SIMPLIFIED ENVIRONMENTAL IMPACT STATEMENT

ETO LDA

FOMENTO II, COMORO, DOM ALEIXO

DILI

This Simplified Environment Impact Statement is prepared by Hersege Lda on behalf of Eto Lda. Hersege Lda is a national mining and environmental consulting company located in Dili. Comment, Suggestion and input for this SEIS report can be forwarded to hersegeconsultant10@gmail.com

AUGUST 2021

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1. EXECUTIVE SUMMARY

The aim of this Simplified Environmental Impact Statement (SEIS) is to examine the negative effects on the environment that undertaken by the proposed activity. Environment is defined as the natural and physical environment and the relationship of people with that environment. This means that the "environment" considered in an SEIS includes land, water, air, structures, living organisms, environmental values at the site, and the social, cultural, and economic aspects. The SEIS process is an important planning tool for the project proponent as it will inform on significant project effects and clearly define mitigation measures to avoid adverse impacts. Early identification of possible impacts promotes environmental sustainability, as anthropogenic factors are balanced with natural environmental needs.

The Retailing Gas station will be located at Fomento II, Comoro, Dom Aleixo and Dili Municipality, The project area nearby national road is new business development proposed by Eto Lda, Company for the purpose of supplying and delivering fuel directly to end users. Total land occupied by the Gas storage and supporting facility is about 1,944 m2, in which the Cylinders, with supporting facility for operation will be constructed. The main components of fuel development project compose of;

a. Gas Storage/2 ISO Tanks
b. Cylinders point
c. Discharge Area
d. Loading Area
e. Water Cooling Space
f. Fire Fighting
g. Office
h. Toilet
i. Security Post

The existing environmental component in the project location has been identified and collected the basic information such as:

- ✓ Physical condition consists of climate, topography, geology, surface water, underground water, coastal water, marine water and soil. Also, conducted several initial measurement for Air Quality, and soil in the project location
- ✓ Ecological condition consists of wetland area, Mangroves, coral, fisheries, protected area and national parks, flora and fauna, forest costal resources and others industry.

- ✓ Economic Component consists of employment sector, infrastructure facilities, Land use, use of forest and natural resources, fishing, agriculture and tourism
- ✓ Social components consists of Population and communities, health profiles of community, institution facilities, community and family structure, and land ownership Cultural Components Consist of cultural heritage, archeological site, sacred site, historical site, and unique landscape The potential environmental impacts during the pre-construction phase are community conflict on land status, disturbance on wild life habitats, negative perspective on community, unfair compensation, outside worker influx, and spread of diseases. Air and noise pollution, water and soil contamination, oil spills and leak, traffic management, workers and public health and safety are the identified environmental impacts during construction phase, operation and decommissioning phase to be concerned.

The Project has been classified as Category B by the *Autoridade Nasional Petrolium e Minerais* (ANPM) on 6 January 2021 (Letter ref. ANPM/DS/S/20/004). According to Timor-Leste law the project can be classified as Category B however the classification is based on the nature, size (Annex II), technical characteristic of the project as based on Decree-Law No. 5/2011, on Environmental License. Category B project to include projects that potentially cause environmental impacts and are subject to the procedure of Simplified Environmental Impact Statement (SEIS) developed based on the EMP in accordance with the Decree Law No. 5/2011.

The proposed project location close to tourism area and protected area the proponent considered these impacts during pre-construction, construction, operation and decommissioning phase within provides the environment management plan.

Potential impacts during pre-construction and construction period there are several vegetation's that will be removed, Increase air pollution, increase of noise level, Health & safety at work, Increasing of waste, Health and safety at work, Jobs Opportunities. Potential impacts during operation, maintenance and decommissioning phase soil contamination, increasing of waste (solid and liquid) Groundwater contamination may occur however all potential impacts will be prevented by proponent according to the mitigation measures in the Environmental Management Plan (EMP) document.

2. DETAILS OF PROJECT PROPONENTS

The proposed contractions and operation of Refilling LPG station in Fomento II will operate if the company get license from government including environmental license, with the contact details as follows:

Operator	: Esperança Timor Oan (ETO),
Mobile	: (+670) 7732 0496
Address	: Rua China Rate, Lahane Oriental, Dili
E-mail	: info@eto.tl
Contact Person	: Alberto Soares Aniceto
Title	: Downstream Manager
Mobile	: (+670) 7732 0496

3. DETAILS OF CONSULTANT WHO PREPARED SEIS

Consultant Name	:	HERSEGE LDA
Consultant TIN	:	12299016
Registered Address	:	Rua Taibessi, Alcrin, Lahane Oriental, Nain Feto, Dili
Telephone No. E-	:	(+670) 77522363 / 76717048 / 76641553
Email Address Type	:	hersegeconsultant10@gmail.com
of Company Status	:	Private Limited
of Company Place	:	Local Timorese
of Incorporation	:	Dili, Timor Leste
Date of Incorporation	:	13 July 2018

Experiences

Hersege Lda has involved in preparing Environmental Impact Assessment in several activities since it was established and has a qualified and experiences members in Environmental Engineering, Geological Engineering, Mining Engineering and Instrumentation Engineering (Oil and Gas Operation). Following are the experiences of the consultant and it member's qualification:

Table 1. Experiences of the Hersege Lda Consultant

NO	COMPANY	TYPE OF SERVICES	PROJECT ACTVITIES	PROJECT LOCATION	STATUS
1	Nananiu Unip. Lda	Mining And Environmental License	River Sand Mining	Matai, Suai	On Process
2	China Wu Yi Co.,Ltd	Mining And Environmental License	Quarry And River Sand Mining	Ulmera, Liquica	On Process
3	Montana Diak Unip Lda	Mining And Environmental License	River Sand Mining,	Hera, Dili	On Process
4	Jucostim Lda	Mining License	Quarry and River Sand Mining	Dato, Liquisa	On Process
5	Xirevo Unip Lda	Mining And Environmental License	Quarry and River Sand Mining	Dili, Liquica	On Process
6	Borala Lda	Environmental License	Fuel Filling Station	Dili, Viqueque	**COMPLETED**
7	Green Diamond Unip Lda	Environmental License	Fuel Filling Station	Oe-cussi	**COMPLETED**
8	Jesoria Unip Lda	Environmental License	Fuel Filling Station	Viqueque	**COMPLETED**
9	Tatoli Fuel Lda	Environmental License	Fuel Filling Station	Lospalos	**COMPLETED**
10	Queybubun Laco Conbustivel Lda	Environmental License	Fuel Filling Station	Maliana	**COMPLETED**
11	AdyPay Lda	Environmental License	Fuel Filling Station	Ossu	**COMPLETED**
12	Mekar Fuel Lda	Environmental License	Fuel Filling Station	Lurumata, Dili	**COMPLETED**
13	Nusabe III Unip Lda	Environmental License	Fuel Filling Station	Aileu	**COMPLETED**
14	Ergin Fuel	Environmental License	Fuel Filling Station	Metinaro	**COMPLETED**
15	Mega Petroleum	Environmental License	Fuel Filling Station	Fatuhada, Dili	**COMPLETED**
16	Super Fuel	Environmental License	Fuel Filling Station	Kuluhun, Dili	**COMPLETED**
17	Titer Unip Lda	Environmental License	Fuel Filling Station	Losaplos	**COMPLETED**
18	Klean Gas Lda	Environmental License	Retail Gas Station	Dili	On Process
19	Abom Kase Fuel	Environmental License	Fuel Filling Station	Maliana	**COMPLETED**
20	GSGP Petrol Station	Environmental License	Fuel Filling Station	Ainaro	**COMPLETED**
21	Vida Diak Petroleo	Environmental License	Fuel Filling Station	Aipelu	**COMPLETED**
22	Xalila Fuel	Environmental License	Fuel Filling Station	Dili	**COMPLETED**
23	Divita Fuel Unip Lda	Environmental License	Fuel Filling Station	Tibar	**COMPLETED**
24	Ai-dalau Furak Unip Lda	Environmental License	Fuel Filling Station	Same	**COMPLETED**
25	ETO Lda	Environmental License	Fuel Filling Station	Mandarin, Balide and Manatuto	**COMPLETED**
26	Global	Environmental License	Fuel Filling Station	Laga	**COMPLETED**

Qualification and Experiences of Each Member

- ✓ **Herculano Ivo. L. Granadeiro** is Mining Engineer with 5 years of experiences in preparing the mining license activities and Environmental Impact Assessment for fuel filling stations and mining activities for obtaining the Environmental License.
- ✓ **Geovanio Alves,** is Geological Engineer with 4 years of experiences in preparing the mining license activities and Environmental Impact Assessment for fuel filling stations and mining activities for obtaining the Environmental License. During the study in Indonesia, Geovanio has done several geological surveys for mineral in Kalimantan, Papua, Halmahera and Sumatera.
- ✓ **Sergio Valdano Pinto** is a Mining Engineer and has diploma of engineering in instrumentation (oil and gas operation), with 5 years of experiences in preparing the mining license activities and Environmental Impact Assessment for fuel filling stations, mining activities and involved in preparation of EIA for China Harbour Timor Temporary Jetty in Mota Ikun for obtaining the Environmental License. Also, Sergio has attended training for Oil and Gas Safety Passport and a safety briefing in Petronas Chemical Methanol Labuan, Malaysia.
- ✓ **Patricio de Oliveira Ximenes** is Environmental Engineer with 4 year of experiences in preparing the mining license activities and Environmental Impact Assessment for fuel filling stations and mining activities for obtaining the Environmental License and as an environmental officer in China Wu Yi, Co.,Ltd
- ✓ **Sergio Martires,** is Mining Engineer with 3 year of experiences in preparing the mining license activities and Environmental Impact Assessment for fuel filling stations and mining activities for obtaining the Environmental License

4. DESCRIPTION OF THE PROJECT

ISO LPGas tanks will be loaded into the tank truck and transported to the project site. Then it will be filled in to the two ISO Tanks at the project site using a connection that has been provided or specially designed from the factory. Facilities used by these business activities, such as; two ISO Tanks with factory standard products for LPG (Propane), with a horizontal type of Storage Tank (**GB150NB/ T47042**), with a capacity of each tank is **24,600** liters, while the size of each ISO Tank is, 20m3. For the small gas cylinder itself has several sizes such as; **from sizes 3kg (600 units), 5kg (481 units and the rest are still in the shipping stage, namely 119 units and a total of 600 units), to 10kg (600 units), 12.5kg (600 units) and 45kg as many as (350).**

The emergency management system consist of; **Fire extinguisher 9kg (4 units), 6kg (2 units) and 2kg (1 unit). while for gas detectors there are 2 units.**

The proposed development will be located in Aldeia Fomento II, Suco Comoro, Dom Aleixo Administrative Post, and the Municipality of Dili, Timor-Leste, with an area **of 39x64.80 m^2 (1,944 M^2)**, the map for the project location is detailed below:

a. Identification of the Project

The refilling LPG station is located at rua Fomento II, Aldeia Fomento II, Suco Comoro, Post Administrative Dom Aleixo and Municipality of Dili. The project area closed to the Xalila Fuel is a business development proposed by Eto Lda, Company for the purpose of supplying and delivering the LPG gas directly to end users.Comoro is one of the Suco in the post administrative Dom Aleixo, Municipality of Dili.

Based on census *Fo Fila Fali* 2015 most of comoro people speak Tetum Frasa, while Makasae, Mambai, Baikeno, Fataluco, Lolein, Tetum Terik and others are spoken by several people

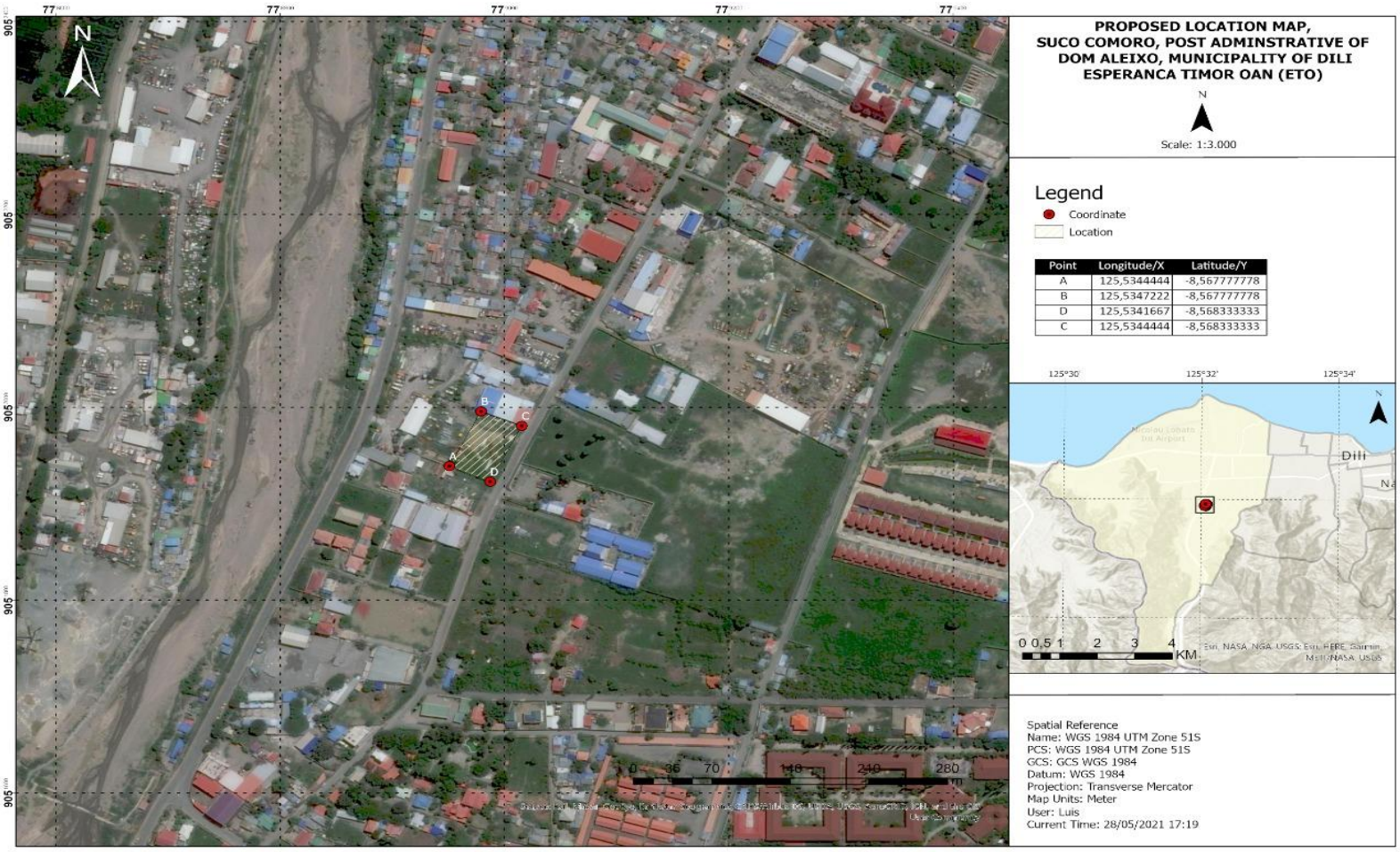


Figure 1. Project Location Map

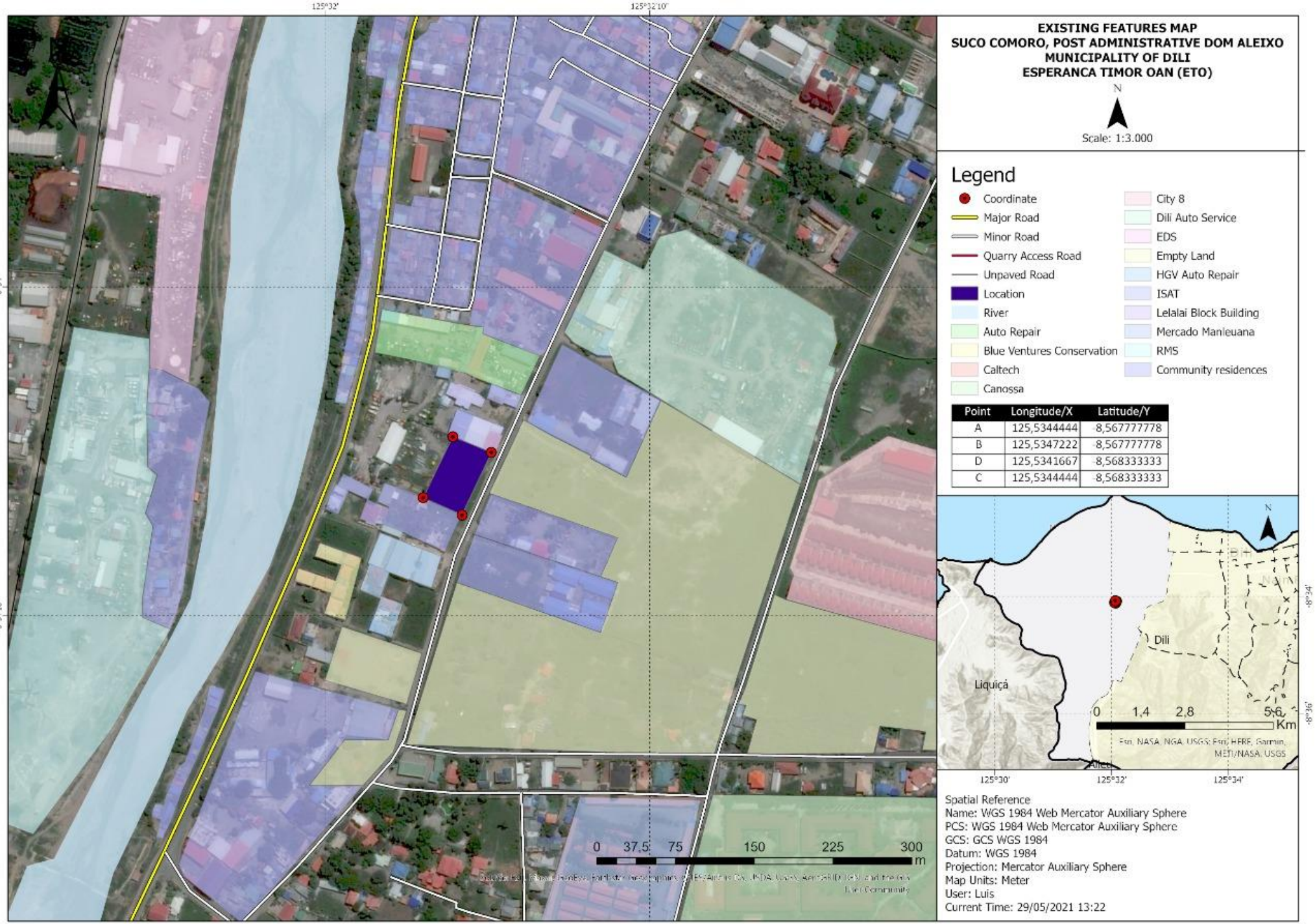


Figure 2. Existing Features Map

b. Category of the Project

In accordance to the definition of the project category set out in article 4 of the Decree Law no.5/2011 Environmental Licensing and Annexes 1 and 2 of the law, this project (Gas Storage) is defined as a category (B). The fuel station project components fall into the Petroleum Industry Sector (Storage sites for Oil / Natural Gas / Petrochemicals or Chemicals) and due to the environmental impact may occur during the activities.

c. Brief description of the Nature, size and Location of the Project

The refilling LPG station is located at Rua Fomento II, Aldeia Fomento II, Comoro, Post Administrative Dom Aleixo and Municipality of Dili and the geographics coordinate are 8°34'5"S Latitude and 125°32'4"E. Total land occupied by the fuel storage and supporting facility is about 1,944 m2, facilities used by these business activities, such as; two ISO Tanks with factory standard products for LPG (Propane), with a horizontal type of Storage Tank (**GB150NB/ T47042**), with a capacity of each tank is **24,600** liters, while the size of each ISO Tank is, 20m3. For the small gas cylinder itself has several sizes such as; **from sizes 3kg (600 units), 5kg (481 units and the rest are still in the shipping stage, namely 119 units and a total of 600 units), to 10kg (600 units), 12.5kg (600 units) and 45kg as many as (350).**

The project area closed to the Xalila Fuel Station is a business development proposed by Eto Lda, Company for the purpose of supplying and delivering the LPG gas directly to end users. The project activity operates from Monday to saturday and starts from Eight in the morning until six in the evening.

