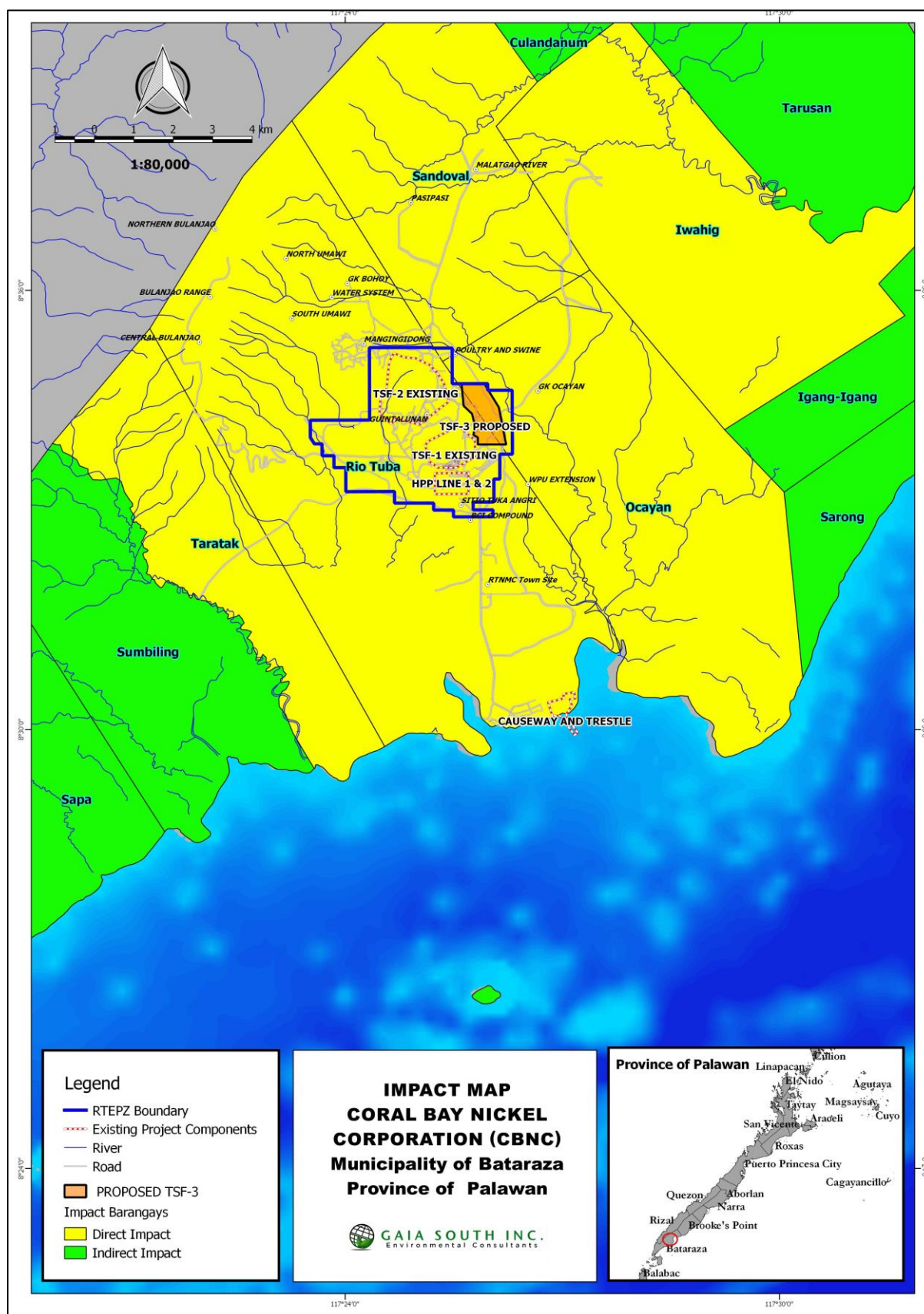


Figure ES-5. Primary and secondary impact areas

Table ES4
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Component	Description
Terrestrial Flora	<ul style="list-style-type: none"> • A reconnaissance survey of the area was initially undertaken to determine the potential locations of the vegetation sampling plots. • Sixteen plots were established. Each plot (10 m x 10 m) was divided into sub-plots using the four cardinal directions <i>i.e.</i>, subplot 1 (NE), subplot 2 (SE), subplot 3 (SW), subplot 4 (NW). In each subplot, an inventory of the vascular plants present was conducted. • Measurement of diameter at breast height (dbh) was undertaken for trees with more than 10 cm dbh. Smaller quadrats measuring 5 m x 5 m and 1 m x 1 m were also established within the 10 m x 10 m plot. The 5 m x 5 m quadrat was established to quantify the intermediate vegetation. A 1 m x 1 m quadrat was established to account for undergrowth vegetation. • Transect line established within the grassland was approximately 800 m long. Observation points were made every 200 m along the transect line. • Using the site development plan map provided, the location of the plots and transect line was determined and the plots were established. • Specimens (about 30 cm of twig with leaves and flowers and/or fruits) of species that were not readily identifiable in the field were collected, inserted between sheets of old newspapers, placed in large plastic bags, and preserved with denatured alcohol. These were subsequently processed as herbarium material for proper identification in the laboratory. • Among the parameters considered were density, dominance, frequency, Relative Frequency, Relative Dominance, Relative Frequency, and Importance Value.
Terrestrial Fauna	<ul style="list-style-type: none"> • Standard field methods and procedures were used for each taxon during the survey. • Four transects were established. Transect walks were done twice, once in the morning from 5:30-8:00am and 4:00-6:00 in the afternoon. • Direct and indirect transect identification such as tracks, signs and auditory cues, trapping and mist-netting were used. Microhabitat searches for amphibians and reptiles (herps) were done while conducting transect walk in the immediate vicinities of the transect line, 5 meters to the left and 5 meters to the right. • Diversity indices (species diversity, species richness were computed using the PAleontologicalSTatistics (PaST), ver. 1.42 by Hammer, Harper and Ryan (2016).
