EXECUTIVE SUMMARY

Project Fact Sheet / PD Summary

Project Information	
Name of Project	**Increase in Production Capacity of the Steel Rolling Mill Plant**
Plant Location and Address	PHIVIDEC Industrial Estate, Brgy. San Martin, Municipality of Villanueva, Misamis Oriental Shown in Figure 0.1 is the PHIVIDEC Map showing SanMartin Steel as among the locators within PHIVIDEC.
Project Area	2.2464 hectares property owned and rented from PHIVIDEC by SanMartin Steel, Inc. in PHIVIDEC, Brgy. San Martin, Municipality of Villanueva, Province of Misamis Oriental. Shown in Figure 0.1 is the Project Location Map.
Project Type	Iron and steel mill; Steel manufacturing
Project Capacity	Increase in rebar production capacity from 20,000 MTPY to 250,000 MTPY
Project Description	Elegant Chemical Alloy Corporation commissioned the company in 2006. It was then Mindanao's only operating rebar mill. SMSI, around 2014 bought the Company together with its facilities and auxiliaries. However, when the whole Company was bought, there was no EIA Report, compliance reports nor monitoring reports turned over to SMSI. These Bar Rolling Mill Facilities and Deform Bar Manufacturing Plant have the following ECCs: 1. ECC 10(43)05- 04-18 3979-37121 2. ECC 10 (43)03 06-26 3294-37121 These ECCs of Elegant Alloy was then transferred to SMSI on August 25, 2015. Copy of the Deed of Sale between Elegant Alloy, Inc. and San Martin Steel, Inc. is attached as Annex B while the ECC transfer is attached as Annex C. This project which involves increase in rebar production capacity, is not covered by the previous ECC, thus, to include said increase in production capacity, an amendment was applied but only to ECC 10(43)05- 04-18 3979-37121 covering rebar operations. Also, SMSI wishes to amend the conditionalities attached to ECC 10(43)05- 04-18 3979-37121 to conform to the updated requirements of the EIS System and the expanded operations of SMSI. Along with SteelAsia's M5 in Davao, SMSI now is the only rebar manufacturing operator in Mindanao. The region's buyers have seen rebar costs reduced by over PhP 1,500 (USD 35) per ton. Davao consumers and distributors no longer needed to 'import' rebar from Manila, as the region had its own rebar mill which could be accessed for picked-up orders 24 hours a day, 7 days week. Besides the lower rebar cost, the impact was also immediately felt by the regions business community as mill created economic activity for logistics, operations supply and jobs and port activity. The two Mindanao mills are also able to cover for the unprecedented construction growth in the Luzon and Visayas islands, shipping rebar regularly to these regions. Villanueva Works offers PNS49 Rebar (sizes 10mm to 16mm, lengths 6M to 12M) with a Grade 230 (ASTM Grade 33) regular and weldable.

<table>
<tr><th colspan="2">Project Information</th></tr>
<tr><td></td><td></td></tr>
<tr><td>Rationale</td><td>The steel industry in the Philippines is one of the most significant growth industries. Steel constitutes a basic industry prerequisite in a country's pursuit of development and industrialization. The central role of the industry stems from its linkages with numerous sectors, where its products serve as an essential input to countless uses, such as building and construction, automotive, shipbuilding and repair, electronics, packaging, etc. and it is equally important contributions to employment generation, growth, and promotion of industrial activity, etc. Therefore, ensuring a strong domestic steel and steel-based industry is vital in developing the competitive edge of a country in meeting the challenges of globalization.

With the boost in infrastructure industry in the country together with the rehabilitation activities in Marawi and some parts of the country, there will be a bigger demand for reinforcing steel bars. The proponent is investing in the expansion of SMSI Plant to improve its production capacity and operations process to cater to the aforementioned increase in demand.

Most importantly, the main focus of the management is to optimize the productivity of existing equipmen in order to ensure the increase the production output while maintaining the cost as low as possible.

With its optimized capacity, SMSI can suffice up to 24% of the steel needs of the Mindanao market. This includes the steel needs of the rehabilitation works in Marawi as well as the big ticket construction projects of the government. In addition to volume, SMSI also brings to its customers the benefit of reliable supply, timely delivery and freight savings of at least P1000 per ton due to its proximity in the market.</td></tr>
<tr><td>Project Components</td><td>The components of the Project are all existing. These include the following:

<table>
<tr><th>Components</th><th>Existing</th><th>Proposed Changes</th></tr>
<tr><td>A. Major Project Components</td><td></td><td></td></tr>
<tr><td>• Furnace</td><td>√</td><td>same</td></tr>
<tr><td>• Smokestack</td><td>√</td><td>same</td></tr>
<tr><td>• Rolling Mill:</td><td>√</td><td>same</td></tr>
<tr><td>• Mill Train</td><td>√</td><td>same</td></tr>
<tr><td>• Cooling Bed</td><td>√</td><td>same</td></tr>
<tr><td>• Finished Goods Warehouse</td><td>√</td><td>same</td></tr>
<tr><td>• Electrical Substation</td><td>√</td><td>same</td></tr>
<tr><td>• Recirculating Water System</td><td>√</td><td>same</td></tr>
<tr><td>B. Other Facilities</td><td></td><td></td></tr>
<tr><td>• Admin Building</td><td>√</td><td>same</td></tr>
<tr><td>• QA Laboratory</td><td>√</td><td>same</td></tr>
<tr><td>C. Additional Facilities</td><td></td><td></td></tr>
<tr><td>• Hazardous Waste Facility</td><td>Nil</td><td>√</td></tr>
<tr><td>• Material Recycling Facility</td><td>Nil</td><td>√</td></tr>
<tr><td>• Clinic</td><td>Nil</td><td>√</td></tr>
<tr><td>• Materials Warehouse</td><td>Nil</td><td>√</td></tr>
</table></td></tr>
<tr><td>Manpower</td><td></td></tr>
<tr><td>Duration of Project</td><td>From acquisition in 2014, the project is expected to operate for a period of at least 40 years.</td></tr>
<tr><td>Project Schedule</td><td>After securing all the required and necessary clearances and permits, including the ECC Amendment, construction of the additional facilities including the</td></tr>
</table>