The refilling LPG station is established in the private land owned by **Mr. Nilton Telmo Gusmão Dos Santos,** Company Eto Lda. In the northern part of the proposed location is Romante Company Land, in the southern part is Community Land, in the eastern part is a public road (Rua Fomento II) and in the western part is a G&S Company.

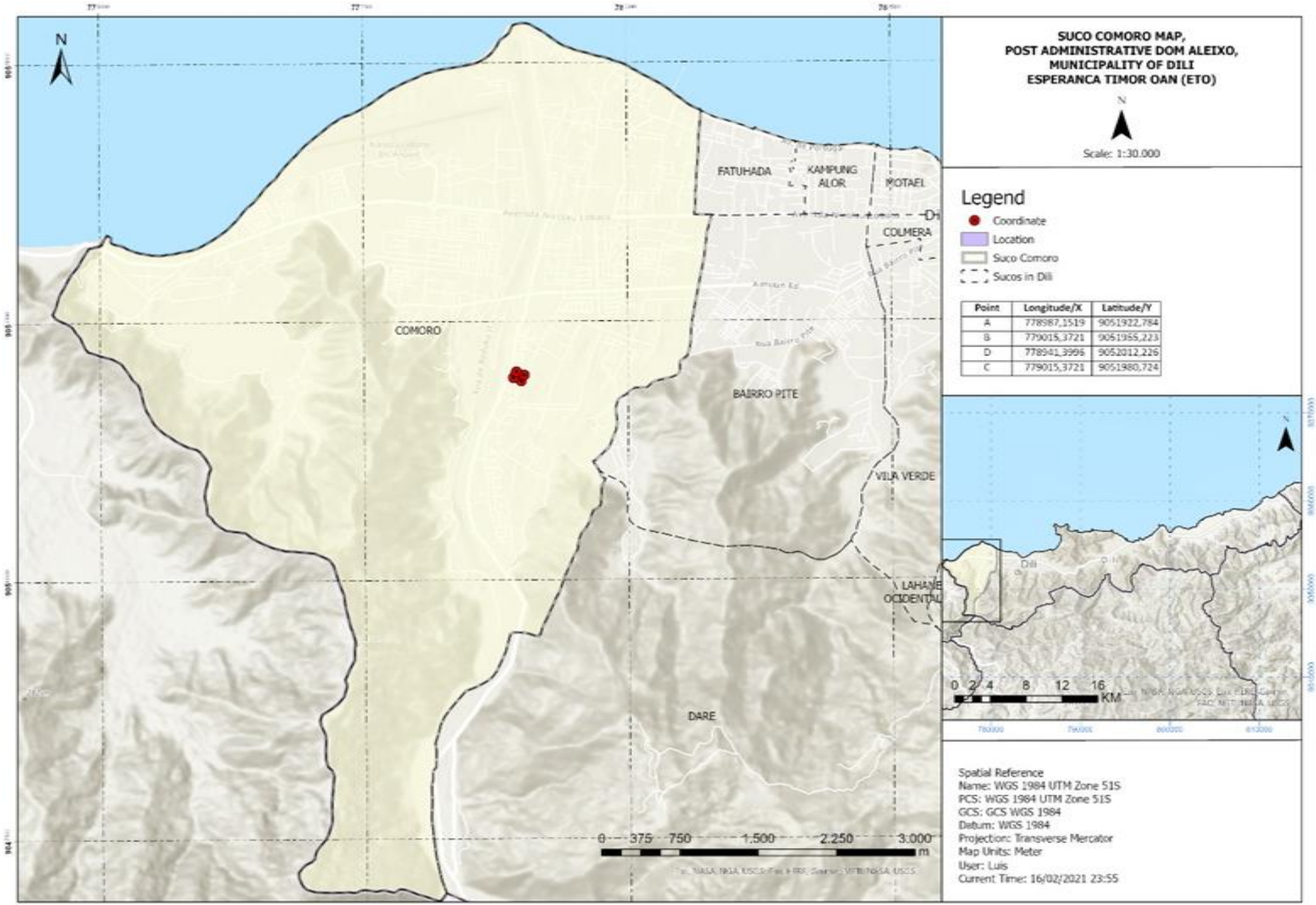


Figure 3. Suco Map

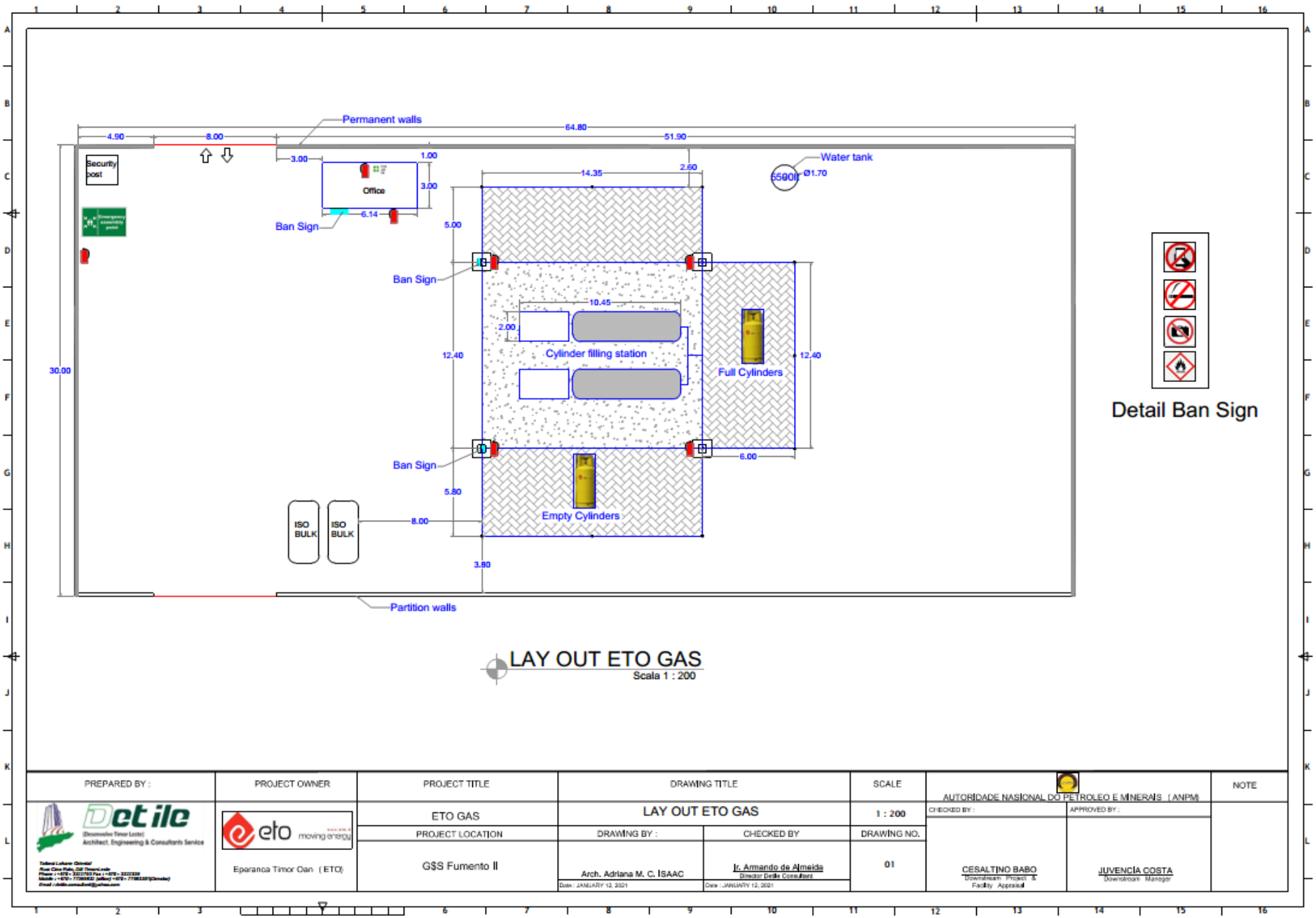


Figure 4. Site Layout Plan

- **ISO Tank**

1. ETO Lda, own and operates Gas supply and distribution facilities as decribed below;

2. Gas Tank Storage : 24,600 Liter, 2 Unit Tank Storage

3. ISO bulk Tanks : 2 Unit

4. Gas Detector : 2 Units

5. Cylinder : 3 KG (600 Units), 5 KG (600 Units), 10 KG (600 Units), 12.5 KG (600) and 45 KG (350 Units).

6. Fire Extinguisher : 9 KG (4 Units), 6 KG (2 Units) and 2 KG (1 Unit)

ETO Lda is a fully registered and licensed from Serve and Location Approved by ANPM that is positioned in the Gas Filling industry in Timor-Leste to maximize profits. Aside from the point that ETO will be retailing Gas, also engaged in other complimentary services that will help company maximize profits. These are the products and services that will be made available to customers;

Figure 5. ISO Tank

➢ **Refill Machine**

The refill machine for filling the cylinder with various weights (3 Kg up to 45 kg) is completed with inlet and outlet hoses and valve adaptors for all common cylinder makes, pump, pressure control and weight scale.

Figure 6. Refill Machine

➢ **Cylinder**

LPGas cylinders (propane tanks) may also be called “Propane Gas Bottles”, "LPG Bottles", "LPG Gas Bottles" or just "Gas Bottle". LPG gas cylinders (propane tanks) work by containing both liquid and gas, as LPG liquefies under relatively low pressure. An LPG gas cylinder (Propane Tank) is considered low pressure versus high pressure cylinders, as used with CNG. LPG gas bottle sizes vary, based on application and demand. A small LPG bottle is portable, as used in camping.

Figure 7. Cylinder Point

d. Affected Area

The following map shown are indicates the affected area in the proposed site. Having mentioned the affected area, the proponent considered these impacts during operation and decommissioning phase within provides the environment management plan. Noise, Dust and emission that will be produced by the operation vehicles and decommissioning period

e. Justification and Need for the Project

There are a number of factors considered as motives why the proposed development should be implemented in this particular site which draw the attention to support Dili development project. Some of the validating factors considered include:

- Accessibility: The accessibility of the site is relatively favorable where the site is located near to Xalila Fuel.
- Demand for LPGas Station Services: The demand of LPGas and related services in this area is highly, due to the various restaurant and local residence that is started to utilize a LPGas to support their daily life.
- The proper standard. There is several LPGas Station in Fomento II, which may not be sufficient to response domestic demand.
- Low Risk to the Locals: The area with the site for the proposed LPGas station is far to the community settlement, approximately 10 meters to 1km or so, this makes the project suitable for the area since there are very few people at risk from the activities of the project.

f. The Proponent's Endorsement of The SEIS

Eto Lda is fully responsible to endorse and implement all the requirements of this Environmental Management Plan (EMP); including implementation of requisite legal frameworks. Monitoring of the LPGas station activities will be carried out by the Eto Lda as the project's proponent and will be responsible for day-to-day management of the project's activities.

g. The Structure of The SEIS

This document has been structured to describe the new, project-related facilities and their likely impacts - positive, neutral or negative - on the existing environment (including the community, the natural environment and local cultural heritage) in the context of prevailing government policies and law:

h. The Proponent's Endorsement of The SEIS

Eto is fully responsible to endorse and implement all the requirements of this Simplified Environment Impact Statement (SEIS); including implementation of requisite legal frameworks. Monitoring of the fuel filling station activities will be carried out by the Carrier Fuel as the project's proponent and will be responsible for day-to-day management of the project's activities. "Endorsement letter attached".

i. The Structure of The SEIS

This document has been structured to describe the new, project-related facilities and their likely impacts - positive, neutral or negative - on the existing environment (including the community, the natural environment and local cultural heritage) in the context of prevailing government policies and law:

Section 1: Executive Summary - provides a summary of the key findings and conclusion of the SEIS in each phase such as; preconstruction phase, construction phase, and operation phases.

Section 2: Details of Proponent - provides an information of proponent including; information of project director, information of project manager and information of project coordinator.

Section 3: Details of Consultant - provides details information of consultant who prepare and written the SEIS and EMP report.

Section 4: Project Description - provides a description of the project including infrastructure, the various phases of development, their location and an outline of likely construction activities.

Section 5: Regulatory Framework - describes the relevant environmental policies, legislation and international conventions to regulate the project, and acknowledges that these policies represent the aspirations of the Gov TL and what it aims to achieve for the people of Timor-Leste should the project proceed.

Section 6: Description of Environment - provides a preliminary assessment including a description of the prevailing climate, topography, geological, air quality, surface water, soil, socio-economic, and cultural heritage conditions within Comoro development area as whole and the Gas Storage development area.

Section 7: Alternative – provides a baseline description of the alternative project location, size, design, technology and methods.

Section 8: Climate Change – describes an information of climate changes which occur during the each phases; preconstruction, construction and operation

Section 9: Impact Assessment – outlines the findings of the impact assessment and mitigation measures through identification of environment impacts, mitigation measures, monitoring measures and responsibility.

Section 10: Summary of EMP – provides summary impact, mitigation measures to minimize potential adverse impact to the environment

Section 11: Public Consultation and Information Disclosure - addresses the requirements for undertaking public consultation under the of Timor-Leste Decree Law No. 5/2011, and sets out the stakeholders and consultation activities that were undertaken for this stage of the project.

Section 12: Difficulties Encountered – provides information of difficulties encountered in collecting or assessing the information presented in the SEIS Chapter 13: Conclusions and Recommendations – provides the overarching conclusions, and recommendations for further action to be taken

Section 13: **Conclusion and Recommendation**- Provide the conclusion and recommendation of Simplified Environmental Impact Statement

Section 14: Non-Technical Summary – provides information in simple language so as to be understood by the average person.

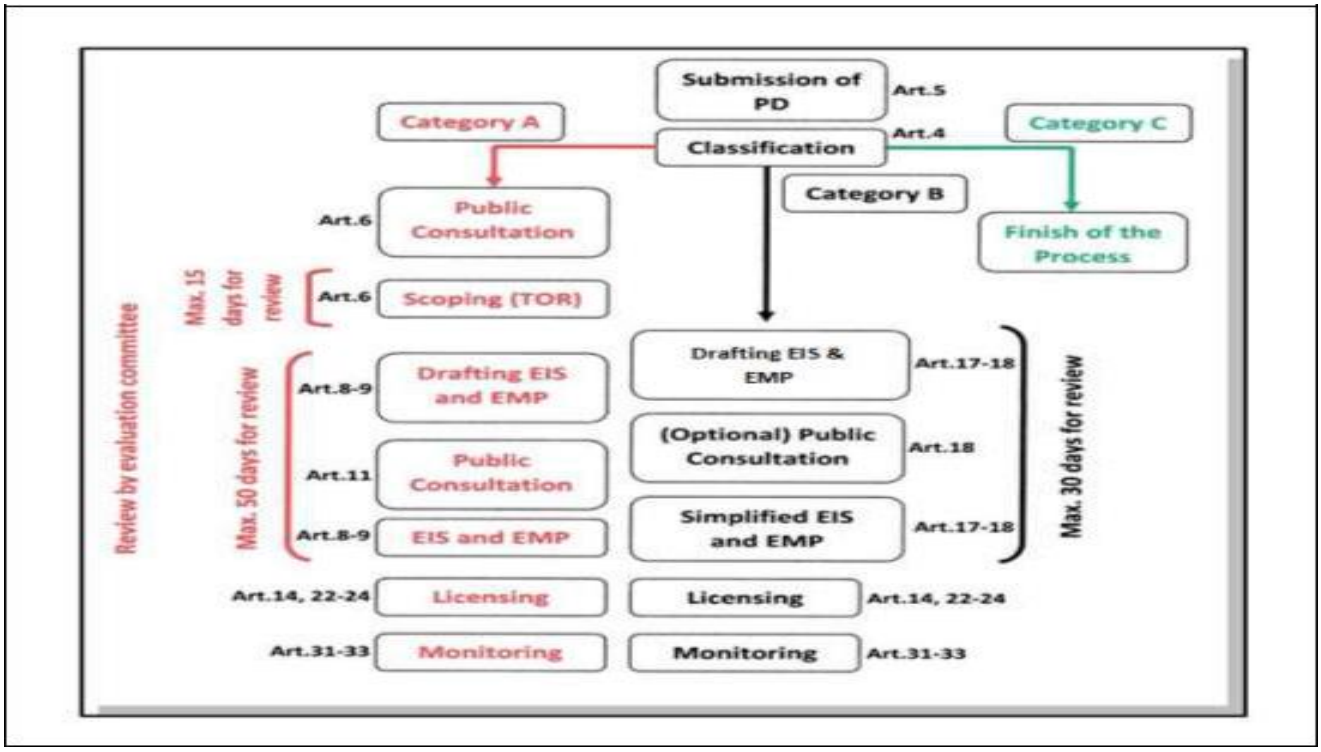


Figure 8. EIA Process Required for Category A, B and C Project

5. LEGAL FRAMEWORK

This environmental impacts assessment as a basis to prepare the report SEIS and EMP has been conducted by taking the reference from the legal framework of environmental safeguard policy, as well as the Timor Leste regulation of petroleum and mineral resources management. The following table, show the main regulation related to EIA and petroleum activity in Timor Leste.

Table 2. Regulation Related EIA

Agency	**Relevant Laws**
Ministry of Commerce and Environment	Decree Law No. 5/2011
	Decree Law No. 26/2012 on Environmental base law
	(Draft) Law on Biodiversity (March 2012)
	(Draft) Law on Protected Area (May 2013)
	UNTAET Law No. 19/2000 on Protected Area
Ministry of Agriculture and Fisheries (MAF)	Law No. 12/2004 on Crimes related fisheries
	Law No. 6/2006 on legal Basis for management and Regulation of Fisheries and Agriculture
National Petroleum and Mineral Authority	1. ANPM Regulation no.2/2014, of 24, October 2014, first Amendment of ANP regulatory No. 1/2012 on the downstream petroleum activity. 2. ANPM Regulation no.3/2014, of 24, October 2014, first amendment and operation of fuel filling station
International	1. Convention on the Prevention of Marine pollution by Dumping of Wastes and other Matter (London Dumping Protocol) 2. Indonesian Petroleum Regulation

Other relevant regulation required in absence of local regulation are also applicable such WHO, IFC, USEPA, where some standard parameters of the environmental indicator was used. The following table shows the most applicable international standards parameter of the environmental indicators:

Table 3. Applicable International standards in Absence of Timor Leste's Standards

Environmental Standard	**TL National Standard**	**International Standard**
Drinking water Quality standards	Adopted WHO Standards	WHOs
Waste water effluent	None	WHO/USEPA
Ambient Air Quality Standards	None	IFC/WHO
Heavy Metal Standards	None	WHO
Noise	Leq55dB(A) per UNTAET Regulation	Word Bank
Vibration	None	USEPA
Soil	None	IFC/World Bank
Ambient receiving water Quality Standards	None	IFC/WHO
OHS	None	IFC/ISO-81001

- **Downstream Regulations**

  Regulation No. 1/2020, Of 19 June 2020 Second Amendment To ANPM Regulation No. 1/2013, Of 18 September 2013 On Installation And Operation Of Fuel Filling Stations As Amended By ANPM Regulation No. 3/2014, 24 October 2014.

  This regulation serves as a legal instrument necessary to efficiently manage the procedures for reviewing existing installations, installing new Fuel Filling Stations, renovating or making alterations to existing Fuel Filling Stations, as well as their operation.

- ***General Principles for Installation of Gas Station***

  Section I of this regulation covers the *location, project and licensing approvals*.