Hydrology/ Flood Modeling on the Dam Break Scenario for TSF3	<ul style="list-style-type: none"> • Use of meteorologic data sourced from the PAGASA and from the mine site rainfall monitoring station established by RTNMC from 1996 to 2015 and the automatic weather station established by Coal Bay Nickel Corporation (CBNC) that monitored maximum, minimum and mean temperature, among other parameters. • Conduct of water source inventory. • The monthly and annual PET in the area was computed using the Thornthwaite Method (Knödel, et al, 2007). • Since there are no long-term stream flow measurements for any river in Palawan, the discharge of Okayan and Tuba rivers were estimated from the long-term water balance of its watershed. The long-term water balance is expressed by the equation $P = AET - Q - GR$, where P, AET, Q and GR represent rainfall, actual evapotranspiration, stream discharge and groundwater recharge respectively (Sokolov and Chapman, 1974). • A hypothetical breaching of a dike was conceptualized using the 2D version of the HEC-RAS model wherein the assumed collapsed is about 10 m width at the bottom of the dike with 45 degree slopes each side.
Water Quality	<ul style="list-style-type: none"> • Use of the quarterly Self-Monitoring Report (SMR) of CBNC. • Collection of water samples from two (2) marine stations, one (1) effluent, one (1) surface freshwater and one (1) groundwater. The sampling was carried out on Sept 22, 2016. • Methodology for conducting the water quality assessment study in the project area was based on the Water Quality Monitoring Manual issued by the Environment Management Bureau and the Philippine National Standards for Drinking Water (PNSDW) specified by Department of Health Administrative Order No. 2007-12. The procedure for field assessment, site selection, sampling and analysis are specified in the above references. • The parameters considered were pH, temperature, total suspended solids (TSS), dissolved oxygen (DO), biochemical oxygen demand (BOD), chemical oxygen demand (COD), fecal coliform, total coliform, lead, arsenic, cadmium, zinc, copper, nickel, iron, manganese, chromium (hexavalent and total) and Oil and Grease.
Physical Oceanography	<ul style="list-style-type: none"> • The physical oceanography surveys were conducted south of Rio Tuba where Ocayan and Rio Tuba rivers drain to the Ocayan-Coral Bay, covering approximately 720 hectares of coastal sea. • An automatic water level logger was deployed at a fixed location within the CBNC's port on August 18, 2016 at 5:45 PM until August 20, 2016 at 5:00 PM to monitor the Bay's