Project Information	
	optimization of the equipment will commence and will be completed in 14 months.
Total Project Cost	PhP 1,000,000,000.00.
Proponent Profile	
Name of Proponent	**San Martin Steel, Inc. (SMSI).** **SMSI** is a wholly owned subsidiary of SteelAsia Manufacturing Corporation and part of the SteelAsia Group. Copy of the SEC Registration of San Martin Steel, Inc. is provided in Annex A. It was established for the purpose of acquiring and operating the existing steel rolling mill plant formerly of Elegant Alloy, Inc. that produces rebar. The SteelAsia Group is comprised of steel bar manufacturing companies. From 1966 to present, it has built and operated rolling mills across the archipelago. Currently, six SteelAsia Group rolling mills cover the major island groups of Luzon, Visayas and Mindanao with a combined manufacturing capacity of 2.3 million tons per year. The SteelAsia Group's operation systems have been internationally certified to: • ISO 9001 Quality Management • ISO 14001 Environmental Management • OHSAS 18001 Occupation Health and Safety • ISO 17025 Testing Laboratory • UK Certification Authority for Reinforcing Steel (UK CARES) British Standard
Address	B2 Bldg., Bonifacio High Street, BGC, Taguig, Metro Manila
Authorized Signatory/ Representative	**Mr. Roberto Cola** Vice President
Contact Details	Landline number: (632) 856-6888 Mobile No.: +639178675921 Email address: RMCola@steelasia.com
Profile of the Preparer	
EIA Preparer	**Mediatrix Business Consultancy**
Consultant's Address	L29 Joy-Nostalg Center, 17 ADB Ave., Ortigas Center, Pasig City
Contact Person	Matilde R. Jimenez-Fernando General Manager
Contact Details	Telephone No.: (02) 689 7114 Email Address: mediatrixbusinessconsultancy@gmail.com