  (a) The approval of the location of a new or an existing Gas Station is done prior to the presentation and approval of a project for the construction of a Gas Station. It must be made through the completion and submission of the form included in annex I in this regulation, called "*Application for Approval of Location of a Gas Station*" to the ANPM.

  (b) After obtaining a Certificate of Approval of Location for Gas Station, operators of new or existing Gas Station shall present to the ANPM an "*Application for the Approval of a Project for a Gas Station*", in the form included in Annex II to this Regulation.

  (c) The License Application shall follow the rules set forth in ANPM Regulation No.1/2012, of 24 October 2012, and the License is issued in the form set out in Annex I to Decree Law No.1/2012, of 1 February 2012, on the Downstream Sector. First Amendment to ANPM Regulation no.1/2014 on Fuel, Biofuel, and Lubricant Quality Standards and Specifications. This regulation sets the minimum quality standards for Fuel, Biofuel, Lubricants and similar products available in the domestic market and minimum standards of consumer protection.

6. DESCRIPTION OF THE ENVIRONMENT

a. Physical Components

i. Climate (including any implication of the climate change)

The climate is tropical in Dili. The summers here have a good deal of rainfall, while the winters have very little. The Köppen-Geiger climate classification is Aw. In Comoro, the average annual temperature is 27.0 °C.

In a year, the average rainfall is 1307 mm. The project could affect the annual climate in the area, but did not experience major changes because the duration of the project to be implemented did not require much time.

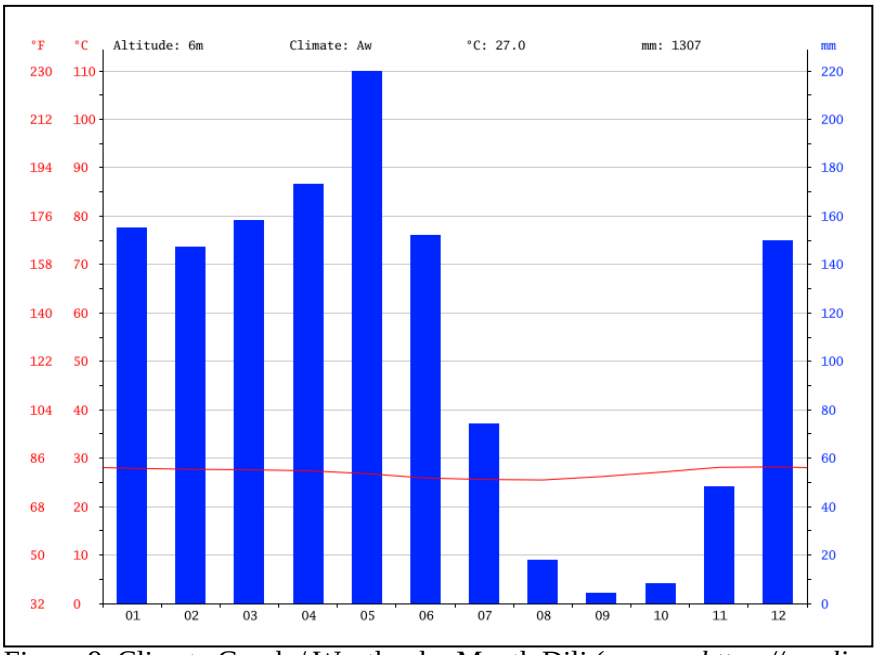


Figure 9. Climate Graph / Weather by Month Dili (*source: https://en.climate-data.org/asia/china/gansu/dili-855768/)*

The driest month is September. There is 4 mm of precipitation in September. Most of the precipitation here falls in May, averaging 220 mm. With an average of 28.2 °C, December is the warmest month. August is the coldest month, with temperatures averaging 25.5 °C. The precipitation varies 216 mm between the driest month and the wettest month. Throughout the year, temperatures vary by 2.7 °C.

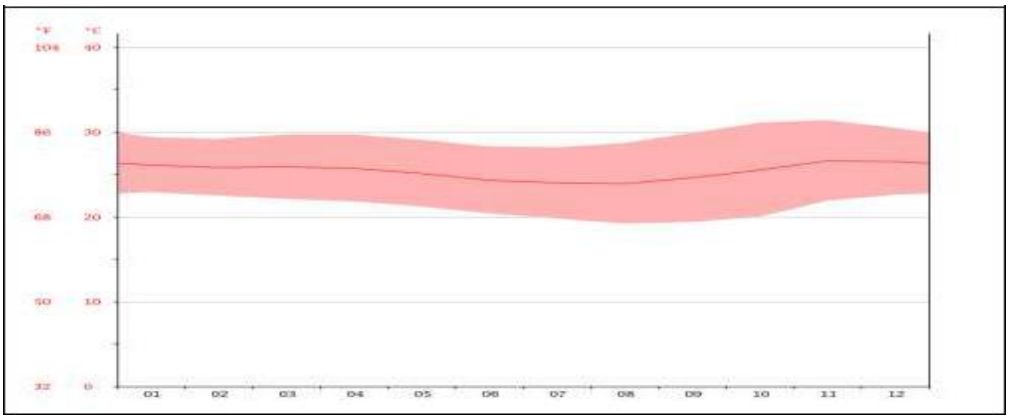


Figure 10. Average Temperature Dili (*source: https://en.climate-data.org/asia/china/gansu/dili-855768/)*

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	27.9	27.7	27.6	27.4	26.8	25.9	25.6	25.5	26.2	27.1	28.1	28.2
Min. Temperature (°C)	24.4	24.1	23.7	23.5	22.8	21.9	21.3	20.7	21	21.8	23.4	24.1
Max. Temperature (°C)	31.4	31.3	31.5	31.4	30.8	30	29.9	30.3	31.5	32.5	32.9	32.4
Avg. Temperature (°F)	82.2	81.9	81.7	81.3	80.2	78.6	78.1	77.9	79.2	80.8	82.6	82.8
Min. Temperature (°F)	75.9	75.4	74.7	74.3	73.0	71.4	70.3	69.3	69.8	71.2	74.1	75.4
Max. Temperature (°F)	88.5	88.3	88.7	88.5	87.4	86.0	85.8	86.5	88.7	90.5	91.2	90.3
Precipitation / Rainfall (mm)	155	147	158	173	220	152	74	18	4	8	48	150

Figure 11. Weather Average Dili (*source: https://en.climate-data.org/asia/china/gansu/dili-855768/)*

ii. Topography

Timor-Leste's topography is dominated by a massive central mountainous backbone that rises to 3,000 meters and is dissected by deep valleys. On the northern side the mountains extend almost to the coast, but on the southern part the mountains taper off some distance from the coast, which provides areas of coastal plain. Up to 44% of the area has a slope of 40%.

The topography within 2 km of Dili contains very significant variations in elevation, with a maximum elevation change of 1,391 feet and an average elevation above sea level of 1,024 feet. Within 10 miles contains very significant variations in elevation (2,570 feet). Within 50 miles contains large variations in elevation (7,689 feet).

The morphology of the observed area is in the flat plain area. The land used around the research site is an privated land and the project will establish in 6 msl.

iii. Geology

The tectonics of the island of Timor occurred due to the collision between the Australian micro plate and the afhanitic asia plate resulting in a fault, namely is thrust fault. This geomorphological results in very steep slopes that represent a balance between geological uplift and erosion and also in very high sediment loads in the river leading to broad and thick alluvial fans and floodplains along the river basin and across the coastal plain.

The project location is underlined by Alluvial which consists of loose sediment, clay to the size of a boulder, tens of meters thick. In fact in Timor-Leste, climate and,

more importantly, soil relief and therefore excessive soil erosion and movement, will be one of the most important factors controlling soil development.

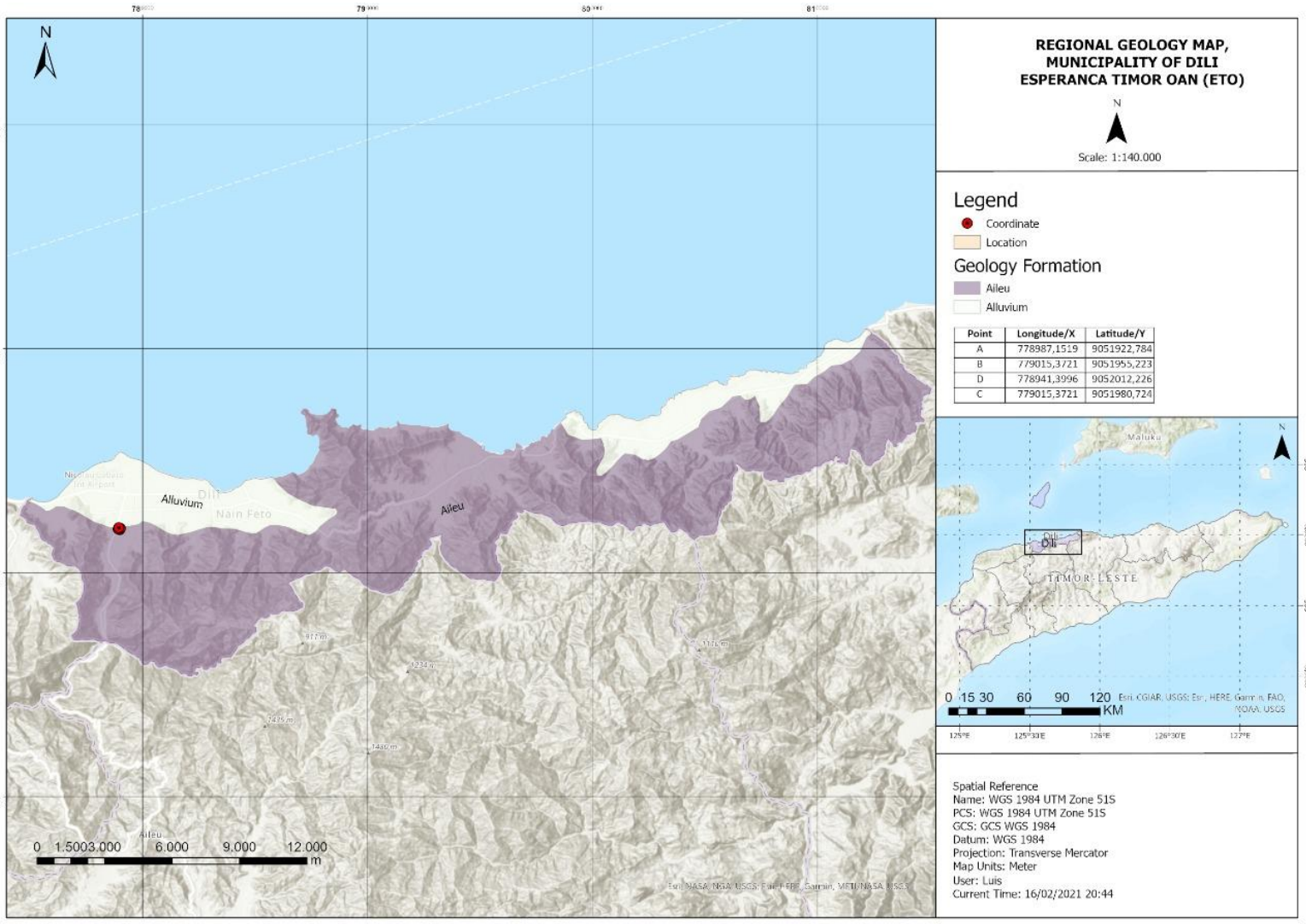


Figure 12. Geology Regional Map (*Source: Hersege Lda 2020*)

iv. Air Quality

Air quality potentially is impacted from volatile Organic Compound (VOC) associated with low hydrocarbon chain compound easily evaporated in to the air. Gas contains benzene that is easily evaporated into the atmosphere during handling of product. Large amount of VOC transferred into the atmosphere will cause pollution and can be harmful to those expose to it. Given the capacity and the closed handling system, the nature of this impact is localized and can be significantly mitigated.

Potential for air pollution from the use of product (vehicle emission) can come in the form of release of NOx SOx Cox and particulate Matter (PM) from the combustion. Pollution from vehicle emission depends on several factors including:

- Specification of fuel for example, in the case of gasoline, use of lower RON could lead to higher emission of NOx and Cox.
- Engine maintenance
- Traffic congestion

Air pollution from use of product has great potential to spread nationally even trans boundary to the neighboring nations. Most appropriate mitigation measures for this type of pollution, however, depend on local policy and regulatory framework in relation to the quality of the petroleum products allowed to be imported in, engine maintenance as well as traffic planning and management. Potential mitigation measures that can be implemented by Eto Lda.

The initial measurement that conducted by using Airradio to measure the air quality in the proposed location. the result shown that in the PM 2.5 is 9 ug/m3, the results describe below the threshold recommended by International Ambient Air Quality Standard WHO 2001, 25 ug/m3– 24 hours mean and PM 10 is 14 ug/m3, the results describe below the threshold recommended by International Ambient Air Quality Standard WHO 2001, 25 ug/m3– 24 hours mean. The SOx is 2 ug/m3 – 24 hours mean, the result of the measurement is described below the threshold recommended by WHO Air Quality Guidelines (AQG), SOx is 20 ųg/m3 – 24 hours mean and the others parameter such as CO and O3 are 0 (Zero). All the result of the measurement is described below the threshold recommended by WHO Air Quality Guidelines (AQG), NOx is 200 ųg/m3, O3 is 100 ųg/m3.

v. Surface Waters

Due to non-existence of natural surface water bodies or even perennial man-made channels/drainage line in the area, potential for surface water impacts from the operation is only limited to pollution to the runoff during raining season. Several activities have the highest potential to generate this kind of pollution including leakage during loading of fuel from tanker into storage tanks and during filling into the vehicular as well as handling of sludge formed at the bottom of the tanks. Pollution to the surface water has the potential to reach large areas depending especially on the scale of the leaks. However, due to the use of standardized equipment and method, leakage can be kept into the minimum and when there is a leak, it is being diverted into the oil catcher to separate water and oil. The *Comoro River* is a seasonal river and located approximately 80 meter to the west of proposed location..

Figure 13. Comoro River *(Source: Hersege Consultant 2019)*

vi. Groundwater

Dili has a tropical monsoon climate with annual precipitation of aproximately 1,200 mm that mostly occurs during the annual wet season from November to April. Prolonged dry seasons attributed to climate change may cause additional pressure on groundwater stress.

From observations at the project site, there are drilled wells that have been made and used by G&S Construction for domestic, industrial, and other purposes. With the current construction project for the ETO Gas facility, from an existing drilled well, to meet the needs of the project, the ETO Gas company has also installed a water pipe from a drilled well source that has been prepared by the G&S Construction company.

From observations and interviews with supervisors in the field, the drilled well has a drill depth of 32 meters using a pipe size of 4 inches.

Figure 14. Underground Water (Drill Well)

vii. Coastal Water

Importance of Coastal Waters. As the interface between terrestrial environments and open oceans, coastal waters encompass many unique habitats and serve important human needs. Coastal habitats include estuaries, coastal wetlands, sea grass meadows, coral reefs, mangrove forests, kelp forests, and upwelling areas.

The *condition* of coastal waters reflects a group of interrelated physical, chemical, biological, and ecological characteristics. Coastal water condition can be affected by a variety of stressors.

- **Nutrients and pathogens** can come from storm water, agricultural runoff, and sewage discharge or overflows. Excess nutrients can cause algal blooms that result in low dissolved oxygen levels, which harm aquatic life. Pathogens (e.g., bacteria and viruses) can affect the health of people who use waters for recreation or eat contaminated fish or shellfish.

- **Chemical contaminants** can come from sources such as agricultural runoff, industrial activities, and atmospheric deposition of airborne pollutants. Of particular concern to human health are toxic chemicals in consumable fish and shellfish.

- **Changes in temperature and salinity** can be influenced by weather patterns or the condition of freshwater inputs. These changes can affect habitat quality and the status of native plant and animal populations, and can also influence algal blooms.

- **Non-indigenous species** can affect the status of native communities. In particular, invasive species can kill or crowd out native populations or otherwise alter coastal watersheds.

- **Overharvesting** can affect populations of fish, shellfish, marine mammals, and other species.

- **Changes in the extent of coastal waters** can also affect their condition. For example, beach erosion and wetland loss can affect contaminant and sediment levels. Wetland loss can also affect the condition of the wetlands that remain.

The northern coasts are mainly characterized by the steep mountains falling directly into the sea, making for rocky and steep coast along most of the shoreline. Municipality Dili offers a wide coastline with attractive beaches, ideal for swimming and other water sports, and fishing. The proposed location will not affect the coast area in Bebonuk Beach.

viii. Marine Waters

Marine water quality refers to the presence or absence of any number of pollutants in ocean waters. Some of the more important pollutants include oil, sedimentation, sewage, nutrients, heavy metals, and thermal pollution. However, due to the use of standardized equipment and method, leakage can be kept into the minimum and when there is a leak, it is being diverted into the oil catcher to separate water and oil.

Figure 15. Marine Water

ix. Soil

Soil and groundwater aquifer are also important receiving environment that can be affected by the project, if there shall be transport of contaminant to the soil and that percolate further to eventually reach groundwater aquifer. Pollutant transfer depends on the type of soil and distance between the surface and the aquifer.

For the washing of cylinders water will be required. Wastewater generated from cylinders washing will be collected in settling tanks. Treated water from clarifier will be reused for cylinders washing purpose.

Soil permeability is the property of the soil to transmit water and air and is one of the most important qualities to consider for proposed project of Gas station. Many factors affect soil permeability. Sometimes they are extremely localized, such as cracks and holes, and it is difficult to calculate representative values of permeability from actual measurements. A good study of soil profiles provides an essential check on such measurements. Observations on soil texture, structure, consistency, color/mottling layering, visible pores and depth to impermeable layers such as bedrock and clay pan form the basis for deciding if permeability measurements are likely to be representative.

According to the data of soil permeability in project location shows that more than 25 cm/hour and according to the soil permeability class included in class very rapid it means if there is any oil spill, the ground water will be quickly polluted.

During operation of the proposed LPG storage and bottling plant, sewage will be generated, which will be disposed through the septic tank followed by soak pit. Hence, during the operation of the proposed LPG storage and bottling plant, no impact is anticipated on water quality.

Based on the measurement in the field, by using Flo meter for soil measurement and water proof for water quality measurement. There are two measurements point that conducted for soil measurements: the first point is inside the project area and the second point is the access road. And for water measurement is the company's water well. The result of measurement are shown below:

Figure 16. Soil Permeability Test

Table 4. Soil and Water Measurement

Parameter	Measurement result	
	Point A	Point B
Soil		
Coordinate	8°34'6"/125°32'3"	8°34'6"/125°32'3"
Temperature	26˚C	29˚C
Moisture	Dry	Dry
pH	7	5
Texture	Heterogenous	Heterogenous
Water		
Temperature	27˚C	
pH	7.0	
TDS	2.8 ppm	

Soil permeability classes for agriculture and conservation

Soil permeability classes	Permeability rates[1]	
	cm/hour	cm/day
Very slow	Less than 0.13	Less than 3
Slow	0.13 - 0.3	3 - 12
Moderately slow	0.5 - 2.0	12 - 48
Moderate	2.0 - 6.3	48 - 151
Moderately rapid	6.3 - 12.7	151 - 305
Rapid	12.7 - 25	305 - 600
Very rapid	More than 25	More than 600

Sources : USDA

The proponent hasn't done a test for TPH (Total Petroleum Hydrocarbon) because of the Covid-19 situation and conditions, we will provide after normal situation.