Component	Description
	<p>actual tidal fluctuations.</p> <ul style="list-style-type: none"> Sub-surface currents were observed from three stations using a drifter. A float board was attached with stainless fins which can be adjusted from 0.5 - 1.5 m, and was mounted on top with an airtight container to house a GPS which recorded the geographic location and hence, trajectory of the drift as it is moved by the ocean currents hitting the submerged fin of the drifter. A bathymetrical survey was conducted covering about 720 hectares of the bay off the coast of Rio Tuba using Garmin GPSMAP® 421s with a dual frequency transducer (Sonar). For depth measurement, the operating frequencies were either at 50 kHz or at 200 kHz, which automatically switches alternately depending on the water depth.
Freshwater Ecology	<ul style="list-style-type: none"> Secondary data from the previous EIAs conducted were used. Sampling sites considered were two (2) stations within Ocayan River. Plankton community was sampled by collecting 30L surface waters with a dipper. The water passed through a plankton net with mesh size of 65µm. The net was backwashed by repeatedly dipping it to the water column to remove any clinging organisms. The sample collected from the cod end of the net was transferred to plastic bottles and treated with 1% formalin to preserve integrity of the collected samples. Bottles were transported to the laboratory for taxonomic identification. Benthic community was sampled using a modified surber sampler. A Muslin cloth net was attached to a scoop frame, which was then deployed on flowing portion of the water body. Approximately 1 m² of the upstream portion was disturbed to dislodge benthic animals. Samples was preserved in ethyl alcohol and transported to the laboratory for taxonomic identification. Heavy metals contents (arsenic, chromium, nickel, lead, mercury and cadmium) of fish caught in Ocayan river were tested.
Marine Ecology	<p><i>Plankton</i></p> <ul style="list-style-type: none"> For the plankton sampling, ten (10) stations were considered. Sampling of the microscopic plankton made use of plankton net with 25µm diameter net. A 30-liter surface water was collected from each site and passed through the net. The collecting net was repeatedly back- washed to remove clinging organisms on the inside part of the net. The collected water at the cod-end of the net was transferred to a collecting bottle labeled with site name. Samples were treated with 1% formalin (v/v) as preservative and fixative. Samples were transported to the laboratory for taxonomic identification and density counting. <p><i>Fish and Corals</i></p> <ul style="list-style-type: none"> Researchers in SCUBA gear lay fiber glass transect line haphazardly on the reef crest of each site with reef. Where there is no visible crest as in the case of coral bommies, the transect line is laid where there is flat surface. Percent cover (%) is taken by adding the length of each lifeform category over the total length of the transect line (English et al., 1996). Observations were also made for interesting biological species left and right of the transect. For fish and corals, seven (7) sites were surveyed. <p><i>Seagrass</i></p> <ul style="list-style-type: none"> For sites with seagrasses, a .5m x.5m quadrat was used to gather samples. The quadrat was further divided into smaller squares by nylon string every 10cm with each quadrat having 25 small squares. The quadrat was randomly thrown in the seagrass area five times to constitute a total sampling area of 1.25 m². For each quadrat, seagrass cover was estimated. Species were identified using field guide. Seagrass assessment were conducted in five (5) sites. <p><i>Heavy metal contents of marine fish flesh</i></p> <ul style="list-style-type: none"> Two (2) fish samples were collected from in-situ fishers. Species were segregated into trophic level. For this analysis, carnivores refer to groupers (Plectropomus and Epinephelus) while rabbitfish (Siganus) were referred to as herbivores. Samples for each trophic group was sent to the laboratory for heavy metal analysis, specifically for Arsenic (As), hexavalent chromium (Cr⁶⁺), copper (Cu), nickel (Ni), and lead (Pb). These metals are known.
Meteorology	<ul style="list-style-type: none"> Climatological data were obtained from PAGASA. The closest synoptic station of PAGASA relative to the proposed project site is the Puerto Princesa Synoptic Station in Palawan. This station has available record since 1981. Climatologic indicators for the area include mean temperature, rainfall, relative humidity, wind speed and direction. Other relevant information gathered from PAGASA is the climate and typhoon frequency maps and the 2020 and 2050 climate projection (Climate Change in the Philippines, 2011).

Component	Description
Air Quality	<ul style="list-style-type: none"> The ambient air quality at the project site was assessed following the DENR Administrative Order (DAO) 2000-81 (Implementing Rules and Regulations of the Philippine Clean Air Act of 1999). Five sampling stations were established covering the proposed project site and the receptor area. The 24-hour ambient air quality sampling was conducted on August 2016. The sampling procedures were based on USEPA, 40 CFR Part 50, (Appendix A, M, and L) and EMB Air Pollution Monitoring Manual (1994). A 24-hour ambient sampling for analysis of particulate matter 10 microns (PM10), total suspended particulate (TSP), gaseous pollutants (NO₂, and SO₂) and heavy metals (As Cd, Pb, Hg, Ni & Cr) was done for each sampling station. Air sampling was conducted and analyzed by Induframach Corporation, a DENR accredited air quality sampler. The instrument used was a BGI PQ200 PM10 Sampler and a Graseby High Volume Sampler for TSP. For SO₂ and NO₂, a Graseby Gas Bubbler Sampler was used. The SO₂ and NO₂ samples were preserved in an icebox, PM10 and TSP filters were placed inside clean envelop. All samples were submitted to the laboratory for analysis. PM10 filters were analyzed at Induframach gravimetric/balance room.
Noise	<ul style="list-style-type: none"> The same sampling stations (five stations) used for the CBNC EMP TSP monitoring were also used for noise level monitoring in compliance with the Environment Monitoring Plan of CBNC. A Digital EXTECH 407764 sound meter that meets the American National Standard Institute (ANSI) standard was used in measuring noise level. The arithmetic median of the readings was taken and compared with the National Pollution Control Commission (NPCC-1981) noise standards.
People	<ul style="list-style-type: none"> The baseline data was sourced from the barangay profiles provided by each barangay and the profile of Bataraza provided by the Municipal Planning and Development Office (MPDO). A perception survey, focus group discussions (FGD) and key informant interviews (KII) were conducted for the direct impact barangays - Rio Tuba and Ocayan. A total of 371 respondents for the perception survey were randomly selected from the two direct impact barangays, 334 for Rio Tuba and 37 for Ocayan. FGDs were conducted in Taratak, Sandoval, and Iwahig as these had been identified in previous studies as impact areas and the team felt that focus should also be given them in terms of gathering more information for better planning and recommendation setting. Key informant interviews were conducted with the barangay captains of the other indirect impact barangays - Sumbiling, Igang-igang, Sarong, Culandanum, and Tarusan. The sample sizes for the household survey were determined with consideration of the household population size, the level of confidence, that is, 95% and margin of error of + or - 5%. The total combined sample size of three hundred seventy-one (371) respondents was derived using the Slovin's Formula.

2.7 Delineation of Impacts Areas

Currently, the CBNC operations consider 11 impact barangays that are covered by the Social Development and Management Program (SDMP). These are Barangays Rio Tuba, Ocayan, Taratak, Iwahig, and Sandoval as host barangays and as primary impact areas and six (6) neighboring barangays (Sumbiling, Sarong, Igang-igang, Culandanum, Tarusan, and Sapa), which are considered as secondary impact communities (**Figure ES-5**).