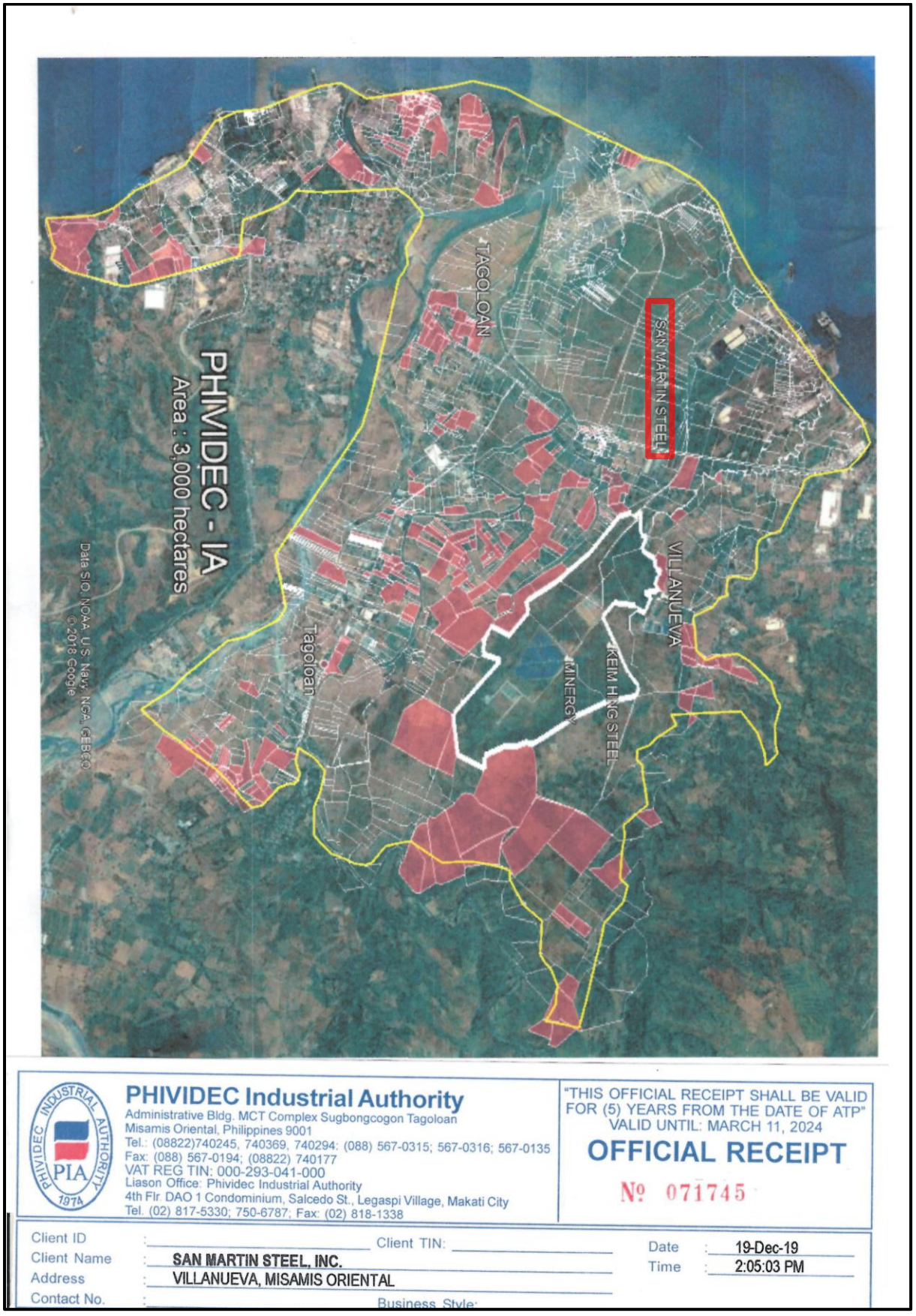

Figure 0.1: PHIVIDEC MAP superimposing the project site

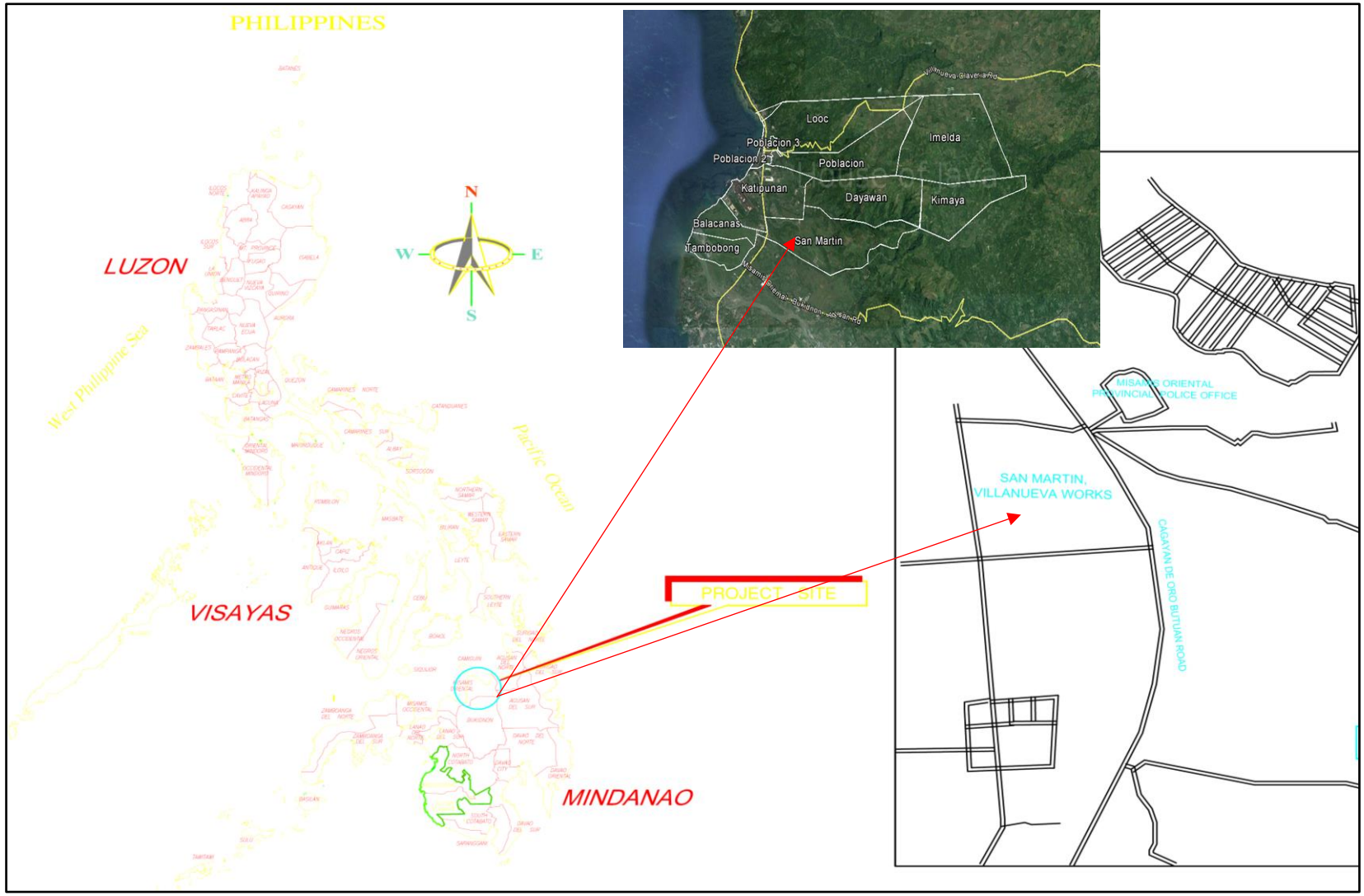

Figure 0.2: Location and Vicinity Map (source: San Martin Steel, Inc.)

Determination of impact area

The criteria used in determining the direct impact area (DIA) and the indirect impact area (IIA) are the guidelines provided under DAO 2003-30 and supplemented by DAO 2017-15.

Annex 2-2 of the Revised Procedural Manual (RPM) of DAO 2003-30 initially defined the Direct Impact Area (DIA) at the pre-EIA stage as the area where all "*project facilities are proposed to be constructed/situated and where all operations are proposed to be undertaken*". However, this was revised by DAO 2017-15 to include the following:

A. The DIA shall be delineated based on the results of the assessment of the Project's impact on air, water, land and people.
B. The IIA on the other hand, shall be delineated for impacts on people and shall include those in the vicinity of the DIA who will either benefit or be affected indirectly by the Project

With these, the result of the air dispersion modeling, noise modeling, ambient air and noise and water quality sampling were used to determine the areas directly affected by the emissions from the establishment. With this, the direct impact area (DIA) covers only the project site because based on the results of the air dispersion and noise modeling and air and water quality sampling, all of the ground level concentrations (GLCs) and results generated were well within the standards of the Clean Air Act, DENR Standards on Noise and water quality.

On the other hand, the indirect impact areas (IIA) cover the hauling route of materials needed to optimize the process and increase the capacity and of billets and finished products during operations and the community at the periphery of the project site.

Process Documentation in the Conduct of EIA

EIA Team

San Martin Steel, Inc. engaged the services of Mediatrix Business Consultancy to conduct the EIA for the project and to prepare the EPRMP Report. The EIA team, composed of professional experts on their respective fields and with the coordination and the technical people from the proponent, were organized based on the project's EIA needs.