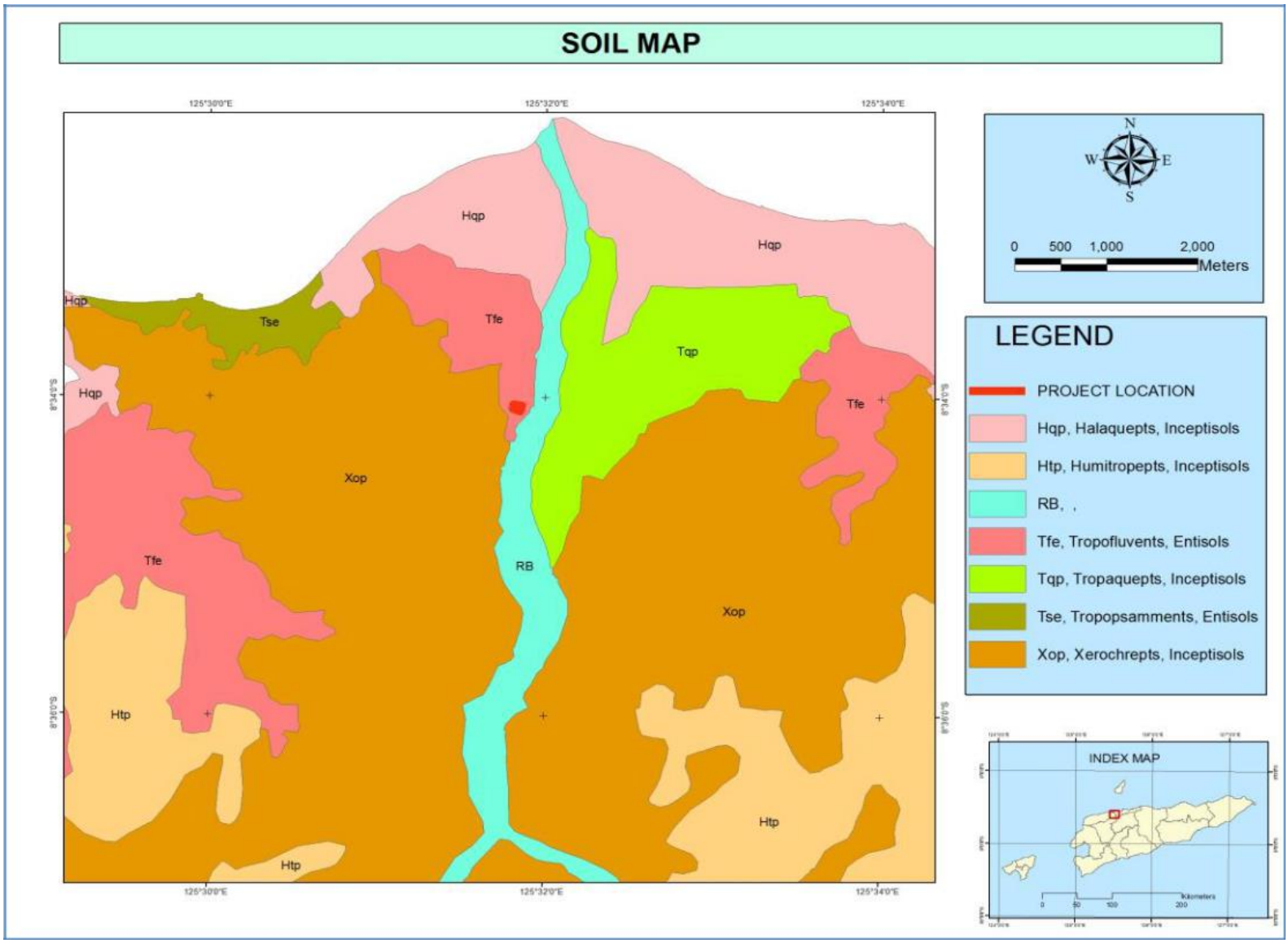


Figure 17. Soil Map (*Source : Hersege Lda 2020*)

x. Noise Level

Sound level meters are commonly used in noise pollution studies for the quantification of different kinds of noise, especially for industrial, environmental, mining and aircraft noise.

The current international standard that specifies sound level meter functionality and performances is the IEC 61672-1:2013. The first noise measurement point is inside the project area. Noise source is from the operated motor vehicle that passes through the main road and to the fuel filling area. Total of the 120 data collected from the noise level meter within the 10 minutes time frame. By using formula based on the "*Lampiran II Keputusan Menteri Negara Lingkungan Hidup No. : KEP-4/MENLH/11/1996 Tentang Baku Tingkat Kebisingan Tanggal 25 Nopember 1996,* the result of measurement is **43.76&53.50 dBA**. This number does not exceed the IFC Noise Level Guidelines for industrial activity (70 dbA) see Table 11. The result of the noise level in both point are 43.76 dBA and 53.50 dBA.

Table 5. IFC Noise Level Guidelines

	One Hour L_{Aeq} (dBA)	
Receptor	Daytime 07:00 - 22:00	Nighttime 22:00 - 07:00
Residential; institutional; educational[55]	55	45
Industrial; commercial	70	70

In addition the temperature at the project location when conducted the measurement is 30^{o}C, the humidity is 58% RH, with the wind speed is 0.8 to 4.3 m/s and the wind blows from North to South. Wind speed in the country is typically constantly mild between 8 and 12 km/hr. Elevated wind speed happened between June and July each year.

b. Ecological Components

i. Wetlands

A wetland is a distinct ecosystem that is inundated by water, either permanently or seasonally, where oxygen-free processes prevail. The primary factor that distinguishes wetlands from other land forms or water bodies is the characteristic vegetation of aquatic plants, adapted to the unique hydric soil. There is no wetland that can be found surrounding the project area.

ii. Mangroves

Mangroves are salt-tolerant trees, also called halophytes, and are adapted to life in harsh coastal conditions. They contain a complex salt filtration system and complex root system to cope with salt water immersion and wave action. They are adapted to the low oxygen conditions of waterlogged mud. A coral reef is an underwater ecosystem characterized by reef-building corals. Reefs are formed of colonies of coral polyps held together by calcium carbonate. Most coral reefs are built from stony corals, whose polyps cluster in groups. There is no mangrove that close to the proposed project location.

Figure 18. Metiaut/Fatucama Mangroves (*Source; Hersege Lda*)

iii. Corals

Based on the survey that conducted by NOAA-CREP, the Average percent cover (standard error) of the reef benthos and benthic substrate ratio (hard and soft coral and CCA/turf and microalgae) are shown in table below:

Table 6. Average Percent Cover of Coral

District	Sites (#)	Hard coral % (SE)	Soft coral % (SE)	CCA % (SE)	Macroalgae % (SE)	Turf algae % (SE)	Sand % (SE)	Benthic Substrate Ratio
Oecusse	16	17.2 (3.0)	13.7 (3.9)	0.7 (0.3)	1.8 (0.5)	47.9 (4.6)	12.2 (2.5)	0.9
Bobonaro	16	14.0 (2.5)	17.8 (3.8)	2.4 (0.7)	1.5 (0.7)	54.5 (4.3)	4.7 (1.8)	0.8
Liquica	26	10.7 (1.6)	22.9 (3.6)	1.8 (0.7)	2.4 (0.6)	46.7 (4.7)	9.0 (1.6)	1.4
Atauro	22	20.5 (2.0)	10.7 (1.9)	7.7 (1.4)	5.2 (0.9)	39.8 (4.0)	4.4 (1.7)	1.2
Dili	14	13.2 (1.3)	24.0 (3.5)	4.6 (0.8)	2.1 (0.6)	35.4 (4.8)	13.6 (2.7)	1.5
Manatuto	13	17.0 (3.6)	8.9 (2.1)	2.9 (1.0)	2.2 (1.0)	51.8 (4.6)	8.7 (3.6)	0.7
Baucau	13	10.4 (1.8)	13.8 (4.4)	2.8 (0.7)	1.9 (0.6)	51.3 (5.0)	10.3 (3.9)	0.7
Lautem	19	20.3 (2.1)	6.0 (1.3)	7.2 (1.4)	9.2 (3.4)	43.7 (4.3)	7.1 (2.1)	0.8

iv. Fisheries

Timor-Leste is surrounded world-renowned marine resources. Fishing licenses are available to off-shore foreign operators to fish for export in the exclusive economic zone. Private sector investment has introduced prawn, grouper, and sea-cucumber farming for export markets. Many individual, small-scale operators catch a range of fish including tilapia, milkfish, groper, shrimp, seaweed and crabs. Majority of fisheries in Dili is artisanal captured fisheries in terms of the number of people engaging. Artisanal fisheries in Bebonuk beach are operated by two to three fisher folks in one canoe which is a traditional style of 4–5m in length with two wings attached to the both sides. Some of canoes have out boated engine of 4-5 horse power. Artisanal fisher folks mainly catch reef fish and pelagic fish, such as, red bass, trevallies, snappers, bonito, Spanish mackerel, queen fish, and juvenile yellow fin tuna. The main fisheries area in bebonuk is in the northern part of the approved location, the distance from bebonuk beach to project location around 2,5 Km.

Figure 19. Fisheries Area

v. Protected Areas and National Parks

On February 3rd, 2016, the Council of Ministers approved the Decree-Law on the National System of Protected Areas. This measure created the legal instruments necessary for the protection of nature, essential to the survival of traditional communities and for the expansion of ecological tourism, one of the great potential for the sustainable development of Timor-Leste.

A total of 30 protected areas were listed in Timor-Leste; and three of them, Cristo Rei Protected Area, Tasitolu and Behau, are located in the DMA (Dili Urban Master Plan) . The NDFNC is going to review the list of protected areas. Behau will be abolished and two mangrove areas will be listed in Dili Municipality although the location details are unclear. Besides, an international NGO, Bird Life International, undertook a survey and designated Important Biodiversity Areas (IBA) to conserve important habitats of bird populations in 2007. Two IBA, Tasitulo and Areia Branca Beach and Hinterland, are located in the DMA. Mangrove trees are not lushly vegetated on the coast of Suco Tibar located at the west end of DMA.

In the surrounding area there are no national parks and protected forests, the distance from these places is very far from the project location, besides that plants and animals in the project area are those that generally exist for animals such as goats, buffalo, local chickens, dogs, small birds, whereas plants found in the project area generally include teak trees, aihanek, aikatapa, aiteka, sarmale, duut fuik, aifunan.

TASI TOLU LAKE

CRISTO REI NATIONAL RELIGION TOURISM

Figure 20. National Park and Protected Area

vi. Flora and Fauna

Based on the observation in the field the Vegetation within the project area consists of (*Ai-Teka*), *Amare Fuik, Ai hanek, Sarmale, Ai Katapa, Ai-matan dukur* and Grass.

Figure 21. Flora within the Proposed Location

The fauna found in the project area are goat (*Capra aegagrus hircus*), chicken (*Gallus gallus*), domestic water buffalo (*Bubalis bubalis*).

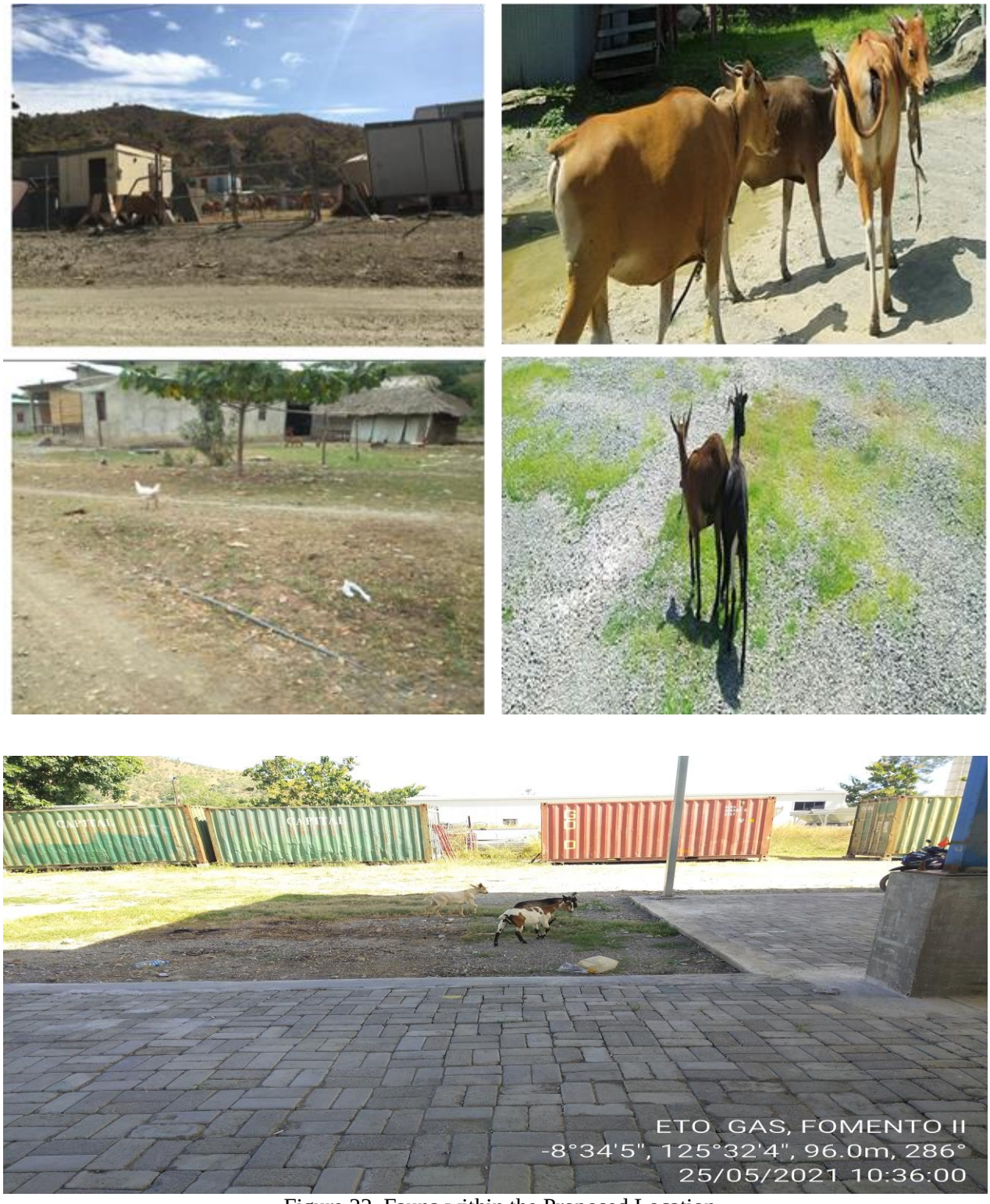


Figure 22. Fauna within the Proposed Location

vii. Forest

Timor Leste's lush rain forests and hardwoods have long been a major resource for its communities. Mirroring similar trends across the world, however, the island's forest cover has decreased by an estimated 50-70%, - or by almost 30 percent between 1972 and 1999 alone. This leaves around 41 percent of Timor-Leste's land forested, with the occasional small pocket of primary forest still intact.

And yet, depletion of the country's forests is continuing. Precious hardwoods such as sandalwood or teak have been almost completely eliminated, while agricultural expansion is adding undue pressure on the remaining forest cover. Slash-and-burn farming, a practice where farmers prepare the field by burning incumbent vegetation, frequently results also in forest fires and forest degradation. Cleared land along the slopes, on the other hand, has exposed upland farming communities to landslides and soil erosion, further fueling the need to clear more land for farming.

viii. Coastal Resources

The coastal zone is essential to marine life and supports a large part of the world's living marine resources, certainly more than the open sea. Its wetlands, lagoons, sea grass beds, coral reefs and shallow bays are nursery or feeding areas for most coastal and many oceanic species.

c. Economic Components, Including

i. Employment Sector

According to the census results, there were 383,331 employed persons in 2015, against 341,694 in 2010, representing an average annual growth rate of roughly 4.8 percent. This result shows that employment grew faster than the working age population during the five-year period from 2010 to 2015. The apparent growth of employment has, however, been achieved through the growth of self-employment and particularly own-account employment. The share of own-account workers in total employment increased from 50.2 percent in 2010 to 57.3 percent in 2015, while the share of employees in total employment has remained essentially unchanged at about 31.1 percent in 2010 and 30.6 percent in 2015.

In terms of branch of economic activity, the data show that there has been a net relative decline of agriculture employment in favor of services during the period. The share of agriculture employment in total employment decreased from 68.8 percent in 2010 to 59.3 percent in 2015.

Correspondingly, the share of employment in services increased from 26.1 percent in 2010 to 35.9 percent in 2015. Industrial employment remained almost unchanged at 4.9 percent in 2010 and 4.1 percent in 2015. The occupational composition of employment has slightly changed in favor of more skill-demanding occupations, although it remains heavily dominated by agriculture and services. The data show a net increase of the share of managers from 2 percent in 2010 to 4 percent in 2015, and a significant increase in the share of professionals from 2 percent in 2010 to 6 percent in 2015. Correspondingly, the data show a decrease in the share of agriculture workers in total employment from 65 percent in 2010 to 60 percent in 2015 but a relative increase in the share of services and sales workers from 12 percent in 2010 to 15 percent in 2015.

The educational attainment of the employed population in the core age group, 15 to 64 years old, has generally increased during the five-year period. The share of employed persons with secondary education increased from 18.8 percent in 2010 to 20.3 percent in 2015. Similarly, the share of employed persons with university education increased from 5.6 percent in 2010 to 9.0 percent in 2015. The share of employed persons with primary education remained essentially constant at 19.9 percent in 2010 and 20.2 percent in 2015.

The data below also show that the share of employment in agriculture is Lower Dili as compared with the others industries in Dili. The presence of this project will create the job opportunity to the community that lives surrounding the project.

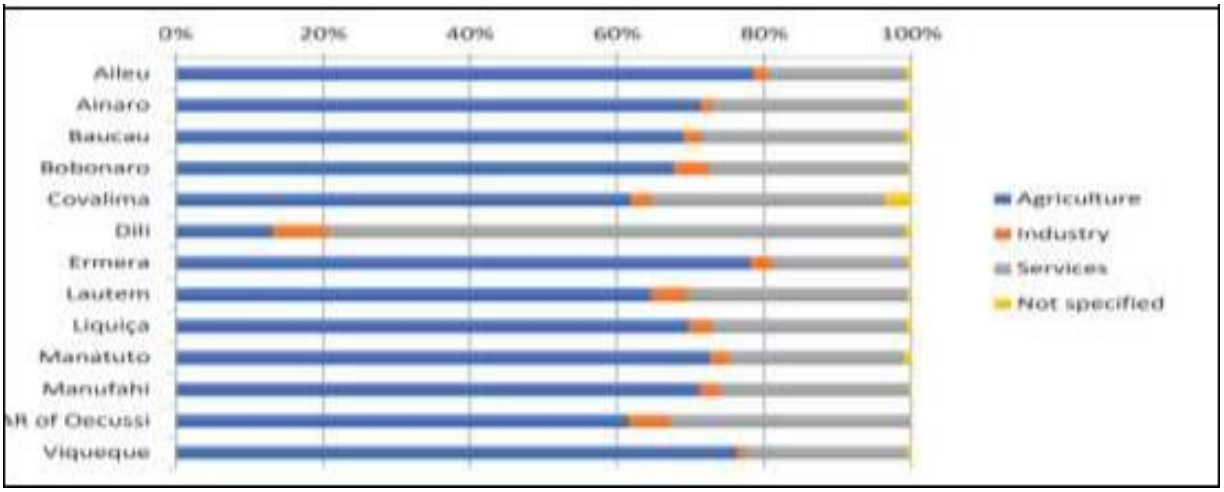
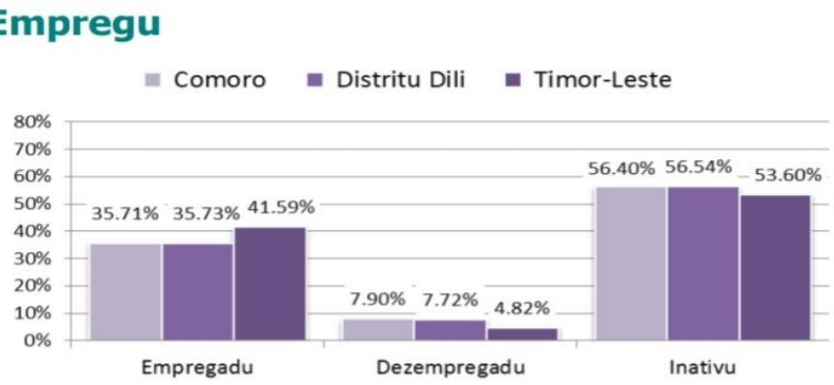


Figure 23. Composition of Employment (Source: https://timor-leste.unfpa.org/sites/default/files/pub-pdf/2015%20Census%20Labour%20Force%20Report.pdf

Following figure shows that Suku Comoro has employed 41.12 %, unemployed 4.82% and inactive employed 53.60% (source, Census fo fila 2010)

Besik metade populasaun Timor-Leste nian mak iha "tinan produtivu", (15 to'o 59).



ii. Infrastructure Facilities

Public investments in infrastructure sectors have an important role and one of the vital drivers of the economic growth and sustainability for a long term period. The development strategy of the VIII Constitutional Government identifies the infrastructure as one of the key elements of agricultural productivity, poverty reduction, rural development and public accessibility to the markets and services.