The primary impact areas are delineated based on the following:

- Within the Rio Tuba Export Processing Zone (RTEPZ); and
- As host area for the plant facilities and haulage road.

No additional barangays will be adopted under the SDMP with the proposed TSF3 as it will be located within Barangays Rio Tuba and Ocayan.

The Municipality of Bataraza is considered as the Regional Impact Area (RIA) of the project as the impacts, mostly of social contributions may be experienced. The whole province of

Palawan will also be indirectly affected by the proposed project due to social benefits that will arise from the operations.

3.0 SUMMARY OF BASELINE CHARACTERIZATION

Table ES5 presents the summary of profile of the environment and people in the identified impact areas of the proposed project based on secondary information and actual observations.

Table ES5. Summary of profile of the environment and people

Component	Description
Land-use	<ul style="list-style-type: none"> Based on the land use map of Bataraza, the project site is classified as mineral development area. It should also be noted that the HPP and its auxiliary facilities and the proposed Tailings Storage Facility No. 3 are located within the 990 ha mining claims of RTNMC and specifically within the area Rio Tuba Export Processing Zone (RTEPZ). Moreover, the area is classified as a multiple-use zone based on the PCSD ECAN Map.
Geology	<ul style="list-style-type: none"> The project site lies on gentle topography on the southern foot slopes of Bulanjao Mountain Range. Southern Palawan is underlain by seven major rock units, listed below from oldest to youngest: <ul style="list-style-type: none"> Late Cretaceous Mt. Beaufort Ultramafics; Late Cretaceous to Early Eocene Espina Formation; Paleocene to Early Eocene Panas Formation; Oligocene Pandian Formation; Late Miocene Sayab Formation; Pliocene Iwahig Formation, and Quaternary Deposits. The proposed site for the new tailings storage is mostly underlain by ultramafic rocks consisting of serpentized harzburgite, dunite, peridotite, and pyroxenite. Palawan including Brgy. Rio Tuba is located in a tectonically stable region. It lies several kilometers from known active faults and trenches that are the main seismic generators in the archipelago.
Pedology	<ul style="list-style-type: none"> Tagburos clay loam as the soil type in the proposed TSF3 was subdivided into two (2) soil mapping units based on differences in slope ranges. The soil mapping units are the Tagburos clay loam, 3-8% slopes, and Tagburos clay loam, 8-18% slopes. <p><u>Physical and Chemical Analysis</u></p> <ul style="list-style-type: none"> Tagburos clay loam 3-8% slopes is a well-drained sandy loam to silty clay loam soil, soil reaction ranges from medium acid to neutral (pH 6.0 to pH 6.6). Nitrogen is very low (0.03-0.05%). Organic matter ranges from very low to low (1.38- 2.69%), while potassium is very high (1.06-11.1 cmol/kg). The natural fertility of this soil is low. In this soil the heavy metals (cadmium, copper, lead and zinc) are below the contamination levels as prescribed by the Taiwanese standards for cadmium (5mg/kg), copper (200mg/kg), lead (500mg/kg), and zinc (500mg/kg). Chromium, which ranges from 870-2960 mg/kg is above the contamination level for chromium of 400 mg/kg as prescribed by the Taiwanese standard. Chromium Hexavalent is not detected. Iron, which ranges from 13.0-21.5% is above the range of Iron in soil. Manganese with 1560-2370 mg/kg is within the range of manganese in soil. Tagburos clay loam, 8-18% slopes is a well-drained sandy loam soil (disturbed soil- formerly mining area). Soil reaction ranges from slightly acid to mildly alkaline (pH 6.1- 7.7). Nitrogen is very low (0.03%). Organic matter is very low (1.60-1.62%), while potassium is very high (1.9- 2.4 cmol/kg). Natural fertility of this soil is low. In this soil the heavy metals (cadmium, copper, lead and zinc) are below the contamination levels as prescribed by the Taiwanese standards for cadmium (5mg/kg), copper (200mg/kg), lead (500mg/kg), and zinc (500mg/kg). Chromium, which ranges from 870-2,960 mg/kg is above the contamination level for chromium of 400mg/kg as prescribed by the Taiwanese standard. Chromium hexavalent is not detected. Iron, which ranges from 13.0-21.5% is above the range of Iron in soil. Manganese with 1,560-2,370 mg/kg is within the range of manganese in soil.