Table ES1: EIA Team

NAME	DESIGNATION	IPCO NUMBER	EXPERTISE	PARTICIPATION
Ms. Matilde Fernando, J.D.	Project Manager / EIA Team Leader	IPCO-035	Socio-Economic, Public Participation and community engagement, Public Health and Safety, Waste Management (Solid and Hazardous wastes Management)	Preparation of Study/ Report and consolidation of documents for the whole project study; Actual measurement of the facility, and preparation of As-built plans of the structure relevant to the requirements needed for the application
Engr. Ria Caramoan	Assistant Team Leader	IPCO-106	Air and water	Preparation of Project Description and water module
Engr. Fritzie Jane Salido	Chemical Engineer	IPCO - 113	Air and water and report consolidation	Report Consolidator
Mr. Alexis Fernando	Researcher	IPCO-034	Research and community engagement	Gathering of secondary information
Mr. Juvinal Esteban	Social Worker	IPCO-091	Social work and community engagement	Preparation of socio module
Sarah Tangonan	ComRel		Perception Survey and public participation	Conduct of Perception Survey and Public Participation
Ms. Cathrina Bautista	Research Assistant		Community engagement	Conduct of perception survey

Following are the proponent representatives who participated in the gathering and provision of information for the EPRMP:

Table ES1A: Company representative who provided assistance in the provision of information for the EPRMP

Consultant / Technical Person from Proponent	Areas of Expertise
Maximo Otadoy, Jr.	Plant Manager
Ronald Magsajo	Business development
Jun Alipio, Jr.	
Jaques Maandig	Resident Manager
Lorena Pading	Pollution Control Officer

EIA Schedule

Mediatrix Business Consultancy was engaged by San Martin Steel, Inc. in February 2016. As early as 2016, the project proponent has been coordinating with the stakeholders of the project especially with LGUs concerned. Stakeholder profiling proceeded immediately to prepare for the initial EIA processes. Public Scoping was held in Municipal Gymnasium of Villanueva; February 24, 2016 while the Technical Scoping was conducted last April 18, 2016. EIA baseline studies and impact assessment were conducted in May and the EIA Report was completed progressively.

Table ES2: EIA Milestone and Schedules

EIA Activity/Stage	Date
EIA Planning, Project and Stakeholder Profiling	January 2016
Preliminary IEC and consultation with the officials of San Martin	November 2015 to February 2016
Public Scoping	23February 2016
Technical Scoping	April 18, 2016
Baseline studies	May 2016 to Feb. 2017
EIA study, modeling, impact assessment and mitigation plan	
EIA Report Preparation	
First Review	February 15, 2018
2nd Review	
Public Hearing	
Final Review	

EIA Methodology

Pursuant to the Department Administrative Order (DAO) No. 30 Series of 2003 of the Revised Procedural Manual of the Philippine EIS System (PEISS) and EMB Memorandum Circular 005 dated July 7, 2014, the project is classified under Category A - Environmentally Critical Projects (ECPs) which requires an EIS Report for an Environmental Compliance Certificate (ECC) application.

The EIA for the proposed amendment conforms to the Revised Procedural Manual for DENR Administrative Order (DAO) 2003-30 and DAO 2017-15 in the conduct of the following activities, to wit: (i) IEC and Scoping, (ii) collection of primary and secondary data, (iii) identification/prediction/ assessment of environmental impacts, (iv) formulation of EMP, and (v) development of EMoP. The baseline information are mainly primary and secondary data which were obtained from the Local Government Units (LGUs) and other government agencies. The data collected were based from the EIA Scoping and Screening Form presented in **Annex J**, which was finalized during the Technical Scoping on June 14, 2017.

Table ES-3 presents the detailed EIA methodology per environment sector/component and discusses how the current project environmental monitoring data/results were used in the assessment of the environmental performance of the company for its current operation.

Table ES3: EIA Methodology

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
Land			
Geology/ Geomorphology, Pedology, Land Use & Classification	Land use, land classification assessment, slope, soil types and classification, erosion	Secondary data, soil sampling and testing, review of geological reports and maps	The area investigated is prone to ground shaking hazards due to the presence of several earthquake generators in and near the region. These possible seismogenic structures include the active Tagoloan Fault, Central Mindanao

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			Fault and the Mindanao Fault-Western Mindanao Extension. Figure 2.2.1.5.1.1b shows that the project falls near the location where earthquake magnitude of 6.5 -7.5 and with depth of 300 – 700 kilometers where recorded. The project site is underlain mainly by alluvial deposits mostly sandy silt associated with pebble to gravel size material being located near Macajalar Bay and fall under the 0.30g and 0.20g for Soft Soil and Medium Soil condition, respectively. The project is located within a private land owned and managed by the Phividec Industrial Authority, an industrial park which houses heavy industries such as powerplants, steel mill and sintering industries. The western part of the municipality has probably the most productive soil parent materials considering its flat landform and other factors concerning productions. However, most of these areas are already used for built up areas especially with the implementation of PD 538 creating the PHIVIDEC Industrial Estate. The remaining half towards the eastern side have soils development from a parent material that is generally deep to very deep, a pH thread of acid to strongly acid. Plant growth in this soil is good. Some of these areas are cultivated for agricultural production, some still have forest cover. Soil sampling was conducted at the project site in 10 April 2018. Soil sampling was conducted to investigate the elements, particularly heavy metals, which are present in the soil matrix within the project site. Heavy metals are a special concern since these substances are hazardous, even in small amounts and have a potential to contaminate the surrounding environment. Also, the aspects of soil erosion/soil quality/fertility were taken into consideration as there are some farming activities ongoing at the project site. Soil quality test was conducted at the project site using Swedish EPA Generic Guideline Value for Soil (2009), as there are no standards under the Philippine law.