The Infrastructure Fund (IF) was established by the Government of Timor-Leste in 2011 as a vital financial instrument for the infrastructure development to support the country in achieving its national goals, as it is underlined in the Strategic Development Plan 2011 – 2030 to increase employment and to ensure sustainable economic growth, social transformation and to improve a quality of life, to achieve strategic objectives and to become a prosperous and strong nation.

Based on the survey in the field the type of infrastructure shows following pictures.

ROMANTE COMPANY (5 METERS)

CHINESE BLOCK FACTORY (15 METERS)

BABY SHOP (40 METERS)

		
HOUSE EQUIPMENT SHOP (70 METERS)	ELECTRONIC SHOP (70 METERS)	ELECTRICITY TOWER 30 (METERS)
		
IOB COLEGE (150 METERS)	SEDE DE ALDEIA FOMENTO II (150 METERS)	GRUTA CRUZ JOVEN FOMENTO II (150 METERS)
		
LOCAL SHOP (80 METERS)	MANLEUANA LOCAL MARKET (700 METERS)	ESCOLA BASICA FOMENTO II (300 METERS)
		
CANOSSA HIGH SCHOOL (700 METERS)	CAPELA FOMENTO II (50 METERS)	INSTALASAUN AGUA/SAS FOMENTO II (600 METERS)

Figure 24. Infrastructure Facilities

iii. Land Use

Dili is the capital city of Timor-Leste and comprises six administrative posts, 31 sucos and 241 aldeias. The Dili Municipality accommodates a population of 234,026 (2010 Census) with annual population growth rate at 4.1% which is far above the national average

growth rate (2.45%). The urban population is expected to share 30% of the national population in 2020.

According to the Land Use Survey for DMA by the JICA Project Team (hereinafter JPT) in August 2014, its result reveals that natural area including forest and natural bush covers around 74.5% of the total DMA and other predominant land use is residential and mixed residential use with other uses sharing 12.5% of total DMA land.

Based on the spatial character of DMA by the urban block, the land use of Urban Center block is occupied mainly by residential areas and government land followed by commercial & business use. The majority of land use is mountain or other natural area in the urban blocks of Center Fringe, Suburban, Hera, and Tibar as large sucos with large natural lands shared by 50%.

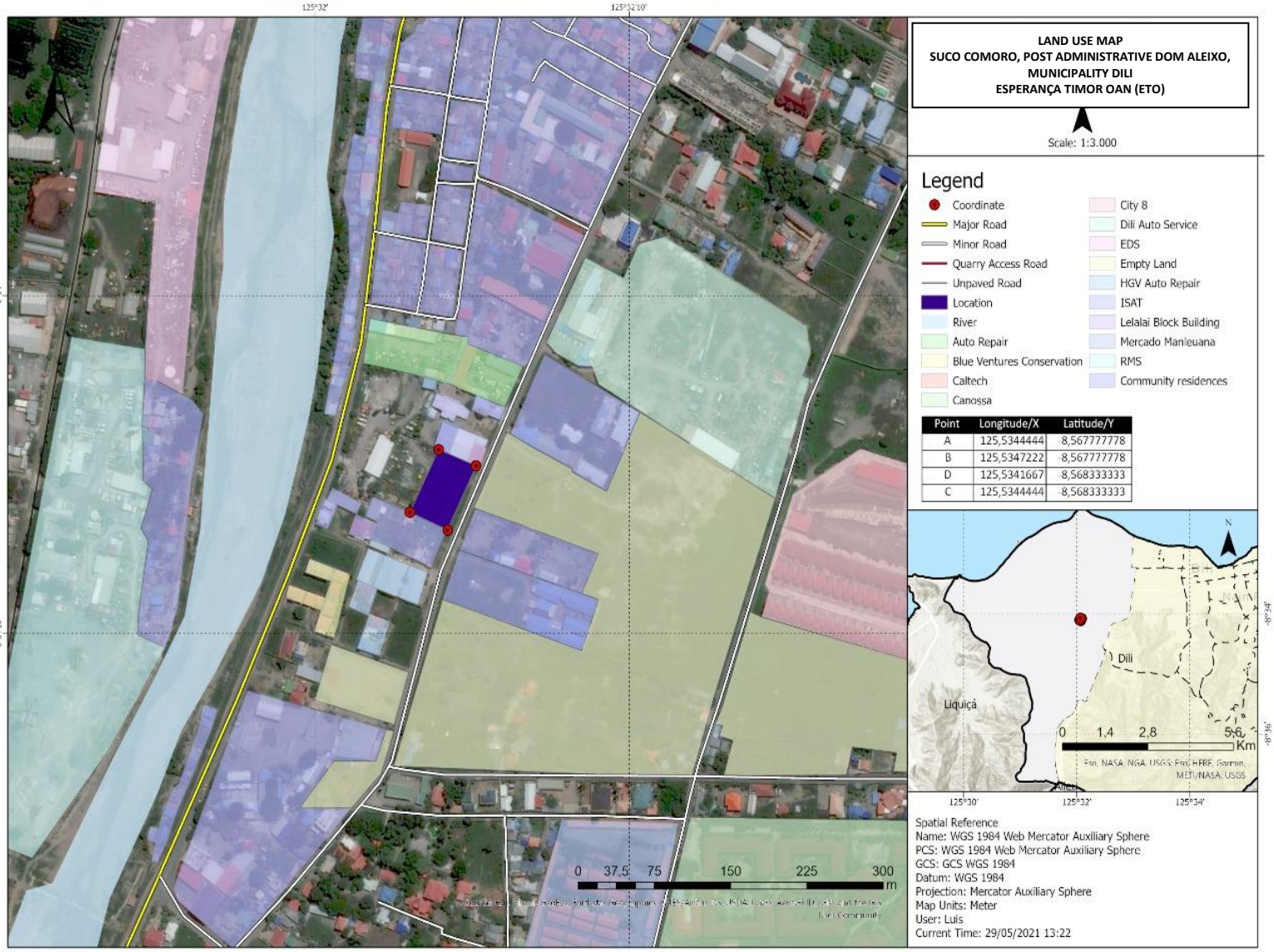


Figure 25. Land Use Map

iv. Use of Forest and Natural Resources

Besides agriculture, Timor Leste's growing population also depends on non-wood forest products, such as bamboo, rattan and grasses for housing; honey for food and medicine; palm wine; and medicinal plants. Over the last decades, the loss of forest cover has increasingly resulted in extensive soil erosion and landslides, leaving farming communities highly vulnerable and food insecure. The GEF Small Grants Programme in Timor Leste, which received a grant budget of USD 1.1 million for the current operational cycle, aims at helping communities preserve the environment and its ecosystem services upon which they rely for their livelihoods (https://www.thegef.org/news/conserving-timor-leste%E2%80%99s-rich-forest-land).

Proposed project will use natural resources such us sand, stone, backfill, water and local wood.

v. Fishing

Timor-Leste is surrounded world-renowned marine resources. Fishing licenses are available to off-shore foreign operators to fish for export in the exclusive economic zone. Private sector investment has introduced prawn, grouper, and sea-cucumber farming for export markets. Many individual, small-scale operators catch a range of fish including tilapia, milkfish, groper, shrimp, seaweed and crabs. The fisheries are in Bebonuk is located approximately 2,5 km to the northern part from the proposed project.

Figure 26. Fishing Area

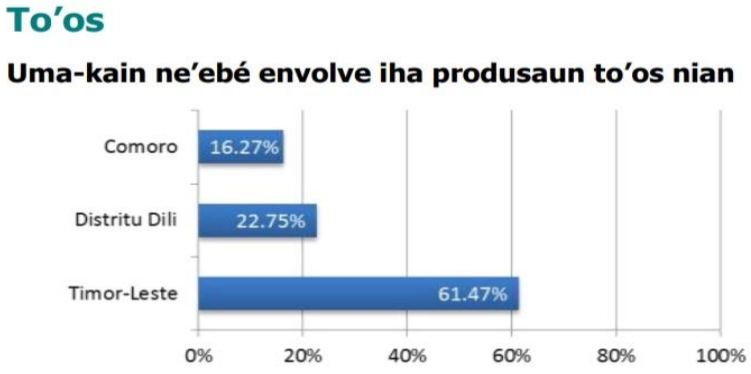
vi. Agriculture

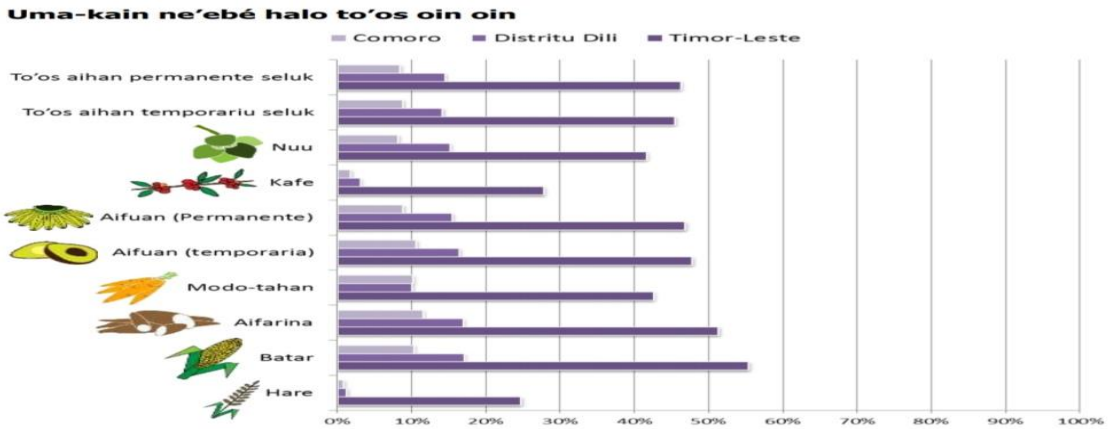
Agriculture is the main activity in Timor-Leste, providing subsistence to an estimated 80 percent of the population. It also generates an average of 90 percent of the country's exports, mainly due to coffee. Most farmers practice subsistence farming, planting and harvesting what they need for a simple life-style, collecting wild foods and traditional medicines, and the animals are very much left free to grow and reproduce. There are almost no large-scale farms except for missions. Most Timor-Leste farmers have limited access to the technologies and practices needed for sustainable and efficient agricultural production. Subsistence and commercial producers face significant constraints, including limited access to quality inputs, low yields, and limited access to markets.

Agriculture continues to be the second largest single sector in the Timor-Leste economy, after the mining and quarrying sector. In recent years its contribution to the country's Gross Domestic Product (GDP) has ranged between 6.4 percent in 2011 to 10.9 percent in 2014 and was 9.1 percent in 2015 (Timor Leste Agricultural Census 2019).

According to the Census fo fila 2010 percentage of agriculture in suku Comoro in picture bellow.

Liu metade uma-kain iha Timor-Leste kuda batar no um quarto kuda hare.





vii. Tourism

Dili municipality life's in the northtern part of Timor-Leste and includes its Capital or first largest city in Timor Leste. Set on a breezy plateau overlooking the sea, Dili has a oldest town centre with bustling sprawling market and an older center with a much more sedate air.

The attractive older part of town derives a decidedly Portuguese flavour from the *Edefisiu Do Governador de Portugues em Dili* and other colonial buildings, some restored such as the beautiful old market square and office. This area is backed by steep limestone outcrops and shaded by large banyan tree and rustling palms. A clear freshwater spring feeds the large municipal Bebonuk Beach–a great place to enjoy a refreshing dip. Beside the winding road from Dili, there is the small village of Pantai kelapa, Bebonuk, and Tasi Tolu and an absolutely breathtakingly beautiful coastline of white sand coves and beaches, stretching both west.

From the Dili plateau impressive mountain ranges including Mt Manleu Ulun in Dom Aleixo Post Administrative (1275m) dominate the skyline. This 'Mountain of Spirits' is protected and considered sacred by the Timorese people. Climbing towering Mt Manleu Ulun nuous undertaking. Towards the summit stunted alpine vegetation gives way to wind sculptured fluted rock pinnacles and hikers are rewarded with stunning views of the northtern part of Timor-Leste.

Driving through the rolling Dili City some areas seem almost untouched while others are used for Big Buildings Fisheries Area, and Rest Area such as Fish Shop, Shoping Center and beautifull of the Beach. Wonderful fresh fruit and vegetables are available selling roadside in Pantai Kelapa and Bebonuk.

Very famous tourist attractions on the outskirts of Dili are White Sand Beach and Bebonuk, some of these local tourist icons are very famous for their beautiful beaches, and for religious tourism purposes for Christians, it is the statue of Joao Paulo II. Destinations to these tourist attractions are not so far from the city center of Dili, can be reached using motor vehicles, bicycles, or public transportation or cars. For the Eto Gas Station project it is located far from these sites, the distance from the project area to the tourist attractions is 2,5kilometers-5kilometers.

Mt. Manleu Ulun

Estatua João Paulo II

Figure 27. Tourism in Dili

d. Social Components

i. Population and Communities

✓ **Numbers**

Comoro is one of the Sucos in the post administrative Dom Aleixo, Municipality of Dili. Based on census *Fo Fila Fali* 2015, Comoro is classified as urban suco with total population 76,681 with the total area of suco Comoro is 15.4 km².

✓ **Locations**

Dom Aleixo Administrative Post is an administrative post in the west of Dili Municipality of Timor Leste, at the mouth of Comoro River. It is named after Aleixo Corte-Real. Its population at the 2010 census was 105,154. Its area is 33.12 km².

Here are the Presidente Nicolau Lobato International Airport, the ministry for foreign affairs and the main mosque of East Timor. The Tasitolu salt lakes are in the most western part of Dom Aleixo in Comoro Suco.

✓ **Composition**

Dili is the first largest district in Timor Leste with a population of about 175,541 inhabitants (2015 Census). Local languages spoken in Dili include Tetum for the majority. A number of people above 80% understand Portuguese and most of the others, including the younger population generally understand Bahasa Indonesia. Portuguese is being taught in all schools and some English in the secondary.

ii. Health Profiles of Communities

Comoro Hospital is located in Comoro Village, the hospital is the other public hospital in Timor Leste after the first hospital, the Lahane Hospital was built. Comoro hospital is the main hospital or national hospital which is now used for the treatment of serious illnesses and certain diseases that villages in the territory of Timor Leste. While for the construction of a small hospital or health clinic from the sub-district to the village in the territory of Timor Leste. however, the Comoro hospital is still the another choice for the people of Timor Leste for treatment, undergoing major surgery, health check-ups and other needs for people living in Dili and from other regions.

Figure 28. Comoro Health Center

iii. Institution, Schools and Health Facilities

Taking both public and private schools, there are 92 primary schools, 32 junior high schools and 17 secondary schools. With regard to health facilities, there are 33 health posts and six community health centers and a hospital in Dili town. Access to facilities, based on average traveling times and average distance, is good with both the nearest health center and secondary school being between half and three-quarters of an hour away and the nearest primary school being half an hour away.

The district has the lowest malnutrition rate for children under five years old, but the morbidity rate is one of the highest in the country at 24% (*IPP691 Compliance with World Bank's Operational Policy 4.10 on Indigenous People).*

iv. Community Structure, Family Structure

The traditional Timorese culture - so well defended during the resistance period, and that served to help defend the argument for independence, due to the cultural

difference regarding the occupying people – is based on the complexity of the family structure practiced in Timor-Leste.

It is a very particular structure, often misunderstood by the malae (foreigners). It is no accident that even people that do not know each other, in Timor-Leste – and that which is already being used by the malae - call themselves by mana or mao (if age or social situation is similar for women and men, respectively), tia or tio (whether it is someone older, a generation or two), avó or avô (if of an advanced age).

In practice, children, godchildren, cousins or persons from the same connection in the traditional structure, are considered immediate family, a situation that reflects the central structuring role of family ties in the Timorese society.

"The bond of kinship provides a long-term perspective, which lacks in other relationships. The permanence of family relationships, usually guaranteed by a biological link, allows, in a greater extent, to build trust and mutual commitment. Anchors are created - material and emotional - between individuals and their families. This means that a strong bond exists in society, which has guaranteed the well-being of families, in extended families such as the ones that exist in the Timor-Leste traditional structure.

v. Land Ownership (including informal or customary land ownership, and other rights over the land)

The designed land for the proposed project of Eto Lda is a Privated land.

For more details information and legal documents attached.

e. Cultural Components, Including non-physical Resources and Elements, Including

i. Cultural Heritage

Timorese cultural heritage is multi-layered–a fascinating combination of traditional Timorese, Portuguese, Chinese and Indonesian influences. This permeates their local architecture, cuisine, clothing styles and artistic endeavors.

Timorese culture continues to evolve in local arts and handicrafts, as well as in dance and music. Cultural motifs, both old and modern, are incorporated into the design of tais – hand-woven textiles, basket work and wood carving. Cultural groups still perform traditional dances and songs and also are entertaining in new ways. Talented Timorese bands and dance groups perform in local venues and at festivals.

Traditional culture in all its forms is still evident in everyday life in the Districts of Timor-Leste, despite colonization, war and invasion. Handed down by the ancestors

these traditional beliefs and practices maintain social order, define kinship relationships and maintain a close and personal link with the land and the sea.

They also serve to maintain a sense of identity and belonging for the different ethnic groups. Whilst there is a degree of commonality amongst these beliefs and practices each clan has its own unique culture and language, making Timor-Leste a fascinating place to visit. Uma *luliks*, sacred houses, are at the center of traditional belief; they are the spiritual and ancestral home of the Timorese and hold the sacred objects that have been passed down from the ancestors. Sacred altars containing ancestral remains and places for animal sacrifice are often all that remain of many original *Uma Lulik* sites.

Traditional culture in all its forms is still evident in everyday life in the Districts of Timor-Leste, despite colonization, war and invasion. Handed down by the ancestors these traditional beliefs and practices maintain social order, define kinship relationships and maintain a close and personal link with the land and the sea. They also serve to maintain a sense of identity and belonging for the different ethnic groups. Whilst there is a degree of commonality amongst these beliefs and practices each clan has its own unique culture and language, making Timor-Leste a fascinating place to visit. Uma *luliks*, sacred houses, are at the center of traditional belief; they are the spiritual and ancestral home of the Timorese and hold the sacred objects that have been passed down from the ancestors. Sacred altars containing ancestral remains and places for animal sacrifice are often all that remain of many original *Uma Lulik* sites

During pre-colonial times Timor-Leste society was organized into chiefdoms maintained by a complex system of marital and economic alliances. Liu Rai, kings ruled over these territories. There are numerous recorded and relayed instances of feuds and wars relating to land and marriage disputes during this time.

‘Ai toos’, sacred timber markers mark territorial clan boundaries and locations where ancient treaties were enacted, older clan members still respect these boundaries The importance of the Liu Rai was strengthened during Portuguese times when their authority was reinforced by the Portuguese who ruled through them, thus preserving this aspect of Timorese culture.

Catholicism, while introduced during Portuguese colonial times, only became an integral part of Timorese culture following the invasion by Indonesia. The reason for

this has been explained as the advocacy and promise of protection afforded by the church. (Molnar A. 2005).