Component	Description
	<p>Final Erosion Susceptibility</p> <ul style="list-style-type: none"> Based on the Soil Erosion Susceptibility Map, the forest on Tagburos clay loam with 8-18% slopes is with "slight susceptibility to erosion". The Shrubland on Tagburos clay loam with 3-8% slopes is with "slight susceptibility to erosion". The grassland on Tagburos clay loam with 3-8% slopes are with "slight susceptibility to erosion". The bare area (mining area) on Tagburos clay loam with 3-8% and 8-18 % slopes are with "moderate susceptibility to erosion".
Terrestrial Flora	<ul style="list-style-type: none"> Seventy-seven species of vascular plants belonging to 43 families were recorded in the area. These species include trees, shrubs, herbs, palms and vines. The species richness of the project area constitutes only 2.20% of the estimated flowering plants (roughly 3,000–3,500) found in Palawan The number of species recorded is relatively few due to its existing land-use. The project site is part of the active mining area of RTNMC and previously used as stockpile area for lateritic soil for processing and export. In the project area, there are 14 species in the threatened plant list based on PCSD Resolution 15-521, Series 2015 and DENR DAO 2007-01. Among these 14 species, one (1) species and a large tree palm endemic to Palawan, <i>banga</i> (<i>Orania paraguayensis</i>), is under the <i>critically endangered</i> (CR) category, while another, the pitcher plant <i>kuong-kuong</i> (<i>Nepenthes philippinensis</i>), also endemic to Palawan, is in the <i>Endangered</i> (EN) category. At least 10 species are in the <i>Vulnerable</i> (VU) category and one species in the <i>Other Wildlife Species</i> (OWS) / Lower Risk / least concern (LR/lc) category. The IUCN Red List (IUCN 2016) also includes four species recorded from the project site as threatened, viz. <i>guijo</i> (<i>Shorea guiso</i>) – Critically endangered (CR); <i>antipolo</i> (<i>Artocarpus blancoi</i>) – Vulnerable (VU); and <i>batino</i> (<i>Alstonia macrophylla</i>) and <i>amayan</i> (<i>Angelesia splendens</i>) – Lower risk / least concern (LR/lc).
Terrestrial Fauna	<ul style="list-style-type: none"> There were 35 species of birds, four (4) mammals (2 volant and 2 non-volant), and 11 herps (7 amphibians and 4 reptiles). The highest number of species of terrestrial vertebrates was recorded from the Southern side of the proposed TSF3. Most of the birds are specialist feeders with 37% of them insect eaters or are insectivorous. Frugivores, nectarivores, and omnivores comprise 8-9% each, while carnivores comprise 6%. The rest of the specialists comprise 3%. Avian endemism is at 26% and those that are deemed resident and resident/migrant species comprise 3% each. There were only four (4) species of mammals caught in the nets and live traps. Two of these were volant and two (2) were non-volant. All of the species of mammals are classified under Least Concern by the IUCN. Eleven species of herps (7 amphibians and 4 reptiles) were caught by hand during herping Sixty-four percent of the species of herps are residents while 36% are endemic to Palawan. As for conservation status, one endemic species <i>Hylarana moellendorffi</i> is classified as Near Threatened because of the destruction of its habitat and maybe due to climate change. <i>Limnonecthes acanthi</i>, also an endemic species is classified as Vulnerable because it is collected for food and its habitat is continually destroyed.
Hydrogeology	<ul style="list-style-type: none"> The proposed TSF3 lies within the Ocayan River Watershed and the area surrounding it is drained by the Ocayan River. A portion of the TSF3 site and the adjacent areas to the west and north used to be mining area of RTNMC. The creek that drains this area is the westernmost tributary of Ocayan River and is called Tagpisa Creek. Tuba River drains the southeastern section of Bulanjao Range and the lowlands southeast of the mountain range, which comprises large portions of barangays Taratak and Rio Tuba. Water balance analysis reveals that the annual rainfall, actual evapotranspiration, groundwater recharge and stream discharge within the watershed of Ocayan River amounts to 208.2, 88.5, 16.7 and 103 million cubic meters (MCM) while that of Tuba River respectively amounts to 131.4, 56.5, 10.5, and 64.4 MCM. A Level 3 water system installed by RTNMC and CBNC serve the domestic water requirements of Bgy. Rio Tuba and also the townsite and offices of RTNMC and CBNC. Barangays Sandoval and Iwahig and many portions of Ocayan, Igang-Igang and Sarong were also connected to a Level 2 water system likewise developed by RTNMC and CBNC in 2013. RTNMC also has five (5) wells and are presently maintained for use in the crushing plant operations of RTNMC and CBNC and for emergency purposes.