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			Heavy metals such as mercury, zinc, copper, manganese, iron, lead, chromium, boron, chloride and cadmium as well as Phophorus, Potassium, organic matter and water retention were tested. Results of soil sampling were compared with Swedish EPA Generic Guideline Value for Soil (2009) for hexavalent chromium, potassium, phosphorus, total organic matter, total nitrogen and pH. This sampling and analysis were undertaken to determine whether soil require urgent remediation due to unmitigated contamination. Although all of the parameters were detected in the Project area, they are all below the Dutch target values and Swedish EPA Generic Guideline Value for Soil. This shows that pedology is still unaffected by heavy metal contamination. Although the present DENR-EMB guideline does not have a definitive acceptable standard or limits on the presence of heavy metals on soils, SanMartin Steel conducted the sampling to establish the baseline.
Terrestrial Biology – Wildlife and Vegetation	Flora and fauna species inventory, species endemicity and conservation status, species abundance, frequency and distribution	Use of secondary data	The project area is already developed, and all facilities are already existing and constructed. There are few trees at the project site, 4 mango trees but no vegetation present.
Water			Based on the assessment of the project site, no waterbody is present within the project area. Tagoloan River's nearest area to the project site is about 2.53 kms while Macajalar Bay is about 1.71 km. The PAG ASA projections showed that rainfalls can increase at certain months of the year by only 2.9 % compared to maximum decrease at other months of the year of 10.4 %, suggesting that rainfall aberrations in the Region should not cause heavy flooding in/adjacent to the project site. Based on the 1997 Groundwater Availability Map of the Philippines, the Project Site falls under local to less extensive and productive aquifers with moderate potential recharge. The classification is attributed to the scarcity of productive wells in the area.
Hydrology/Hydrogeology	Regional hydrogeology, catchment and drainage system	Use of secondary data, water balance analysis, interviews	
Water Quality	Physico-chemical and bacteriological characteristics of applicable bodies of water	Primary data were secured through water sampling and laboratory analysis	
Freshwater Ecology	Accounting of all existing benthic habitats, species, composition, density, and diversity of sea grass resources and associated macro benthic algae in front of the project site , commercially-important macro invertebrates in the inter-tidal areas, plankton community	Use of primary and secondary data	

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			The project will use the existing deepwells at the project site which can still cater the water requirements for the project while implementing waste water recycling. The plant will also utilize rainwater harvesting in the future as its method for collecting rain and later used in the processing of materials.
Air			
Air Quality	Ambient air quality and noise levels	Primary data through sampling and laboratory analysis	The ambient TSP, PM_{10}, $PM_{2.5}$, SO_2, NO_2, and heavy metals (As, Cd, Cr^{+6}, Pb, & Hg) concentrations were measured at the identified sampling points. The selection of the sampling stations was based on the locations of receptors, source, and prevalent wind direction. Methods for sampling and analysis conformed to methods prescribed in Sec. 1(b) Rule VII Part II of the Clean Air Act IRR. The resulting ambient air concentrations were compared with the National Ambient Air Quality Guidelines Values (NAAQGV), Rule VII, Part II and the National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources/Operations Section 1 Rule XXVI Part VII of the Clean Air Act IRR. The monitoring results show that the concentrations of TSP, PM_{10}, NO_2, and SO_2 for 1-hour averaging period in all stations are below the CAA limits of 300 µg/Ncm for TSP, 200 µg/Ncm for PM_{10}, 260 µg/Ncm for NO_2, and 340 µg/Ncm for SO_2, respectively. Heavy metals concentrations (As, Cd, Cr^{+6}, Pb, & Hg) in all stations are below the method detection limit. Moreover, the results of monitoring for 24-hour averaging period are also within the CAA limit.
Meteorology/Climatology	Monthly average rainfall, climatological normal and extremes, wind rose diagrams, and frequency of tropical cyclones	Use and review of secondary data	The climate of the project site belongs to Type IV as referred to the climate map of the Philippines based on the Modified Coronas system of classification. The Type IV climate has more or less rainfall distributed evenly throughout the year.
Air Dispersion Modeling	Worst case scenario identification, use of meteorological data	Use of AUSPLUME Model	
Noise		Sampling of noise	The noise standard used are the residential areas as prescribed in Section 78, Table 1 of the 1978 NPCC Rules and Regulations, Environmental

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			Quality Standard for Noise in general areas. Significant noise was contributed by vehicles playing near the stations, especially those stations which were situated in populated communities, with houses close to each other. Motorcycles and tricycles were main modes of transportation particularly for communities although there were few cars that pass. During sampling, there were also activities that contribute to the noise levels measured, like youths playing, sounds from karaoke and many others (background noise). Activities like these are part of the community culture and so they were considered valid for inclusion in the measurement of baseline noise data.
Climate Change			
Temperature change	Seasonal Temperature increase (in °C) in 2020 and 2050 under medium range emission scenario in Misamis Oriental Monthly Average Temperature without Climate Change Monthly Average Temperature with Climate Change (2006-2035)	Effects of Temperature Increase	The historic average annual ambient air temperature indicates that there is little monthly or seasonal variation in average temperatures.
Rainfall change	Seasonal rainfall change (in %) in 2020 and 2050 under medium range emission scenario in Misamis Oriental Monthly Average Rainfall without Climate Change (1980-2010) Monthly Average Rainfall with Climate Change (2006-2035) Monthly Average Rainfall with Climate Change (2006-2065)	Effects of change in rainfall pattern	The climate change scenario for the Philippines published by PAGASA in February 2011 indicated that the Province of Misamis Oriental will have a fluctuating amount of rainfall.
Greenhouse Gas Assessment	GHG Emissions based on IPCC 2006	Fuel oil consumption vs GHG emissions	The total overall estimated CO_2 emission based on IPCC 2006 and USEPA is