Since that time Catholicism has coexisted alongside traditional spiritual beliefs, the Catholic Church has pragmatically tolerated this duality. With an estimated 98% of Timorese being Catholic, religious ceremonies, churches and artifacts are important aspects of Timorese culture that are likely to attract cultural tourism of a religious nature. Local languages spoken in Dili include Tetum for the majority, a number of people above 40 understand Portuguese and most of the others, including the younger population generally understand Bahasa Indonesia. Portuguese is being taught in all schools and some English in the secondary.

ii. Archeological Sites

An archaeological site is a place (or group of physical sites) in which evidence of past activity is preserved (either prehistoric or historic or contemporary), and which has been, or may be, investigated using the discipline of archaeology and represents a part of the archaeological record. Sites may range from those with few or no remains visible above ground, to buildings and other structures still in use. There is no archeological site that founded around the project location.

iii. Historical Sites

Cristo Rei of Dili (Christ the King of Dili) is a 27.0 m high (88.6 ft) statue of Jesus located atop a globe in Dili, Timor Leste. The statue was designed by Mochamad Syailillah, who is better known as Bolil. The statue was officially unveiled by Soeharto in 1996 as gift from the Indonesian Government to the people of Timor Leste, the then Indonesian province. The statue is one of the main tourist attractions in Timor Leste.

The statue, and the globe on which it rests, are situated at the end of the Fatucama peninsula, facing out to the ocean and can be reached by climbing some 597 steps.

The idea of raising the *Cristo Rei* statue was proposed by the East Timor governor José Abílio Osório Soares to President Suharto. It was intended as a present for the 20th anniversary of East Timor's integration into Indonesia.

Suharto appointed the director of national airline Garuda Indonesia to lead the project. Garuda was given the responsibility to find capital for funding the project, and raised 1.1 billion rupiah (US$123,000). However, that was not sufficient to erect the

statue, and contributions from East Timorese civil servants and businessmen were needed to complete the project, which eventually cost more than 5 billion rupiah (US$559,000).

It took almost a year of working to create the body of the statue, which was fabricated by 30 workers in Sukaraja, Bandung. It was made of 27 separate copper sections, which were then loaded onto three trailers and shipped to Dili. Reconstruction of the statue, including the globe and a 10-meter-high cross, took three months.

It was unveiled on 15 October 1996. Roman Catholic bishop Carlos Filipe Ximenes Belo, together with President Suharto and Timor Leste Governor José Abílio Osório Soares, directly witnessed the revelation of this statue from the air using a helicopter.

iv. Sacred Sites

Cristo Rei considered as Sacred Sites by Catholic people, The Catholic Church in Timor Leste is part of the worldwide Catholic Church, under the spiritual leadership of the Pope in Rome. Since its independence from Indonesia, East Timor became only the second predominantly Catholic country in Asia (after the Philippines), a legacy of its status as a former Portuguese colony. About 98.3% of the population is Catholic in East Timor as of 2006, which means over 900,000 faithful.

The country was divided into three dioceses: Dili, Baucau and Maliana (erected in 2010). These dioceses are immediately subject to the Holy See.

The Apostolic Nuncio to East Timor is concurrently the nuncio to Indonesia. The position has been vacant since 11 October 2019, and the Nunciature is located in Jakarta.

v. Unique Landscape

No unique landscape near proposed location

7. ALTERNATIVES

a. Alternative Location

Alternatives to the project location will be presented in this section, as well as the historical use of the overall area in which the project site is located. These alternatives will be discussed from environmental and socio-economic perspectives.

Based on the preliminarily identification of feasibility study for the proposed location, there is no project alternative and the alternative locations are not the applicable alternatives to the project. In fact, the current location for the proposed Gas station is most reasonable

aspect as it has been setup with the feasibility study assessment which concludes that the current location for the project site is acceptable.

b. Different Project Sizes or Design

Based on the current project design that submitted to the ANPM is a suitable design that company proposed due to the condition in the field.

c. Alternative Technologies/ Methods

Automated payments technology could invite consumers to link their debit or credit cards in a once-off registration process, and then fill up at any time.

8. CLIMATE CHANGE

a. Description of Historic Weather

The climate is tropical in Dili. The summers here have a good deal of rainfall, while the winters have very little. According to Köppen and Geiger, this climate is classified as Dwb. The Köppen climate classification divides climates into five main climate groups, with each group being divided based on seasonal precipitation and temperature patterns. The five main groups are A (tropical), B (dry), C (temperate), D (continental), and E (polar). In Dili, the average annual temperature is 27.0 °C. In a year, the average rainfall is 1307 mm.

b. Details of Future Projection Under Projected Climate Change

The proposed project would emit carbon dioxide (CO2) from during construction and operation period. The emission emitted during the time of construction is directly through fuel use in construction vehicles and equipment, and there is in direct emission from generator usage when electrical power off. These are the future projection for climate change.

Future climate predictions for the course of the 21st Century (BoM CSIRO, 2011) include the following:

- Surface air temperature and sea-surface temperature are projected to continue to increase (very high confidence);
- Wet season rainfall is projected to increase (moderate confidence);
- Dry season rainfall is projected to decrease (moderate confidence); • Little change is projected in annual mean rainfall (low confidence);
- The intensity and frequency of days of extreme heat are projected to increase (very high confidence);

- The intensity and frequency of days of extreme rainfall are projected to increase (high confidence);
- Little change is projected in the incidence of drought (low confidence);
- Tropical cyclone numbers are projected to decline in the broad region surrounding Timor Leste (0–20ºS and 100ºE–130ºE) (moderate confidence);
- Ocean acidification is projected to continue (very high confidence); and
- Mean sea-level rise is projected to continue (very high confidence)

c. Implication for the Proposed Project

The project will be implemented after the proponent obtain license from government including environmental license.

d. Adaptation measures required to mitigate any potential adverse impacts

The impacts of the proposed alteration project on the environmental elements are both positive and negative. The magnitude of each impact is described in terms of being significant, minor or permanent, short-term or long term, specific (localized) or widespread, reversible or irreversible. Most of the impacts have been addressed in the proactive design of the project and other mitigations can only be guaranteed through active and responsible management committed to the propositions of the environmental management plan.

9. IMPACTS ASSESSMENT AND MITIGATION MEASURES

Table 7. Impacts Assessment and Mitigation Measures

Pre-Construction

Project related activities	Source of potential impacts	Potential Impacts	
		Negative	Positive
• Land clearing using heavy machinery • Land excavation	• Land clearing • Poor soil and rock piles • Inexperienced workers • Fuel and lubricant leakages	• Air pollution • Noise and vibration pollution • Impact on workers' health and safety and community • Impact on agriculture, geology economic and ecology • Soil and water pollution • Fire or/and explosion • Conflict	• Employment opportunity
• Vehicle and heavy machinery movements	• Intense movements of vehicles and heavy machineries in and out of the facility • Inexperienced workers • Fuel and lubricant leakages	• Air pollution • Traffic jam and traffic accident • Impact on workers' health and safety and community • Soil and water pollution • Fire or/and explosion • Conflict	
• Wastes Production	• Poor soil and rock piles • Improper disposal of wastes • Poor site management	• Air pollution • Visual pollution • Soil and water pollution • Impact on economic and agricultural activity • Conflict	

Construction

Project related activities	Source of potential impacts	Potential Impacts	
		Negative	Positive
• Vehicles and heavy machineries movement • Excavation	• Poor site management • Inexperienced workers and drivers • Poor soil and rock piles management • Fuel and lubricant leakages	• Air pollution • Noise and vibration pollution • Impact on workers' health and safety • Soil and water pollution • Fire or/and explosion • Conflict	• Employment opportunity
• Concrete mixtures for construction of walls, floor, supporting office, retention basin, pumps island and etc.	• Poor site management • Inexperienced workers • Fuel and lubricant leakages	• Air pollution • Noise and vibration pollution • Impact on workers' health and safety and community • Soil and water pollution • Fire or/and explosion • Conflict	
• Installation of tanks, Fuel pipes, canopy and dispensers electrical system and etc.	• Inexperienced workers • Not follow procedures	• Air pollution • Noise and vibration pollution • Impact on workers' health and safety and community • Fire or/and explosion • Conflict	
• Wastes production	• Improper disposal of wastes • Poor site management	• Visual pollution, • Soil and water pollution • Conflict • Impact on economic and agricultural activity	

Operation

Facility related activities	Source of Potential impact	Potential Impacts	
		Negative	Positive
Exchange of LPG ISO tanks	• Inexperienced and untrained staffs • Leaking from ISO tanks (body, seal and valves) • Carelessly handling ISO tanks • Safety procedure negligence • ISO tank fall	• Fire in the facility • Explosion in the facility • Air pollution in and outside the facility • Loss of life • Impact on health and safety of the workers and community	• Employment opportunity
Refilling the LPG cylinders	• Inexperienced and untrained staffs • Leak from cylinder valves • Leaking from cylinders' body • Leak from the filling plant components (seals, pipe, hoses and valves) • Safety procedure negligence	• Fire in the facility • Explosion in the facility • Loss of life • Air pollution in and outside the facility • Impact on health and safety of the workers and community	
Cylinder delivery and Road ISO tanks trucks movements in the facility	• Unlicensed and inexperienced driver • Crash into other vehicles • Poor maintenance of trucks • Cylinders falling off • Safety procedure negligence	• Air pollution in and outside the facility • Traffic in the facility • Traffic accident in the facility • Fire and explosion • Loss of life • Impact on health and safety of the workers • Damage to facility	
Cylinder delivery and Road ISO tanks trucks movements outside of the facility	• Unlicensed and inexperienced driver • Crash into other vehicles • Poor maintenance of trucks • Cylinders falling off • Safety procedure negligence	• Air pollution in and outside the facility • Traffic outside of the facility • Traffic accident outside of the facility • Fire and explosion outside of the facility • Loss of life outside of the facility • Impact on health and safety of the community • Damage to public and private facility and property	
Community activities	• Rubbish burning • Burning house • Burning for agriculture purposes	• Air pollution in and outside the facility • Fire in the facility • Explosion in the facility • Loss of life • Impact on health and safety of the workers	
Produce solid and liquid	• Improper management of wastes	• Soil quality	

wastes		• Water quality • Land field	
Vandalism	• Set up fire in the facility or outside of the facility	• Fire in the facility • Explosion in the facility • Loss of life • Impact on health and safety of the workers and community	

Maintenance

Facility related activities	Potential Source impact	Potential Impacts	
		Negative	Positive
Repair cylinders (valves and bodies)	• Inexperienced and untrained staffs • Improper use of equipment • Safety procedure negligence	• Impact on health and safety of the workers	• Employment opportunity
Repair ISO tank (bodies and parts)	• Inexperienced and untrained staffs • Improper use of equipment • Safety procedure negligence	• Impact on health and safety of the workers	
Repair Filling Plant (hoses, valves, seals, bolts and etc.)	• Inexperienced and untrained staffs • Improper use of equipment • Safety procedure negligence	• Impact on health and safety of the workers	
Repair canopy/fence/concrete floor	• Inexperienced and untrained staffs • Improper use of equipment • Safety procedure negligence	• Impact on health and safety of the workers	
Repair truck (ISO tank road truck and cylinders delivery truck)	• Inexperienced and untrained staffs Improper use of equipment • Safety procedure negligence	• Impact on health and safety of the workers	
Produce solid and liquid wastes	• Waste Vehicles maintenance • Wastes ISO tanks and Cylinders maintenance • Leak from cylinder or ISO tanks or vehicles • Improper management of wastes	• Soil quality • Water quality • Air quality • Land field	

Decommissioning

Facility related activities	Source of Potential impact	Potential impacts	
		Negative	Positive
Dismantle of canopy, fence and removing concrete floor	• Inexperienced staffs • Improper use of equipment • Safety procedure negligence	• Noise pollution • Air pollution • Impact on staffs occupational health and safety • Impact on community health and safety	• The place can be rehabilitated and use for other purpose
Removing filling plant from the facility	• Removing filling plant without proper equipment • Safety procedure negligence	• Impact on staffs occupational health and safety	
Removing ISO tanks (poor condition and good ones) from the facility	• Removing ISO tanks from the facility without using proper equipment • Safety procedure negligence	• Impact on staffs occupational health and safety	
Removing Cylinders (poor condition and good ones)	• Removing heavy cylinders without proper equipment • Safety procedure negligence	• Impact on staffs occupational health and safety	
Movement of vehicles inside the facility	• Movement of people and other vehicles inside the facility • Safety procedure negligence	• Impact on staffs occupational health and safety • Damage to facility	
Movement of company's vehicles outside of the facility	• Movement of people and other vehicles outside the facility • Safety procedure negligence	• Impact on staffs occupational health and safety • Impact on community health and safety • Damage to public and private facility and property	
Produce Solid and liquid wastes	• Dismantle of the facility components • leaks	• Soil quality • Water quality • Air quality • Land field	
• Decommissioning	• Employees losing their job	• Impact on family economy	

10. SUMMARY OF ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) involves risk management strategies that should be undertaken by the project proponent, project manager and the residents to mitigate environmental degeneration. They are approaches to monitor, control, reclaim and restore the environment back to its appropriate state. EMP's for projects thus provide logical frameworks within which the identified issues of environmental concern can be mitigated, monitored and evaluated.

Environmental monitoring involves measurement of relevant parameters, at a level of details accurate enough, to distinguish the anticipated changes. Monitoring aims at determining the effectiveness of actions to improve environmental quality.

The environmental management and monitoring plans has been developed and outlined to bring home the key findings of the Environmental Impact Assessment of the project in mention, recommending necessary mitigation actions, defining roles and the estimated cost.

a. Institution roles and Responsibilities

The following institutions and authorities (as mentioned earlier in the section of institutional roles and responsibilities) have roles and responsibilities in safeguarding the social wellbeing, economic, and the environmental protection relevant to the proposed project.

(1) *Agençia Nacional de Licensiamento Ambiental (ANLA)* (2) *Secretario Estado do Meio Ambiente (SEA)*	Carry out inspection and monitoring to safeguard the environment, health and safety
(3) Autoridade Nacional do Petróleo Minerais (ANPM) *Direcção Downstream* (4) *Ministério* do Petróleo	eThe regulatory authority for the petroleum and natural gas and related products, and mining industries Carry out inspection and monitoring on downstream activities
(5) *Direcção Nacional* de *Servicos* de *Águas e Saneamento (DNSAS)*	Responsible for the national management of water resources. It also formulates sector policy, manages the distribution for human consumption, and monitor water quality through DNSAS laboratory
(6) *Ministério da Saúde*	Responsible for public health
(7) Direcção Nacional da Protecção Civil (which include the fire fighters)	Responsible for fire hazard and emergency

b. Cost Estimation for Mitigation Measures

The total investment of Eto Lda is equal to $200,000 which will covered construction of the Gas Station and its supporting facilities, training of staff, component of Gas station facilities.

11. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

1. Public Consultation

Public consultation is conducted by project owner and supported by the consultant with the objective to obtain constructive opinion or comments from affected community including negative and positive comments. The method of public consultation is door to door and by forum. Opinion and comments attached in this EMP Document.

There are several respondents were interviewed on their concerns regarding the impacts due to the proposed project activity. Most of the correspondents are pleased with the presence of the fuel filling station and the job opportunity that might be created. However, dust and safety are the main issue that raised by the correspondent.

From the public consultations which took place from February 25, 2021, while during the event there were many questions, suggestions and constructive criticism submitted from the surrounding community, people's representatives or local authorities as well as explanations on environmental laws from ANPM. from the suggestions and criticisms submitted by the guests at the event, among others, as follows;

Consultation with ETO GAS Security/Local Community

Consultatio with Mr. Tulus/G&S Operator

Consultation with Mr. Anacleto dos Santos/Local Community/Fomento II

Consultation with Mr. Hipolito Ximenes/Local Community/Fomento II

Figure 29. Public Consultations by Face to Face (*Source: Hersege Consultant 2020*)

2. Information Disclosure

Disclosure of relevant environment safeguards documents will be in an appropriate form, manner, and language and at an accessible location to be understandable to the affected people and local stakeholders. The approved SEIS and EMP will be provided in the Proponent's office and can be accessed by project stakeholders' including affected communities within the project's area. The SEIS and EMP are considered as public document which is subjected to pass the information on the identified impacts and the proposed mitigation measures to be implemented.

12. PUBLIC CONSULTATION WITH LOCAL AUTHORITIES AND COMMUNITIES

According to **Minesterial Diploma No.47/2017,** in preparing drafts for SEIS and EMP, ANPM requested the proponent to complete the existing requirements, by holding public consultations with local residents, government institutions, local authorities, intellectuals and other relevant government agencies. With the reason that in the preparation stage of the SEIS and EMP documents, it is very necessary for these activities so that the proponent can understand the situation and condition of the area from the surrounding community, of a development project or investment in certain areas, especially in the Comoro area. The purpose of the public consultation held by the company is to hear, understand and accept suggestions, criticisms and constructive solutions, for the vision or business strategy plan prepared by the company so far.

That way, on February 25, 2021, the proponent made a plan to complete the requirements requested by ANPM to hold a public consultation forum, from the preparations made by the proponent for smooth running of the event, the first thing the proponent made was to coordinate between the proponents. with the local authority, and also with the ANPM to determine the day and date to realize the event. From the public consultations which took place from February 25, 2021, while during the event there were many questions, suggestions and constructive criticism submitted from the surrounding community, people's representatives or local authorities as well as explanations on environmental laws from ANPM. from the suggestions and criticisms submitted by the guests at the event, among others, as follows;

- **Mr. Mariano De Deus (Romante Company Owner);**

On that occasion the Romante Director, emphasized and reminded the director of the Eto Lda company, to be committed to Health and Safety Environment, develop the human resources for safety training and proper training for staff before this bussinnes running.

- **Mr. Januario Ximenes (Chefe Aldeia Baya Leste);**

Worried about the presence of this business in the fomento II area, because previously there was a gas station that now existed, namely from the Xalila fuel company, therefore Mr. Aldeia himself gave some input so that the Eto company could control it well so that there was no danger in the form of fire, a big explosion, which scared and traumatized the surrounding community.

- **Mrs. Faustina Piedade (Komunidade);**

Mrs. Faustina advised the Eto company to be careful in recruiting workers employed for this business, in other cases people are very afraid of the name Gas, and for the Eto company to be able to maintain and avoid accidents in the business in the future.

- **Mrs. Isabel de Fatima (Komunidade);**

Mrs. Francisca suggested that the company should preserve the environment, while for the equipment used, she emphasized that the company should use high-quality equipment in accordance with factory standards and required requirements. Mrs. Isabel is worried about the requirements regarding the training certificate requested by Eto Lda.

- **Mr. Jose Figueredo from ANPM/Downstream Staff;**

From that opportunity, representatives from government institutions/ANPM, namely; Mr. Jose, he explained in great detail the requirements or permits, especially in the downstream sector related to the Environmental Permit Proposal which was applied until a permit was issued for activities related to existing government institutions.

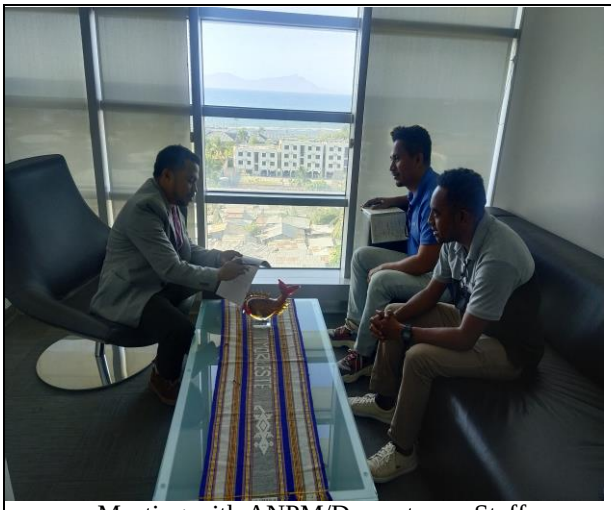
- **Mr. Plinho Lewis Gusmão (Chief of Marketing)**

At the last opportunity before the closing of the event, the Chief of Marketing of Eto Lda Company, namely; Mr. Plinho Lewis Gusmão, accepts all inputs with a big heart, and Mr. Plinho conveys that the Eto Lda company is highly committed with a clear vision and business strategy, building and developing human resources for the

community around the project area and the Fomento II community in general. Eto Lda has a great business spirit, improve the safety work and environment part, high integrity in doing business, Eto Lda also has work experience in the business of preparing and supplying fuel oil, Gota Water Comsumption, Eto Telco, and Gas for government institutions to public consumption in the future.