Component	Description
Physical Oceanography	<ul style="list-style-type: none"> • Coral Bay near CBNC port area was influenced by a mixed semi-diurnal tide cycle. A mixed semidiurnal tide cycle is characterized by having two low and two high tides of different heights within a cycle. • Based on the observations during the time of sampling, wind velocities is about 4.38 meters per second on average blowing from the NW-SW direction. • The average sub-surface current is in the range of 0.08 to 0.22 m/s, with the lower value representing areas near the coast and higher values measured farther offshore and therefore represent the open sea sub-surface flows. • Results of the survey indicate that the general direction of the wind during the field survey was eastward which was basically influenced by the <i>Habagat</i> or the Southwest monsoon. • Based on the model, water movement within Coral Bay is faster during tidal ebbing compared to high tidal events based on the coastal circulation patterns.
Water Quality	<ul style="list-style-type: none"> • The fecal coliform count of the sampled groundwater was 5.1 MPN/100 ml and shows exceedance from the drinking water standards and from Class A guide values of DAO 2016-08. Note that total coliform is >23 MPN/100 ml confirms the fecal coliform finding. • For the aesthetic/primary parameters pH, temperature, oil and grease, and total suspended solids, most values throughout 2015 were in agreement with either the PNSDW 2007 or the DAO 2016-08 guide values. • For the heavy metals, all parameters were within the new DAO 2016-08 Class A guide values except for nickel which indicated a slight exceedance from the 0.020 guide value with an actual result of 0.027 mg/L. • The results indicate that the control freshwater bodies, those that have not received any of the plant discharges, generally conform to the Class C beneficial use criteria. • The results show that average of monthly values are generally within the marine water quality standards for Class SC waters except for some exceeding values for lead at station TS (Tagdalungon Shoreline). The values for both stations (0.10 and 0.155 mg/L, respectively) were above the 0.05 mg/L guide value set by DENR. The above-standard values were detected during the months of Jan-Feb and July-September. The Sept 2016 report for Pb was, however, below the detection limit of 0.02 mg/L.
Freshwater Ecology	<ul style="list-style-type: none"> • Ocayan River is generally depauperate of phytoplankton with total density for both stations only at 10s and 100s level only. • The profile is typical of lotic waters that do not retain much nutrients and particulates in the water column. • Upstream Ocayan is dominated by nauplius larvae, a larval stage of crustaceans. This indicates abundance of the group in the water column. In contrast, the rotifers dominate downstream portion of Ocayan. • Upstream Ocayan had five (5) documented species of benthic organisms while the downstream part has four (4). The insect group dominates in both sites, particularly the Heptageniidae, an order under insect family Ephemeroptera (mayflies). • Change in the benthic profile is very apparent when data is compared with 2005 and 2001 sampling results. There is no change in species richness profile from Ocayan upstream station but there is a change in the composition. Earlier sampling from the station showed a high dominance (hundreds of individuals per square meter) of Hydropsichidae, an order of Trichopteran insects (caddishfly) with moderate tolerance to pollution. The dominance extends downstream in 2005. • Toxic metals found in four most common fish species from Ocayan showed levels are below detectable limits except for Pb.
Marine Ecology	<ul style="list-style-type: none"> • The Mooring Dolphin (S1) has a live coral cover of 18.3%. Much of the benthic cover is composed of silted-over coral colonies comprising more than 75% of the bottom. • The site is notable for bleached massive coral colonies as well as tabulate corals overgrown with algae. • The Causeway (S3) is an artificial structure where hard substrate was made available for coral recruitment. • Among the three secondary impact sites, Small Sandbar (S7) has the highest live coral cover at 34.28%. The coral colonies occur on sandy bottom as bommies and on some hard substrate co-occurring with seagrasses. • Ameril Island (S9) has live coral cover of more than 35% while Ursula (S10) has more than 26%. Both sites exhibit good coral growth clear of silt deposits and clear waters. Bleached corals were not observed in both sites unlike other sites. • In terms of species richness, S6, S8 and S9 all has about 40 species. On the other hand, density is highest at 3.2 individuals per meter square at S2, a site where highest fish biomass was also documented at 182.2 g/m². • Among the ten sampling sites, four (4) had seagrasses: S3, S4, S7 and S8

Component	Description
	<ul style="list-style-type: none"> Generally, there is low diversity and density of phytoplankton from all sites Cadmium was found to have 6-7 times than the Australia's standard for and more than 20 times than EU's food grade. Lead (Pb) content of the herbivore sample exceeds EU standard by two-folds. Like Cadmium, Lead (Pb) is also a natural contaminant of fossil fuels which may be related to increased sea-going transportation in the area. All other heavy metal species showed concentrations lower than standards.
Meteorology	<ul style="list-style-type: none"> The climate in the project area is of Type III under the Modified Corona Classification of Philippine Climate. This type of climate is relatively dry from January to April and wet throughout the year. CBNC has three rainfall stations in Rio Tuba, which are located at Guintalunan, Mangingidong and at the Pier site. The rainy season occurs from May to December with October being the rainiest month. From June to February, the mean temperature is fairly constant at 26.37 to 26.93°C, with January being the coldest month. The mean temperature exceeds 28°C during April and May, which are the warmest months of the year. The annual average temperature in the area is 26.96°C. There are several types of wind systems that affect the province. Wind speed range from 1.0 m/s during the months of July and August to a maximum of 2.3 m/s in January. Mean annual wind speed is 1.9 m/s on general E direction. In the Palawan area, the typhoon passage frequency is one (1) cyclone per year mostly in Northern Palawan.
Air and Noise	<ul style="list-style-type: none"> The results for PM₁₀ measurement show an average of 34.02 ug/Nm³ which is below the guide value of 150 ug/Ncm. The highest value was recorded at AQ-2 or Lower Kinurong. The results for the five sampling stations show conformity to DAO 2000-81 ambient air quality guideline values for TSP, which is 230 ug/Ncm. Total suspended particulates were below the limit and ranged only between 42.7 and 68.8 ug/Ncm during the time of sampling and averaged only 54.16 ug/Ncm. This was even lower than the measurements taken in the CBNC 2015 monitoring which ranged between 77.85 and 146.94 ug/Ncm, and averaged 124.3 ug/Ncm. The SO₂ values for the four stations were also below the 180 ug/Ncm Guide Value, ranging only from 5.0 to 9.3 ug/Ncm and averaged 7.92 ug/Ncm. The NO₂ values were also below the guide value of 150 ug/Ncm and averaged only 3.8 ug/Ncm, with values falling between 2.8 and 4.9 ug/Ncm. The 2015 average was 1.72 ug/Ncm and is lower than the 2016 result. For the heavy metals arsenic, cadmium, and lead, the values recorded were all within the ambient air quality guide values. The other heavy metals nickel, mercury, and chromium were generally not present in the ambient air except for AQ-1 which showed a Ni value of 0.18 and AQ-4 which registered a 0.1 Hg level during the time of sampling. The 2015 ambient noise monitoring data shows that the average for all sites falls within the DENR ambient noise standard. The daytime average for all sites is 67 as against the guide value of 70. However, sites such as Stn 5-8 were exceeding the guide value. Annual average GHG over the 8-year period is 404,019 MT CO_{2-e}.
Socio-economics	<p><u>Bataraza</u></p> <ul style="list-style-type: none"> In the 2010 Census of Population and Housing released by NSO, the total population of Bataraza was 63,644. Based on the 2008 CBMS survey results, Bataraza has 7,561 households. The 2008 CBMS results showed that the basic literacy rate of persons with ages 10 years old and above in the municipality was 79.34%. Employment rate in the municipality stood at 91.69% or 8,419 employed individuals from its labor force population of 9,182. <p><u>Host/Direct Impact Barangays</u></p> <p><u>Barangay Rio Tuba</u></p> <ul style="list-style-type: none"> The population of Rio Tuba in 2013 survey is 17,689. The average percentage increase in household population for 2013 and 2014 is 10.9% and 10.93% Household accounts show that out of 4,544 households in 2013 Household Actual Survey (HHAS) it has increased by 372 with a total of 4,196 in the year 2014 survey. This represents 7.21% increase for one (1) year after census was previously conducted. The profile of occupation showed a high percentage of permanent employment in the private sector. Owning a business can also be interpreted as self-employed which is applicable to