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
	Guidelines and USEPA Procedure		136,175.33 metric tons per year. The Philippines Initial National Communication (INC) on Climate Change has projected 122,344 Gg of CO_2 for 2008 for energy sector. Using these projections of INC, the Project operation is expected to contribute an approximately 0.034084% of the total CO_2 emission. In the global levels projection of CO_2 emission for 2020 under the USEPA Sectoral Trend in Global Energy Use and Greenhouse Gas Emissions, Climate Protection Division, Office of Air and Radiation, the estimated contribution of the Project globally is 0.000461%. When such a comparison is made, this total emerges as a small contribution to the total global anthropogenic CO_2 load. If this total is a measure of responsibility for global warming, on an absolute magnitude, the Project can still be considered to be on the low-end greenhouse gas emitters in the world.
People: Socio-Economic, Health			
Public health and Demography	Morbidity and mortality trends, Demographic data of impact area: - Number of households and household size - Land area, - Population, - Population density /growth - gender and age profile, - literacy rate, profile of educational attainment	Interviews with key elected officials of the barangays (from barangay captains to councilors and the social welfare barangay officers/ barangay health workers); analysis of secondary health data; Use of secondary data from RHU and NSO; Interviews with the locals; household-level survey	Questions related to health and sanitation in the affected communities were included in the perception survey.
Socio-economics	Socioeconomic data: Main sources of Income, Employment rate/ profile, sources of livelihood, Poverty incidence, commercial establishments and activities, banking and financial institutions	Perception surveys, Interviews with municipal and barangay officials; analysis of secondary data; analysis of survey results Provision of traffic management flow in a traffic management plan Provision of housing options for workers within the vicinity	Manpower at the Plant does not discriminate against gender and age as long as the worker is qualified and fit to work. Also, equal protection clause on employment is considered by prioritizing local employment in the barangay/s and within the affected municipality for technical staff and workers.
			Perception surveys were done in from January 7 to 10, 2017. A total of 1,100 households were randomly interviewed and surveyed, which corresponds to 20% of the population of Brgy. San

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			Martin in year 2010 according to the Philippine Statistics Authority. A total of 177 respondents were laborer/skilled, 130 were self-employed, 22 respondents were drivers, another 60 respondents (10.08%), 79 respondentswere Government Employees, 5 elected officials, 130 have other types ofoccupation, 10 did not provide their response and the remaining 497 respondents are jobless. For the respondents' monthly income, 325 respondents (54.62%) answered to be earning between Php 1,000-5,000. 130 respondents (21.85%) earn a monthly income of Php 5,001-10,000 while 140 respondents (23.53%) obtains a monthly salary of Php 10,001-above. 66 households (55.46%) have a family size between 2-5 persons. 46 households (38.66%) answered the range between 6-10 persons while 7 households (5.88%) have11-15 persons in their family. According to the survey, all respondents and households are residents of San Martin. In terms of the types of houses, 46 households (38.66%) are concrete, 44 households (36.97%) are made of nipa, bamboo, 27 (22.69%) mixed concrete, and 2 (1.68%) are salvage material. Roofs of these houses are made of steel roof (yero) (45.95%), concrete (35.14%), nipa, and bamboo (17.57%) and salvage material (1.35%). For the households' method of cooking and fuel, majority (49.25%) uses wood, other households use LPG/Butane (34.33%), 9 households (6.72%) use charcoal, another 9 households (6.72%) use kerosene while the remaining 4 households (2.99%) use electric stove. In terms of their sources of water, 112 households (40.73%) acquires water from artesian well, 112 households (40.73%) use purified water. 45 households (16.36%) obtains water from the water district while the remaining 6 households (2.18%) get water from deep wells. Most households use water for drinking/cooking (49.58%) as well as washing (49.58%) while 2 households (0.83%) use water for farming.

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
			88 households (25.36%) have television sets in their homes, 82 households (23.63%) have electric fans, 68 households (19.60%) possesses radio, 58 households (16.71%) owns a CD/DVD player, 28 households (8.07%) have computers while 23 households (6.63%) owns airconditioners. Majority of the respondents (57.03%) do not own any vehicle but 175 respondents (27.34%) own motorcycle, 60 respondents (9.38%) have bicycles, 30 respondents (4.69%) holds a car (sedan), 5 respondents (0.78%) owns a van/jeepney and the remaining 5 respondents (0.78%) answered the others option. Note: Mutltiple responses **Health situation, Environmental awareness and Utilities** Each 119 households had a sick family member for the past years and all consulted a doctor although there are multiple responses for this question. The top three causes of illness in the area are Fever/Headache (44.55%), Cough/Flu (39.55%), and Diabetes/Highblood (15.45%), one household (0.45%) answered the others option. In terms of toilet facilities, 115 households (93.50%) have water closet toilets while 8 households (6.50%) have an open pit toilet. All 595 respondents (100%) experienced Calamity for the last 10 (ten) years. With the implementation of the project, there will be change in lifestyle of the community that would improve their standard of living. This will be brought about by stable jobs and higher household incomes. As a result, the affected families will be capable of giving their children proper education and widen their opportunities. The company, by example, shall encourage modest lifestyle and simple living standards in accordance with its philosophy. On the contrary, the company will encourage families to participate in livelihood projects that will be sponsored by the company.
Environmental Risk Assessment			
Risk Assessment	Safety risks and physical risks	Consequence and Frequency analyses to be	

EIA Study Module	Parameters/Scope	Baseline Sampling and Methodology	Findings
		undertaken using the methodology described in the Revised Procedural Manual for DAO 2003-30	

Over-all, the environmental performance of the Plant is compliant with the standards set by law and by DENR and the environmental safeguards/measures for the current project operation are sufficient and effective as evidenced by its continuing Plant's environmental performance without violation as shown in the test results compliant with the standards set by DENR and by law which are reported quarterly in EMB Region 10. Although there will be increase in capacity, no additional measures are installed because the existing mitigation measures can still accommodate the possible impacts. Moreover, to save on water, rainwater collection as enhancement measure will be implemented as well as additional safety measures for the workers will be in place to ensure safety.

Public participation, scoping and consultation in the conduct of the EIA Study

Pursuant to DAO 2003-30, MC 2010-14, and DAO 2017-15, SMSI has conducted a series of public participation activities through pre-scoping Information, Education and Communication (IEC) via FGD/KII, perception survey, public scoping and informal discussions with the Municipal and Barangay Officials of San Martin and Villanueva from November 2016 regarding the amendment of the project.

Perception Survey

The perception survey was conducted on August 28 to 30, 2016. A total of 383 households were randomly interviewed and surveyed. The Malabanban Sur population of 9,123 as of 2015 was used.

Public Scoping

On 24 February 2016, the public scoping with the stakeholder was held to discuss about the (project including its impacts and benefits) and provide them the opportunity to present their issues and concerns as well as provide their clarifications on pertinent matters concerning the same project. Consultations were done through public scoping and these were attended by Brgy. San Martin officials and residents. Public Hearingwill be conducted next to present the results of the EIA Report to the stakeholders after EMB completes the EIS screening.