Meeting with ANPM/Downstream Staff

Meeting with SEA/ANLA Department



Meeting with ANPM/Downstream Staff

Meeting with DNSAS Laboratory Staff

Figure 30. Public Consultations by Forum with Local Community, Local Authority, ANPM & Others Authorities (*Source: Eto Lda and Hersege Consultant 2021*)

13. DIFFICULTIES ENCOUNTERED

The following information indicates the difficulties encountered by Eto Lda team and Consultant team during site survey:

a. Lack of the availability of data regarding weather condition
b. Weather condition was not favorable to conduct the survey. As a consequent the survey was delayed for quite a while.
c. The availability of laboratory test in domestic use is considerably minim. Difficulty on disseminating the information through public consultation due to the fact that there should be in advance invitation taken place and convincing the cultural and community leader to be able to participate the public consultation.

14. CONCLUSION AND RECCOMENDATION

a. Conclusion

Based on the information above we can concluded that the construction of the Gas station project is a new additional business venture proposed by Eto Lda to involve directly in the direct delivering the Gas to the consumers in Teritorial Timor. The location of the project is located in Suco Comoro. Analysis of the environmental impacts from the pre-construction phase, construction phase, operation phase, maintenance phase and decommissioning phase has suggested that there are potential impacts related to the Loss of Vegetation, air quality, contamination of the soil and groundwater body. Moreover, the important concern also related to the occupational health and safety such as exposure to the chemical and other hazardous material which should be properly managed and mitigate. The mitigation measures to the impacts have been proposed in the mitigation measures section**.**

b. Recommendation

There is several recommendations can be presented in relation with the project activities:

- The project owner to continue its construction and operation of Gas station compliance with all the legal framework of environmental policy and best practice of safeguard principle by implementing the proper mitigation measures according to the SEIS and EMP provided in this document
- The proponent continue to enhance the social corporate responsibility in reaching out the community in promoting the best practice of safeguard principle in order to reach a good balance between business and giving back to the community
- Authorities and project Proponent have to actively monitor the implementation of the EMP with the given proper indicator so that the propose EMP will be implemented
- The proponent has to read carefully the document so that all the propose EMP would be understood and implemented
- The proponent stated the seriousness in the resolving any environmental problem that may occur in relation to the project implementation.

15. NON-TECHNICAL SUMMARY

The aim of this Simplified Environmental Impact Statement (SEIS) is to examine the negative effects that this proponent undertaking is likely to have on both the physical ecological and socio economic environment.

Objectivo husi Declarasaun Impactu Ambiental Simplikada (DIAS) atu examina afeito negative ne'ebe proponente hala'o sei kona ba fisika ekologia no ambiente sociu ekonomiko.

The proposed project is an automotive fuel filling station, called Eto Lda which located at Fomento II, Suku Comoro, Post Administrative of Dom Aleixo, Dili and Timor-Leste.

Proposta projeitu mak hanesan fatin avastamentu kombustivel, bolu Eto Lda ne' ebé lokaliza iha Fomento II, Suku Comoro, posto administrative Dom Aleixo, Dili no Timor-Leste.

This environmental impacts assessment as a basis to prepare the report SEIS and EMP has been conducted by taking the reference from the legal framework of environmental safeguard policy, as well as the Timor Leste regulation of petroleum and mineral resources management.

Avaliasaun impaktu ambientál ida ne'e hanesan baze ida atu prepara relatóriu DIAS no PJA ne'ebe hala'o tiha ona husi referénsia husi rejime jurídiku kona-ba polítika ambientál salvaguarda, nune'e mós ba regulamentu Timor-Leste kona-ba jestaun rekursu petróleu no mineral.

Description of the existing environment including physical, ecological, socio-economic and cultural components are provided for the baseline environmental information.

Deskrisaun kona-ba ambiente hirak ne'ebé inklui fízika, komponente ecologika, sósiu-ekonómiku no kulturál sira fornese informasaun baze ambiental

Based on the preliminarily identification of feasibility study for the proposed location, there is no project alternative and the alternative locations are not the applicable alternatives to the project.

Bazeia ba identifikasaun preliminár estudu viabilidade ba fatin ne'ebé propoin, katak laiha alternativa projetu no fatin alternativu sira la alternativa ne'ebé bele aplika ba projetu

The description of climate change consist of historic weather, future projection under projected climate change, Implication for the Proposed Project and adaptation measures required to mitigate any potential adverse impacts

Deskrisaun kona-ba mudansa klimátika ne'ebé kompostu husi istóriku klimatika, projesaun futuru iha klima ne'ebé projeta muda, implikasaun ba Projetu ne'ebé Propoin no adaptasaun medida hirak ne'ebé presiza hodi halo mitigasaun ba impaktu ladiak potensiál ruma

Potential environmental impacts have been identified; proposed mitigation measures and monitoring responsibility during pre-construction, construction, operation, maintenance and decommissioning phase.

Identifika tiha ona potensiál ba impaktu ambientál; propoin medidas mitigasaun no monitorizasaun responsabilidade durante pré-construsaun, construsaun, Operasaun, manutensaun, ho dekomisaun prontamente prevee tiha ona

The Environmental Management Plan (EMP) involves risk management strategies that should be undertaken by the project proponent, project manager and the residents to mitigate environmental degeneration.

Planu Ambientál Jestaun (PJA) involve risku jestaun estratéjia ne'ebé sei hala'o husi proponente projetu, jerente projetu nian no ba komunidade hodi halo mitigasaun degenerasaun ambientál

Public consultation is conducted by project owner and supported by Hersege Consultant with the objective to obtain constructive opinion or comments from affected community including negative and positive comments. The method of public consultation is door-to-door or face-to-face and by forum as well.

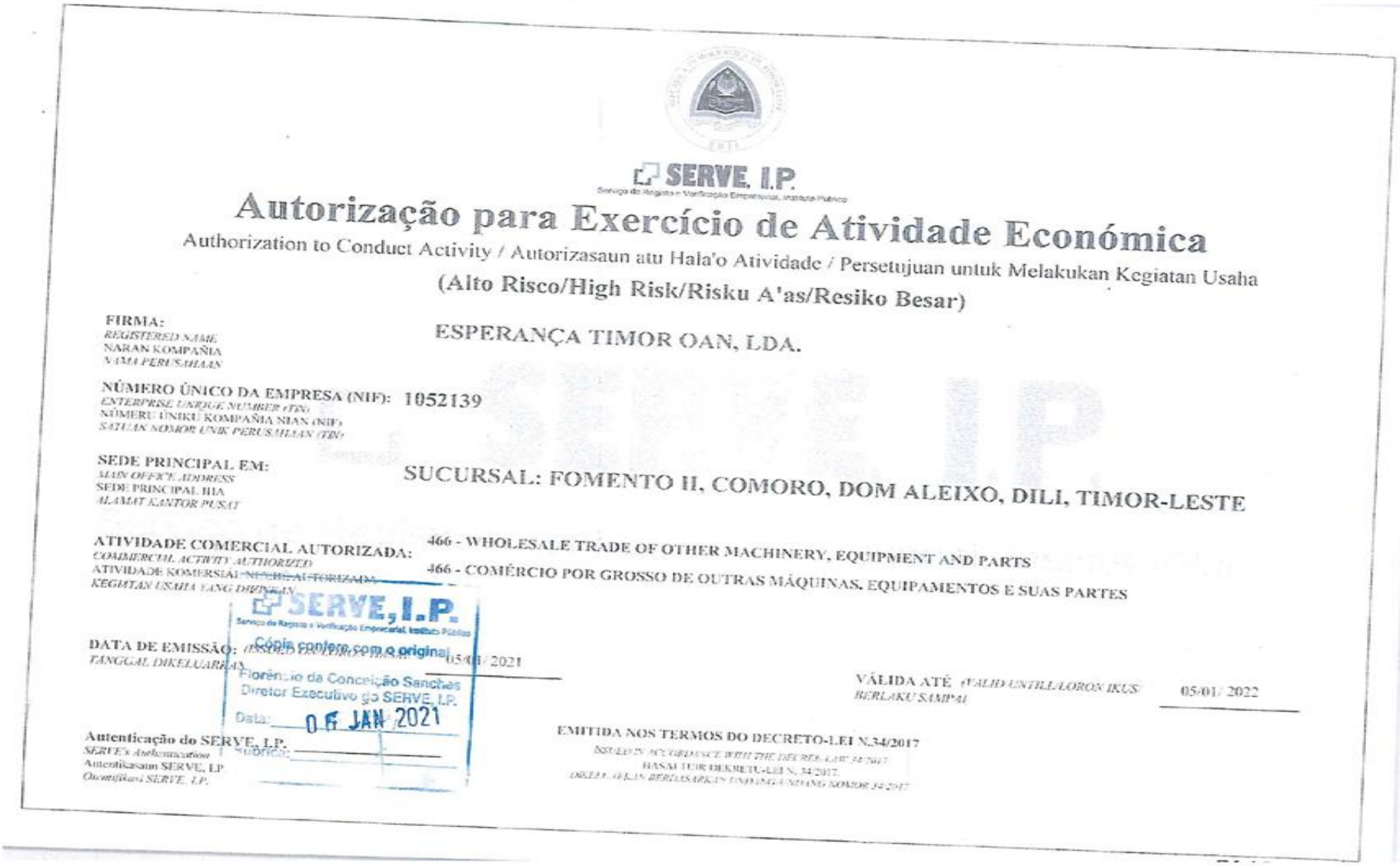
Konsulta pública ne'ebé hala'o hosi projetu nain no apoiu hosi Konsultór Hersege ho objetivu atu hetan opiniaun ne'ebé konstrutivu ka komentáriu husi komunidade afetadu sira

ne'ebé inklui komentáriu negativu no pozitivu. Metodu ba konsulta públika mak husi odamatan ba odamanatan ka oin ba oin nomos via forum.

The difficulties encountered by Eto Lda team and Consultant team during site survey: lack of availability of data, weather condition and the availability of laboratory test in domestic use is considerably minim

Difikuldade ne'ebé ekipa Eto Lda no Konsultór levantamentu durante survey: fatin ne'ebé propoin besik fatin santu, falta disponibilidade ba dadus, kondisaun tempu no disponibilidade teste laboratóriu utilizasaun doméstika mak konsidera minimu.

ANNEX I
COMPANY LEGAL DOCUMENT



SERVE, I.P.
Serviço de Registo e Verificação Empresarial, Instituto Público

Autorização para Exercício de Atividade Económica

Authorization to Conduct Activity / Autorizasaun atu Hala'o Atividade / Persetujuan untuk Melakukan Kegiatan Usaha

(Alto Risco/High Risk/Risku A'as/Resiko Besar)

FIRMA:
REGISTERED NAME
NARAN KOMPAÑIA
NAMA PERUSAHAAN

ESPERANÇA TIMOR OAN, LDA.

NÚMERO ÚNICO DA EMPRESA (NIF): 1052139
ENTERPRISE UNIQUE NUMBER (TIN)
NÚMERU UNIKU KOMPAÑIA NIAN (NIF)
SATUAN NOMOR UNIK PERUSAHAAN (TIN)

SEDE PRINCIPAL EM:
MAIN OFFICE ADDRESS
SEDE PRINCIPAL HIA
ALAMAT KANTOR PUSAT

SUCURSAL: FOMENTO II, COMORO, DOM ALEIXO, DILI, TIMOR-LESTE

ATIVIDADE COMERCIAL AUTORIZADA:
COMMERCIAL ACTIVITY AUTHORIZED
ATIVIDADE KOMERSIAL AUTORIZADA
KEGIATAN USAHA YANG DIIZINKAN

466 - WHOLESALE TRADE OF OTHER MACHINERY, EQUIPMENT AND PARTS
466 - COMÉRCIO POR GROSSO DE OUTRAS MÁQUINAS, EQUIPAMENTOS E SUAS PARTES

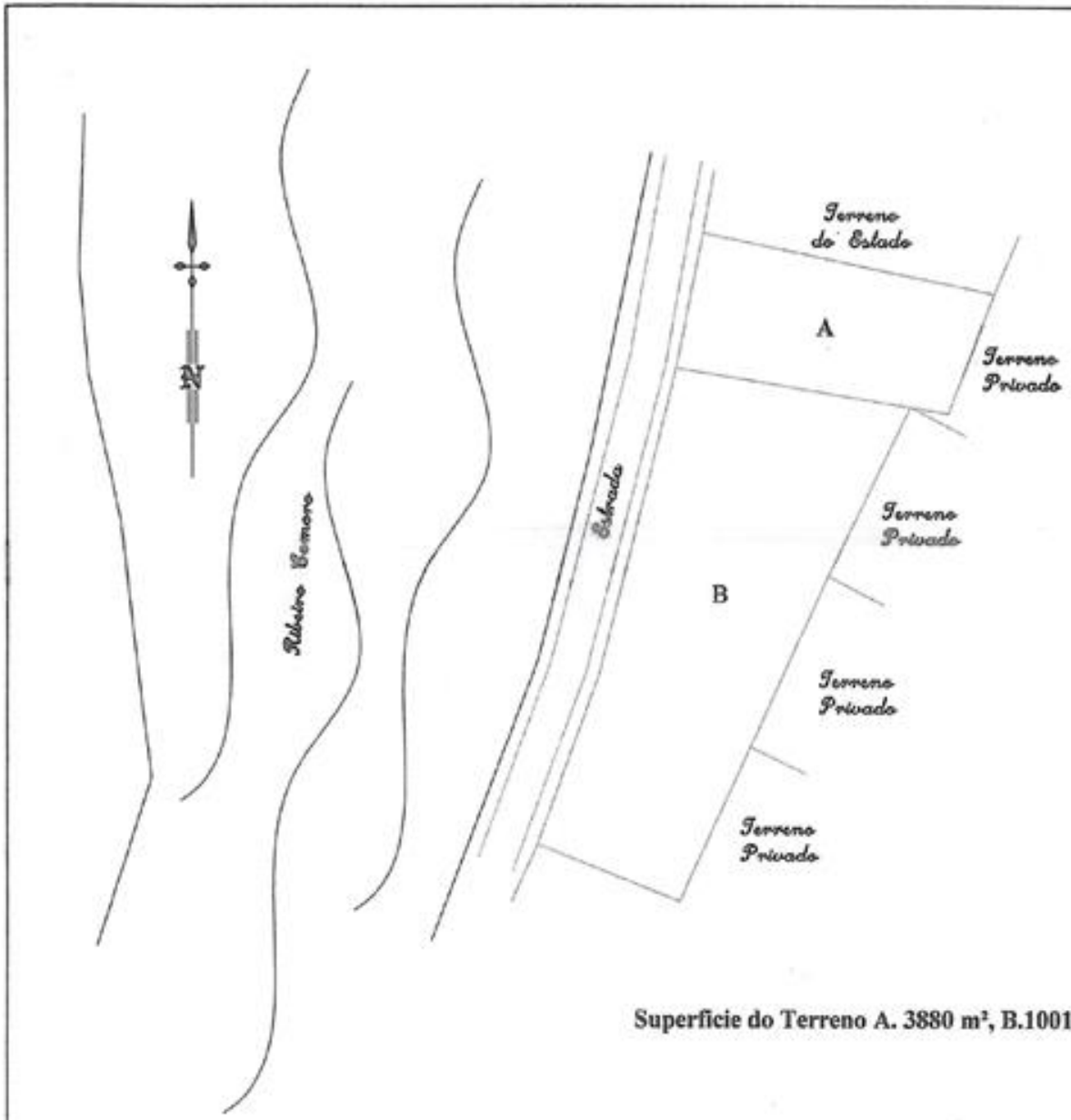
SERVE, I.P.
Serviço de Registo e Verificação Empresarial, Instituto Público
Cópia conforme com o original
Florêncio da Conceição Sanches
Diretor Executivo do SERVE, I.P.
Data: 06 JAN 2021

DATA DE EMISSÃO: 05/01/2021
TANGGAL DIKELUARKAN

VÁLIDA ATÉ *(VALID UNTIL/LOROS IKUS/BERLAKU SAMPAI)* 05/01/2022

Autenticação do SERVE, I.P.
SERVE's Authentication
Autentikasaun SERVE, I.P.
Otentikasi SERVE, I.P.

EMITIDA NOS TERMOS DO DECRETO-LEI N.34/2017
ISSUED IN ACCORDANCE WITH THE DECREE-LAW 34/2017
HASAI TUIR DEKRETU-LEI N. 34/2017.
DIKELUARKAN BERDASARKAN UNDANG-UNDANG NOMOR 34/2017



Superficie do Terreno A. 3880 m², B.10018 m²

Escala Gráfica 0 20 40 60 80 100 120 140 160 180 200
Todas as distâncias estão em metros

Escala Numérica 1 : 2000

TIMOR LESTE DILI

PLANTA DO TERRENO

Esta Planta foi preparada para o uso do Registo e Construção pelo Albano da Costa e Silva

Notas:
(1) As dimensões apresentadas são provisórias e estão sujeitas a survey final pela Direcção Nacional de Terras e Propriedades.
(2) Esta planta foi preparada para uso exclusivo da Direcção Nacional de Terras e Propriedades e não pode ser utilizado para outro qualquer fim.
(3) Referência Ortofotomapa 1 : 1000 ADF Series : Dili C5

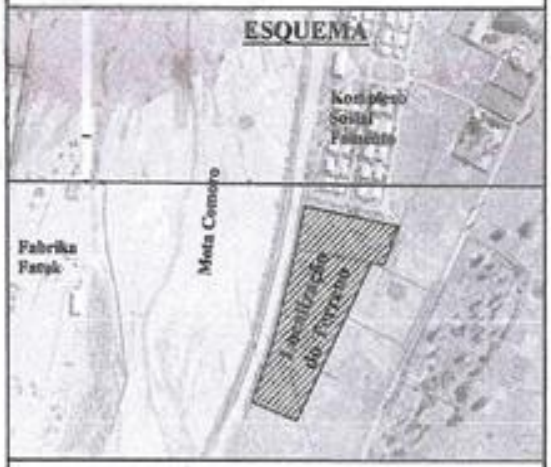
LOCALIZAÇÃO DO TERRENO

Aldeia	: Fomento II
Suco	: Comoro
Sub Distrito	: Dom Aleixo
Distrito	: Dili

REQUERENTE

Nome : **Albano da Costa e Silva**

ESQUEMA



LEGENDA

Terreno Edificio

Data Investigação : 24 de Fevereiro de 2009

Referência NIP 1 :10000
Mapa Base Cadastral 51 - 5.072.