Component	Description
	<p>farm owners and other occupations.</p> <ul style="list-style-type: none"> • Income per capita is high. Poverty incidence is low. Magnitude of families living below poverty threshold is low. • Commercial enterprises are thriving. There are many medium sized stores, mostly located in barangay proper. The service sector is also growing with the rise of many commercial establishments. • The predominant religion was Roman Catholic closely followed by Islam. This is due to the ethnic background of the settlers in the area from Luzon and from the Sulu group of islands. • The ethnicity is diverse in the barangay. The different ethnic groups found to be present in the barangay were Tagalogs, Cebuano, Tausug, Manaranao, Mapun, Ilonggo, Cuyunun, Ilocano, Pangutaran, Bicolano, Palaw'an, and Boholano. <p>Barangay Ocayan</p> <ul style="list-style-type: none"> • Based on the 2007 NSO Census of Population declared in the Barangay Profile of Barangay Ocayan, the total population was 1,780 with 846 males and 936 females. • In 2007, there were 308 households with an average of 6 persons per household. • The barangay has five (5) pre-school/day care centers, five (5) public elementary schools and one (1) private preschool facility. • There were two (2) ethnic groups – the <i>Cuyunen</i> and <i>Palaw'an</i> - noted in the barangay. • There were a total of 616 employed residents. Of this number, four were employed locally while 612 were self-employed. There were four (4) residents employed as teachers while 28 as skilled workers. • Farming has been ranked as number one major source of income while fishing was ranked number two. Business was ranked third as their major source of livelihood. <p>Socio-Economic Survey</p> <ul style="list-style-type: none"> • For Rio Tuba, 84.13% or 281 of the respondents was composed of spouses while only 11.97% of the married and single heads of the household was available for the interview. There were also children, of legal age (2.69%), who served as respondents during the survey. In Ocayan, 25 or 67.57% of the interviewed were heads of the family while 10 or 27.03% were spouses. • Majority (50%) of the respondents of Rio Tuba had resided in the area for more than 10 years while 20.36% had lived there since birth. • With Ocayan residents, 17 or 45.95% had been living in the barangay since birth. There were 16 or 43.24% who had resided there for more than 10 years. Only four (4) respondents stated that they have stayed in the barangay from 1-10 years. • It was reported by 209 of the respondents from Barangay Rio Tuba that illegal drug trade and use was a community problem besetting the area. Aside from this, limited sources of income, limited access to education, prostitution, dirty and polluted environment and health issues were some of the problems experienced in the barangay. Conversely, Ocayan respondents saw the lack of income opportunities as well as health problems in the locality. • Three hundred sixteen or 94.61% of respondents from Rio Tuba and 36 or 97.30% from Ocayan were aware and know of the presence of the various inter-related companies existing in their community. • When asked about their knowledge of the planned CBNC Expansion Project for the TSF3 and increase in cobalt annual limit, 211 or 63.17% in Barangay Rio Tuba and 9 or 24.32% from Ocayan responded in affirmation. However, there were 113 or 33.83% in Rio Tuba who had no idea of the proposed project. • It has been mentioned by the Barangay Rio Tuba respondents that the positive impacts they foresee from the proposed CBNC expansion project are provision of more employment to local residents, increase in business and livelihood, industrialization of the company, increased tax collection and revenue for the barangay and municipality, increased land values, more community projects and better solidarity in the community. • All these responses had likewise been forwarded by the Barangay Ocayan respondents. • About 306 or 91.62% of the respondents from Barangay Rio Tuba agreed to pursue the expansion of the TSF3 and the increase in annual cobalt production. There were only four (4) or 1.2% who did not agree and 24 or 7.19 who had no opinion. On the other hand, 25 or 67.57% agreed that the proposed project will be able to provide more jobs and development to the community. Six or 16.22% had no opinion while five (5) or 13.51% disagreed. • One hundred sixty-five or 49.40% from Barangay Rio Tuba strongly agreed in accepting the project while 150 or 44.91% agreed to the project. There were only two (2) people or 0.60% who strongly disagreed. There were also two (2) or 0.60% who had no opinion. The Ocayan respondents strongly agreed (14 or 37.84%), agreed (9 or 24.32%), disagreed (5 or 13.51%), strongly disagreed (2 or 5.41%).