Provided below is a summary of issues and concerns and how these were addressed and responded to.

Table ES4: Public Scoping Issues and Concerns

Module	Concern	Name and Affiliation	Proponent's Response
Project Description	Kind of Furnace, employment and waste	SB Councilor Leoncio Abejo	The Proponent responded that the existing furnace of the Plant will be enhanced; some of its parts will be replaced to improve the process; The Proponent added that it is the Company's policy to prioritize hiring from residents. More than 80% of San Martin employees are from Misamis Oriental. About 40% are from Villanueva.
Air	Dust from the process, standard height of stack, noise and taxes due to local government	Kagawad Celso Casino, Brgy. San Martin	The Proponent responded that there is no dust from the process because it only involves reheating; The smokestack of the Plant is currently 36 meters and was already inspected by EMB10. On noise, the Proponent will look at the concern and address immediately. As to taxes due to the local government, SanMartin Steel, Inc. will pay what is due to the government even if it is located in the industrial estate.
	Can SanMartin provide measures to mitigate the dust outside the Plant brought about by vehicles plying the access road; is employment or hiring done with PESO, all	Kap. Jeric Emano, Brgy. San Martin	SAN Martin will strictly implement speed limits of its vehicles and contractors and will provide additional water sprinkling to minimize dust emission. The HR of SMI will coordinate and report to PESO all employees hired.

	hires should be reported to PESO; CSR for San Martin before ECC issuance		The Proponent noted the request for CSR prior to ECC issuance.
	Air emissions; Recommended Plant inspection by the Sangguniang Bayan	Edgar Caday, OSHNET	Air modelling will be conducted to determine the pollutants and the affected area; the proponent noted the recommendation for site inspection.
	Air pollution may reach their barangay	Capt. Elmer Hermil, Brgy. Imelda	
	Black smoke coming out of the Plant's roof	Auxilladora Veimen	The proponent responded that they will closely look into the concern because the smokestack is currently 36 meters and was already inspected by EMB10. The issue on horizontal spread of smoke is noted and will be addressed immediately.
Others			
MMT	MMT formation as a requirement of the current ECC transferred to San martin	Oliver Ello	Engr. Alex Jimenez responded that MMT was not formed because the capacity is limited and thus MMT is not required. Once the ECC amendment is issued increasing the capacity to 250,000 MTPY, MMT will be required. EMB Region 10 will determine if this project will be clustered with other MMTs since this is considered small compared to bigger industries.
	Include him as a representative of the Senior Citizens Association (OSCA) in the Plant inspection to monitor the activities of the Plant	Romeo Talipan, OSCA	The Proponent noted the suggestion.
Project Description	Kind of Furnace, employment and waste	SB Councilor Leoncio Abejo	The Proponent responded that the existing furnace of the Plant will be enhanced; some of its parts will be replaced to improve the process; The Proponent added that it is the Company's policy to prioritize hiring from local residents. More than 80% of SanMartin employees are from Misamis Oriental. About 40% are from Villanueva.
Air	Dust from the process, standard height of stack, noise and taxes due to local government	Kagawad Celso Casino, Brgy. San Martin	The Proponent responded that there is no dust from the process because it only involves reheating; The smokestack of the Plant is currently 35 meters and was already inspected by EMB10. On noise, the Proponent will look at the concern and address immediately. As to taxes due to the local government, SanMartin Steel, Inc. will pay what is due to the government even if it is located in the industrial estate.
	Can SanMartin provide measures to mitigate the dust outside the Plant brought about by vehicles plying the access road; is employment or hiring done with PESO, all hires should be reported to PESO; CSR for San Martin before ECC issuance	Kap. Jeric Emano, Brgy. San Martin	SAN Martin will strictly implement speed limits of its vehicles and contractors and will provide additional water sprinkling to minimize dust emission. The HR of SMI will coordinate and report to PESO all employees hired. The Proponent noted the request for CSR prior to ECC issuance.
	Air emissions; Recommended Plant	Edgar Caday, OSHNET	Air modelling will be conducted to determine the pollutants and the affected area; the proponent noted the recommendation for site inspection.

	inspection by the Sangguniang Bayan		
	Air pollution may reach their barangay	Capt. Elmer Hermil, Brgy. Imelda	
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	Include him as a representative of the Senior Citizens Association (OSCA) in the Plant inspection to monitor the activities of the Plant	Romeo Talipan, OSCA	The Proponent noted the suggestion.

EIA Summary

Summary of Alternatives Considered in terms of Siting, Technology Selection/Operation Processes and Design

Following were the criteria used:

Technology Selection/Operation Processes
As a member of the Steel Asia group of companies, the technology and the processes to be used in the increase in production capacity ofSan Martin Steel Rolling Mill is common to their other existing plants in the country. The production capacity of each plant may be different but they will use the more modern rebar rolling technology and for this project, upgrading of the technology will be undertaken.

Resources
In terms of water source, the exisiting capacity of their own deepwell within the Plant compound can still supply the Plant's water requirements which is reused and recycled. In terms of power supply, power from local cooperative is used with standby generator sets.

Logistics
Steel manufacturing is essentially a transportation business as it requires a lot of moving & handling for its raw materials and finished goods. The plant is sited near the port and major highways where customers can optimize the logistics cost.

Manpower Availability
This Projects needs around 386 personnel to run and maintain the facilities 24/7 at two shifts. Manpower at the Plant does not discriminate against gender and age as long as the worker is qualified and fit to work. Also, equal protection clause on employment is considered by prioritizing local employment in the barangay/s and within the affected municipality for technical staff and workers.

Land
The land area must accommodate all the facilities needed in a contiguous manner. In addition, it should not require a long time for land conversion and expensive site development. It should have sufficient elevation for flooding. The Project site is an existing plant within an industrial area.

Carbon footprint

The proponent's policy is to adopt practices to minimize fuel use. These include optimized trip planning/routing to increase fuel efficiency, reducing the number of kilometers each truck travels daily and minimizing travel time. This is being implemented by SteelAsia that it why it is locating in places near the development areas.