ANNEX II
PUBLIC CONSULTATION

Hersege Lda, Mining and Environmental Consultant
Rua Taibessi, Alcrin, Lahane Oriental, Nain Feto, DILI, TIMOR LESTE
(+670) 77522363 / 76717048 / 76641553
hersegeconsultant10@gmail.com

PUBLIC CONSULTATION

No	Name	Address	Position	Comments	Phone Number	Signature
1	Leopoldo Lopes	Fatumeto II	Security and Local Community	- Orgulho hanesan Timor-oan no apoio total ba projetu refere. - Husu mós ba parte Governo atu apoio no aprova licença ba companhia ETO GAC. - Oportunidade diak ba ami joven iha bairo refere hodi bele hetan serbisu.	75367369	[signature]
2	Anacleto da Silva	Fatumeto II	Neighbour of community	- Loke campo de trabalho - Cria investimento iha sector nee no laran. - Apoio total ba projetu refere		[signature]
3	Hipólito Ximenes	Fatumeto II	Opinion Leader of Local Community	- Oportunidade diak ba ami nebe presiza serbisu. - Orgulho hanesan Timor oan tamba investor local deit produs no investe. - Husu Governo atu apoio companhia ETO.		[signature]

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4	Teles		Operator CP	- Bele completa necesidade basico ba ema Cotan - Companhia tenki sei justo ba prosesu meresu to'o - Loke campo do trabalho ba joven sira.	7301 8806	[signature]
5	Januário A. Oliveira		Relação Externa Comércio e Gas	- Sente no bele hatene kapat inventi mentu [illegible] bele tulun ba ema sira nebe presiza ou utiliza Gas ba necesidade ema [illegible] no Comercio - Polin [illegible] iha futuru hodi kompete ho ema ho companhia seluk.	7700800	[signature]

Date: ...., .../........./2020

Approved By			
No	**Name**	**Position**	**Signature**
1	Alberto Soares Anicleto	G. Downstream	[signature]
Surveyor			
1	Gilberto Alves	Geology & HSE	[signature]
2	Hermenegildo Leo. L.G.	Mining & HSE	[signature]
3	Sergio O. Pinto	Mining, OK & HSE	[signature]
4			
5			

MINUTAS DE ENCONTRU

NARAN	PERGUNTA/SUJESTAUN	RESPOSTA/SOLUSAUN
1. Mariano da Deus/[illegible]	- Ita nia knaar diak tanba hetan rikusu mak halo servisu	- Kompania atu loke fatin ba ema bazeia ba requizitos husi ANPM
2. Januari Ximenes Chefe aldeia Amilete	- Perigo ba komunidade no kompania - Sala tan iha [illegible]	- Tratamento ba servisu ba ema - Estranjeiro nia halo
3. Faustino Pinto	- Servisu ba loron ne'e tenki kuidadu no atensaun - Trauma ho gas	[illegible] ita nia bele [illegible] atu halo ekonomia ba povo
4. Izabel da Fatima	- Lisensa sertifikadu nia halo ona?	ANPM: - Safety / risku
5. Luis Cardoso/Chefe aldeia Fomento I	- Atu investe laiha kompania tenki esplika nia risku	- Sertifikadu / Transparansia - Regula tuir lei
6. Elvis Mendonça Pereira Vice Juventude	- Atu rekruta [illegible] iha area local - Tenki iha kordenasaun ho Autoridade local.	- Ita ba merkadu ba investimentu. - Medida mitigasaun
7. Julio Belo	- Mau maksimal hatene ona fatin, ho planeamentu.	

28				
29				
30				
31				
32				
33				
34				

Dili, 06 de Agostu de 2021

COMPANHIA ETO LDA,

Plinio Lewis Gusmão

HERSEGE LDA,

HERCULANO IVO LOPES GRANADEIRO

LISTA PREZENSA

No	NARAN	POZISAUN SERVISU	HELA FATIN & NO CONTACTU	ASINATURA
1	Luis Camões	Xefe Aldeia F1	Fomento 2 7727[illegible]	[signature]
2	Esterlita Pereira	Delegada	Fomento 1 73076096	[signature]
3	Marcos da. costa F Silla Brandão	Delegado F2	Fomento – 4 77551065	[signature]
4	Helder Antonio Exposto	Xefi A. São miguel	Aimutin / 77293461	[signature]
5	Marcelino Cordoso	Comunidade	Fomento – 4	[signature]
6	Manuel Dorfel	Komunidade	Fomento – 4	[signature]
7	Paulino Duarte	Komunidade	Fomento – II	[signature]
8	Joelito Filipe Martins.	Komunidade	Fomento – II	[signature]
9	Eduardo Amaral	vice juventude	Fomento II 78156825	[signature]
10	MANUEL Lopes	—"—	—"— —"— 78062415	[signature]
11	Julio Belo	Komunidade	Fomento II 76565857	[signature]
12	Celestino M.N. de Jesus	Delegado	Fomento III 75933053	[signature]
13	Nelson.S. Ximenes	Delegado	Fomento I	[signature]
14	Angelina Soares	Delegada	—"— II	[signature]
15	Carmeliana Amaral	Comunidade	Fomento II	[signature]
16	Julia Rosalia F Martins	—"—	—"—	[signature]
17	Deonisia Carvalho	Komunidade	—"— —"—	[signature]
18	Odete Soares	Delegada	Aimutin	[signature]
19	Bárbara F. Alberto pereira	Delegada	4 de setembro	[signature]
20	João A.M. Calau	chefe Aldeia	4 do setembro.	[signature]
21	Anabela de S. A- Cucpi	Delegada	Ramelau della	[signature]
22	TIAGO Sarmento	DELEGADO	77620348/ Golgota	[signature]
23	Natercia dos santos doutel	Komunidade	Fomento II	[signature]
24	Maria Sarmento Soares	komunidade	Fomento II 74340105	[signature]
25	Natalina de Jesus C. Lonos	komunidade	Fomento II 76852360	[signature]
26	Rosalina Silva araujo	Komunidade	Fomento II	[signature]
27	Isabel simião	Komunidade	Fomento II	[signature]

eto

LISTA PREZENSA

No	NARAN	POZISAUN SERVISU	HELA FATIN & NO CONTACTU	ASINATURA
1	Imaculado da C.P. Ferreira	Chefe aldeia	Fomento II 77108759	
2	Jose Figueredo	ANPM	MCF	
3	PLINIO LEWIS GUSMÃO	ETO COO	77233692	
4	Julio Amaral	Eto manis	F.	
5	Mitho	Eto manis		
6	Januario Filipe	Estrutu Ald		
7	Jose Ximenes.			
8	Ricardina da Costa A.	Comunidade		
9	Joaquim marais Soares	Comunidade		
10	Filomena Da Silva Sarmento	Delegada	Fomento III 77456676	
11	Valeriano Domingos Luis	Komunidade	Fomento II 77474034	
12	Isabel ATAIDE OLIVEIRA	Komunidade	Fomento II 76389083	
13	Filomena Soares	Komunidade	Fomento II 76167551	
14	Julia Pires Soares	Komunidade	Fomento II 75907957	
15	Ilda de Jesus	Komunidade	Fomento II —	
16	Francisco da Silva Dotol	Komunidade	Fomento II 76726701	
17	ELUIS M. PEREIRA	VICE. JUVENTUDE	— " — 75093680	
18	Leandro B. de araujo	Komunidade	— " — II 77283426	
19	Mariano DE DEUS	Doutor companya	— " —	
20	FAUSTINA DA Pedadi	KOMONIDADE	FOMENTO II 76371955	
21	Pedro Soares da Conceição	Komunidade F2	Fomento II	
22	Januario Ximenes	Chefe Aldeia	Bairo Lefo	
23	Victor Costa	ANPM	77429904	
24	Januario Alves	3rd Gas	Fomento I	
25	Florindo Barreto	Comunidade	Fomento II	
26	Agripina E. Salsinha	Comunidade	Fomento II	
27	Aloycios Cojo Noronha.			

28	Jakarias do Santos	komunidade	Fomento II	
29	Anselmo Amaral Da Cruz	komunidade	Fomento II	
30	Luciano Soares	komunidade	Fomento II	
31	Antoni Tiago Ramos. P	komunidade	Fomento II	
32	Leanito da conceicão	komunidade	Fomento II	
33	David da ~~Cruz~~ Martins	komunidade	Fomento II	
34	CUSTODIO C.B DOS SANTOS SERRO	komunidade	Fomento II 74048692	

Dili, 06 de Agostu de 2021

COMPANHIA ETO LDA,

HERSEGE LDA,

HERCULANO IVO LOPES GRANADEIRO

ANNEX II
BASELINE INFORMATION

Hersege Lda, Mining and Environmental Consultant
Rua Taibessi, Alcrin, Lahane Oriental, Nain Feto, DILI, TIMOR LESTE
(+670) 77522363 / 76717048 / 76641553
hersegeconsultant10@gmail.com

ENVIRONMENTAL ASSESSMENT CHECKLIST

1. Project Description

Project Tittle	ETO GAS LOA.
Proponent	Mr. NILTON TELMO GUSMÃO DOS SANTOS
Address	Rua Taibessi
Person in Charge	ELEUTO SOARES MUNIZ
Phone Number	77320496

2. Project Information

Project Location	FOMENTO II, DOMPLEIXO, DILI
Coordinate	8°34'51", 125°32'31"
Area of Proposed Land	PRIVATEO LAND
Brief Description	
Source of Water	WELL WATER
Who owns the Proposed Land	Mr. NILTON GUSMÃO DOS SANTOS
Present Land Use	GAS STATION
Are there any squatter settlement in the proposed land	NEIGHBOURS
Are there any trees in the proposed land	YES
Boundary of the project Land	North: ROMATE COMPANY
	South: CHANGLE COMPANY.
	East Mr. AKOI
	West: Comoro River, FOX Company

3. Screening

Is proposed project located in an ecological sensitive area?	Yes	✓	No	

4. Environmental Profile

Describe the terrain of the project Area	Flat or Level (Slope < 3%) ✓	Level to the moderately Steep (Slope 3% - 30 %)	Moderately steep to mountainous (Slope <30%)

Are there any sign of potential natural disaster within 500 meters?	Yes	No ✓	If Yes Please Describe, (Where & Nature) – NATURE OF INUNDATION

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Is there any surface water body within 1,000 meters of the proposed site?	Yes ☑	No ☐

If Yes, Describe each water body

Name (include type i.e river, Canal/Stream)	Dimension	Status and Uses (is it polluted? Is it Domestic/wastewater discharge to it? What is its uses agriculture, domestic, industry, washing, fishing?
Comoro River	DEPTH 3-5m LENGTH 80-100m	- INDUSTRY - DOMESTIC - AGRICULTURE - OTHER
MANLEU STREAM	DEPTH 1-1.5 LENGTH 5-8 meter	

Is there any ground water well on the proposed site or within 500 m?	Yes ☑	No ☐

Yes, describe each well

Type (Dug well, tube well or hand pump)	Location (Coordinate, Village)	Depth and yield	Uses (Drinking, Agriculture, domestic, industrial, washing, livestock)
TUBE WELL	INSIDE THE RIVER	DEPTH 50 meter	- DRINKING, - WORKING - DOMESTIC - INDUSTRIAL

Based on the interview on the surrounding community, is any form of wildlife found on , or around the proposed site of the project	Yes ☐	No ☑	If Yes, Please describe

Are there any existing trees or vegetation on proposed site of the project	Yes ☑	No ☐	If yes, how many and types of trees or vegetation?

Are there any reserved forests or protected area within 1,000 m of the proposed project?	Yes ☑	No ☐	If yes, please describe?

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What is the present land use of the vicinity within 500 meters of the proposed site?

	Residential	Commercial (shop, Fuel Station)	Open Land (Park, Farmland, Unutilized plot, barren land	Industrial	Government Institution
Description	Community House Company camp.	Shop Xalila fuel Bezam fuel		Romahye E&S Civil Engineering Chinese company EOS company RMC company	

For any agriculture farmland on the proposed site or within radius of 500 meter around it?

Main Corps	Source of Irrigation
-	-

Please describe all sensitive receptors within 1,000 meter within proposed site of the project

Type (School, College, Hospital, Clinic	Name	Size (Number of Student and Teacher, Number of Beds, Nurse, Doctor)	Location (Coordinate and Village)	Distance from site
College	IOB University			200 meter
SD Fomento II	SD Fomento II			800 meters
Ai-Ti High School	Ai-Ti High School			300 meter
Canossa	Canossa High School			800 meter

Roughly how many houses within 500 meters of the proposed site of the project?	± 300-500 Houses

What is the main source of income of the surrounding community	- 85% Agriculture - 10% Government worker - 5% Entrepreneur.

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Is there any cultural importance within 1000 meter of the proposed site of the project?	Yes	No
	☑	☐

If Yes, Please Describe

Type (graveyard, Lulic House or Area, Archeological, Church)	Name	Description
CAPEL	CAPELA FOMENTO II	
CHURCH	IGREJA AIMUTIN	
CHURCH	IGREJA COMORO	

What are the main pollution existing within a radius of 500 meters of the proposed site			
Name of the source	Type of Pollution (Noise, Air, Water)	Location (Coordinate and Village)	Distance from the site
SANDS EXTRACTION	pollution, NOISE		50 METER
QUARRY / MINING	AIR, WATER		800 METER
INDUSTRIAL	pollution, AIR		500 METER.

Local Geology Information within or around proposed site	
Soil Information within or around proposed site	

Number of Population within the Village (Sucu)	Total	
	Male	
	Female	
Number of Employment		
Number of Unemployment		
Birth Rate		
Mortality Rate		
Common Disease		

Hersege Lda, Mining and Environmental Consultant
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hersegeconsultant10@gmail.com

INITIAL MEASUREMENT

Coordinate	8°34'5", 125°32'3"	Time:	09:15 WIT.
Date	10-01-2021	Temperature:	32.8°C
Humidity	88% RH	Wind Speed :	0.9 - 3.8 M/S
PM 2.5	5 ug/m3	Wind Direction:	NORTH - SOUTH
PM 10	12 ug/m3	CO_2 :	672 ppm
NOx	0	CO :	0
O_3	0	SOx :	0
pH Soil	7.0	Temperature Soil:	26°C
Soil Moisture	DRY	Water Temperature:	27°C
Water TDS	28 ppm	pH Water:	7.0
Noise Measurement			

No	dBA	No	dBA	No	dBA	No	dBA
1	38.2	31	46.2	61	43.4	91	39.6
2	45.6	32	38.5	62	39.2	92	47.2
3	57.2	33	39.8	63	45.7	93	52.3
4	58.7	34	40.2	64	50.1	94	56.7
5	41.3	35	50.9	65	38.9	95	45.1
6	38.5	36	52.7	66	41.5	96	46.4
7	38.9	37	60.0	67	42.8	97	39.9
8	40.5	38	49.6	68	47.3	98	40.5
9	50.1	39	45.7	69	40.6	99	41.7
10	53.8	40	43.3	70	50.1	100	38.6
11	42.3	41	38.9	71	50.7	101	50.5
12	39.2	42	42.1	72	53.5	102	52.1
13	40.7	43	44.8	73	57.6	103	53.8
14	50.1	44	45.1	74	60.0	104	60.0
15	50.3	45	50.3	75	59.2	105	57.6
16	47.8	46	52.7	76	40.5	106	55.3
17	43.4	47	38.6	77	44.8	107	56.1
18	38.8	48	39.2	78	44.6	108	42.7
19	39.2	49	45.6	79	38.2	109	48.2
20	50.3	50	41.7	80	44.3	110	51.8
21	57.1	51	43.8	81	56.4	111	54.5
22	41.7	52	44.5	82	50.9	112	46.7
23	60.0	53	52.3	83	42.3	113	42.1
24	48.2	54	54.5	84	45.1	114	38.7
25	40.7	55	53.1	85	39.6	115	38.2
26	45.5	56	50.8	86	41.7	116	40.9
27	52.1	57	48.2	87	43.2	117	39.1
28	55.7	58	45.7	88	58.4	118	42.5
29	49.3	59	45.2	89	55.1	119	50.1
30	43.7	60	38.9	90	60.0	120	51.7

Hersege Lda, Mining and Environmental Consultant
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hersegeconsultant10@gmail.com

INITIAL MEASUREMENT

Coordinate	8°34'6" / 125°32'8"	Time	11 - 45 07.
Date	10-01-2021	Temperature	84°C
Humidity	98% RH	Wind Speed	0.9 - 3 m/s
PM 2.5	7 µg/m³	Wind Direction	NORTH - South.
PM 10	0.9 µg/m³	CO_2	779 ppm
NOx	0	CO	0
O_3	0	SOx	0
pH Soil	7.	Temperature Soil	29°C
Soil Moisture	Dry	Water Temperature	27°C
Water TDS	2.3 ppm	pH Water	7.0.
Noise Measurement			

No	dBA	No	dBA	No	dBA	No	dBA
1	39.2	31	58.2	61	50.7	91	48.9
2	43.4	32	58.9	62	54.2	92	45.3
3	47.5	33	60.0	63	38.9	93	44.9
4	39.8	34	51.6	64	40.5	94	39.7
5	38.2	35	50.9	65	42.3	95	38.5
6	44.3	36	47.5	66	46.1	96	50.1
7	46.7	37	42.4	67	47.0	97	53.6
8	50,1	38	38.1	68	50.2	98	55.2
9	53.6	39	38.5	69	52.8	99	40.8
10	60.0	40	39.0	70	53.5	100	52.5
11	52.9	41	39.8	71	49.3	101	60.0
12	55.1	42	43.6	72	38.4	102	57.6
13	41.5	43	43.9	73	39.1	103	53.2
14	42.8	44	50.1	74	41.6	104	54.4
15	46.3	45	51.7	75	50.3	105	39.9
16	46.7	46	54.3	76	52.5	106	42.3
17	49.1	47	40.8	77	60.0	107	46.7
18	40.9	48	39.5	78	49.7	108	51.3
19	39.6	49	38.3	79	52.6	109	55.9
20	38.8	50	41.6	80	47.5	110	49.1
21	44.2	51	43.2	81	46.7	111	45.5
22	45.5	52	45.1	82	43.1	112	51.8
23	50.3	53	46.7	83	44.3	113	50.5
24	53.7	54	50.3	84	50.2	114	55.2
25	53.1	55	50.8	85	55.7	115	49.4
26	49.6	56	53.6	86	56.9	116	39.7
27	42.4	57	53.0	87	53.4	117	42.5
28	50.2	58	49.9	88	52.8	118	47.0
29	52.8	59	47.2	89	49.5	119	50.3
30	55.3	60	48.0	90	48.0	120	52,7

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Dili, 30 Juñu 2021 **ANPM/DS/S/21/373**

Hato'o ba: Sr. Alberto Soares Aniceto
Director Dowsntream Kompañia Esperança Timor Oan Lda
China Rate, Lahane Oriental, Dili

Kopia ba: Sr. Florentino Mateus Soares Ferreira, Prezidente ANPM

Assuntu: Opiniaun Kategorizasaun Projetu Ba Kompañia Esperança Timor Oan Lda. (Sucursal)

Ho Respeitu,

Liu husi karta ida ne'e hakarak informa ba Na'in ba Kompañia Esperança Timor Oan (ETO) Lda. (Sucursal) nia projetu konstrusaun ba fasilidade amazenamentu LPG nebe'e lokaliza iha Fomento II, Comoro, Dom Aleixo, Dili katak Autoridade Nacional do Petroléo e Minerais (ANPM) finaliza ona sira nia avaliasaun daruak ba Projetu Dokumento (PD) nebe mak submete iha loron 8 Juñu 2021. Rezultadu jeral hatudu katak Kompañia Esperança Timor Oan Lda. (Sucursal) prenxe ona rekerimentus minimu ne'ebe rekere ba submisaun Projetu Dokumentu (PD) ne'ebe mak hakerek iha *Diploma Ministerial No. 46/2017 kona-ba Regulamentu Ba Rekerimentu Detailadu Ba Klasifikasaun, Estudu Inisial No Termus De Referênsia, Deklarasaun Impaktu Ambientál No Planu Jestaun Ambientál Ba Avaliasaun Ambientál.* Detailhu rezultadu avaliasaun aneksu iha karta ne'e ba Ita-Bo'ot nia informasaun.

Ekipa avaliasaun ba Projetu Dokumentu (PD) desidi katak projetu konstrusaun ba Kompañia Esperança Timor Oan Lda. (sucursal) nia projetu monu ba **kategoria B** tuir Decreto Lei No. 5/2011 kona ba Lisensiamento Ambientál.

ANPM mos sei rekere Kompañia **Esperança Timor Oan Lda. (Sucursal)** atu submete dokumetu sira nebe tuir mai ne :

1. Deklarasaun Impaktu Ambientál Simplifikada (DIAS)
2. Planu Jestaun Ambientál (PJA)
3. Planu Saude no Seguranca
4. Planu Responde ba Emergencia no