Component	Description
Public Health	<ul style="list-style-type: none"> • There is a fluctuating trend in the mortality rate across all ages from 2011 to 2015. Infant mortality rate as well as maternal death rate also showed fluctuating trends. The infant mortality rate in 2014 was exceptionally low in 2014 at 0.2 per 1,000 population. • Recorded crude birth rate in the Municipality of Bataraza in 2015 was at 24.30, which indicated an increasing trend from 2012, which was at 20.84. • The leading cause of diseases in the impact barangays in Bataraza, Palawan is upper respiratory tract infection (URTI) which consistently ranked first from 2011 to 2015. Listed among the leading causes of infectious diseases from the same period are diarrhea, skin diseases, malaria, typhoid fever and pulmonary tuberculosis. Among the leading causes of non-infectious diseases are hypertension, urinary tract infection (UTI), bronchial asthma, anemia, animal bite, and age-related illnesses. • The leading cause of death in the 11 impact barangays in Bataraza, Palawan from years 2011 to 2015 is hypertension (HPN). Most of the leading causes of death for the covered period are not related to communicable diseases with the exception of pulmonary tuberculosis (PTB). <p><u>Municipal and BLGU Health System and Facilities</u></p> <ul style="list-style-type: none"> • Primary health care delivered by the Municipal Rural Health Unit (RHU), located at the Poblacion, are services limited to preventive and promotive services such as immunization, health and nutrition education, and family planning and routine check-ups. • All of the leading causes of infection showed fluctuating trends from 2011 to 2015 with URTI being the leading cause of diseases in the 11 impact barangays in Bataraza Palawan during the mentioned period while Hypertension (HPN) and urinary tract infection (HPN) were the leading causes of non-infectious disease for the same period. • The leading cause of death in the 11 impact barangays in Bataraza, Palawan from years 2011 to 2015 is hypertension (HPN). Most of the leading causes of death for the covered period are not related to communicable diseases with the exception of pulmonary tuberculosis (PTB) and are classified as degenerative (senility), lifestyle (cancer, heart disease, and diabetes), Obygyne-related (still birth), and others. • In 2011, a doctor, a dentist, a medical technician, and a sanitary inspector take care of the 63,644 population of Bataraza, Palawan. There is one (1) nurse for every 21,215 residents in the municipality, one (1) midwife for every 4,546 resident, and one (1) active barangay health worker for every 350 resident in the municipality. • The impact barangays in Bataraza each has its own health center. A birthing clinic managed by a midwife beside the health center was recently put up in Barangay Taratak. The impact barangays regularly receive assistance from CBNC in the form of medical subsidy <p><u>RTNFI Hospital</u></p> <ul style="list-style-type: none"> • Complementing the role of the Municipal RHU in health service delivery is the RTNFI Hospital, which is located within the RTN Townsite about 35 km from the town proper. It has 30 beds and five (5) bassinets. It is a primary hospital with capability for emergency operations.

4.0 IMPACTS MANAGEMENT AND MONITORING PLAN

The potential impacts to the environment and people of the proposed expansion project were identified and presented in **Chapter 3 - Impact Management Plan**. The matrices also include the management and mitigating measures for each impact. Monitoring plan is presented in **Chapter 6 – Environmental Compliance Monitoring Plan**.

5.0 CONTINGENT, LIABILITY AND REHABILITATION FUND

A Memorandum of Agreement (MOA) was executed on July 28, 2003 among RTNMC, CBNC, MGB-IVB, Provincial Government of Palawan, Municipal Government of Bataraza, PCSD, residents of Brgy. Rio Tuba, residents of Brgy. Ocayan; *Katutubong Palawan*, HARIBON Foundation, and Bataraza Christian Muslim PalawanoAsso., Inc. (BACHRISMUPAL). *Section 1* of the MOA states that RTNMC/CBNC shall establish a Mine Rehabilitation Fund (MRF), which is in compliance with *Section 181* of DENR Administrative Order 2010 – 21. The current MRF of RTNMC/CBNC is in two (2) forms: Monitoring Trust Fund (MTF) and Rehabilitation Cash Fund (RCF). The MTF committed as per MOA to cover

the expenses of the monitoring activities is PhP 50,000.00 and the current amount deposited in the Development Bank of the Philippines (DBP) is PhP 64,430.02. On the other hand, the RCF committed as per MOA to ensure compliance with the approved rehabilitation activities is PhP 5,000,000.00 and the current amount deposited is PhP 5,240,034.90. In addition, an Environmental Trust Fund (ETF) was established by CBNC. The current amount of ETF as deposited in DBP is PhP 287,949.85.