The following locations in Cebu were evaluated using these criteria.

Table ES5: Summary of Alternatives Considered

SITE	AREA	DISTANCE		ENVIRONMENTAL IMPACT	REMARKS
		PORT	AIRPORT		
Municipality of Sibonga	60 hectares	54.4 Kms or 1hr & 15mins	64.8 Kms or 1hr & 30mins	85% Flat, 15% Rolling	Ownership issues and area is cut by old Cebu Railway system
Carcar City - Brgy. Ocaña	18 hectares	48.8 Kms or 1hr % 10mins	59.2 kms or 1hr & 20mins	70% Flat, 30% Rolling	Found out that portion of the property is occupied by school
Municipality of San Fernando	6.6 has (expandable to 10 has)	33.7 kms or 42 mins	44 kms or 1 hr	30% Flat, 70% Rolling	Not considered due to limited area
Bogo City	25 hectares	105 kms or 1hr & 54mins	100 kms or 1hr & 58mins		Too far from market and port facility
Toledo City - Brgy. Dumlog	13.18 hectares				Limited area
Municipality of Concepcion, Iloilo	91 hectares	112 kms or 1hr & 36mins	111 kms or 1hr & 44mins	Rolling terrain per google map; Beside proposed 270 MW Coal-fired Power Plant owned by A. Brown Company	Distance to Iloilo City is 107 kms or 1hr & 36mins Located in the upper portion of Panay Island near Municipality of Estancia
MUNICIPALITY OF CARMEN	15.77 hectares	39.4 kms or 54 mins	39.8 kms or 58 mins	60% Flat, 40% Rolling	One access road but long frontage area
	100% Titled			Nearest distance to river (shallow during dry months) is 20 meters	Nearest distance to National H-way is 700 meters via Municipal Road
	Residential			Has existing lagoon/pond	National H-way elevation 25 ft; Site lowest elevation 45ft; Site highest elevation 85 ft
Sitio Kirahon, Villanueva	**industrial**				**Chosen as additional site**

Environmental Impacts of Each Alternative
Following are the environmental impacts of each alternative:

In terms of location, the potential impacts in all locations are the same. However, other areas were not considered because of existing, and power sources and the land classification is not yet industrial.

Environmental characteristics of the project site were also considered in the site selection. The location is clear and flat area. Being in a topographically flat area, hazards associated with slope instability, erosion and mass wasting are insignificant. The location of the project facilities was also evaluated in terms of geohazard susceptibility based on information from government agencies such as the Mines and Geosciences Bureau (MGB) and the Philippine Institute of Volcanology and Seismology (PHIVOLCS). Generally, the project area's susceptibility to earthquake-triggered slope failure and rainfall-triggered slope failure are low. With regard to seismic vulnerability and liquefaction potential, the potential ground-shaking and liquefaction susceptibility of the project site is also low.

There are four active fault lines in Misamis Oriental that might result once quake happen according to the provincial administration through its Disaster Risk Reduction Management Office (PDRRMO). Fernando Dy Jr., officer-in-charge of PDRRMO, disclosed the the Office is intensifying its programs to avert catastrophes. He

identified the faults to be present in Cabanglasan town in Bukidnon province, Barangay Iponan, and the municipalities of Tagoloan and Alubijid in Misamis Oriental. Should these fault lines move, the municipalities of Lagonglong, Balingasag, and Jasaan will be affected since they are within the Cabanglasan fault. The Cabanglasan fault traverses east of Misamis Oriental. Also, Villanueva, Claveria, and Tagoloan towns are located near the Tagoloan fault while Opol is at the Iponan fault and the province of Lanao del Norte, which is near the Alubijid fault.

Massive earthquake drills in coordination with with the Department of Education (DepEd) are the priority because the schools in municipalities that will likely be affected. There established sites or Safe Haven near schools, so that in case there will be an earthquake, a safe place will be ready for them. An identification of the properties is set in August to determine establishments or residences found along the fault lines that will most likely be affected once earthquake occurs. Markings will be placed in areas that can be possibly affected. Then, they will be warned of the dangers they are facing. Currently, risk reduction rather than really already looking for relocation sites as it is not easy to relocate these affected residents is the priority. More discussions are provided and summarized in the next two chapters.

No Project Option

If the project will not proceed, there will be no additional disturbance to the environment. However, the 'no project' option must be weighed against the economic benefits that the project would bring to the host barangays and to the national and regional economies. The economic benefits that would be derived from the project are:

- Potential to create jobs during the operations phase;
- Local taxes include the local distribution of real property taxes and local business tax;
- Capital investment;
- Contribution to the combined Gross Regional Domestic Product (GRDP) for Region 10;
- The overall impact of these economic contributors from the project to the national economy will be added to the annual GDP.

Also, if this increase in production capacity project will not materialize, social development such as livelihood projects, skills training, scholarship programs and medical assistance for the residents of San Martin, in particular will not be realized. Also, the prospective multiplier effect of the project such as business opportunities, support to basic services like infrastructure and medical assistance and other opportunities for the community and LGU will likely lose when the project is not pursued.

Having at least 60% of the market share, there will also be scarcity in the supply and availability of quality construction materials availability which will bring up the cost of construction materials and sacrifice the integrity of the infrastructure development plan in the country. Also, rehabilitation program for the calamity and war-stricken areas will be delayed.

Concise integrated summary of the main impacts and residual effects after applying mitigation

The Project's major impact given in a worst-case scenario of drought is water resource use competition. However, when that time comes, the Project will be forced to stop its operation because it will not be feasible to operate the mill in such worst-case scenario.

The specific measures to address the issues on water resource competition are the following:

- Water reuse and recycling to reduce water requirement
- Water harvesting

Risks and Uncertainties relating to the findings and implications for decision-making

Based on the EIA conducted, there are insignificant risks and uncertainties for the Project because mitigation and management plans have been laid down and the Proponent's mother company, the SteelAsia Group of Companies has been in the business for more than 51 years.