

4. Tasi Mane Project

TASI MANE PROJECT CLUSTERS

Planned developments include:

- Suai Supply Base;
- Betano Refinery and Petrochemical Complex;
- Timor-Leste LNG in Beaco.

Supporting Infrastructures:

- New towns to accommodate the work force and resettlement of local residents;
- The upgrade of two existing airstrips, in Suai and Viqueque;
- A highway connecting project locations along the south coast (Suai-Betano-Beaço).



Table 4-1: Tasi Mane Project Location



HIGHLIGHTS OF 2019

- Conclusion of the fourth phase of the land & properties compensation process for the Suai Supply Base project;
- Completion of the Optimization Design for Refinery & Petrochemical Complex project developed by TTCL Public Company Limited (TTCL);
- Completion of the land title clearance for the Refinery and Petrochemical Complex project, with the compensation payment process for the community affected concluded this year;
- Under the scope of the TLNG human resources development program, 31 trainees finalized their fundamentals training at CNEFP Tibar. Upon the completion of this training, it is anticipated that the best and top 25 out of 31 trainees will be sent to PT Badak LNG facility in Bontang, Indonesia, for 18-months of intensive OJT.

4.1 Tasi Mane Project Overview

Envisioned in the Government's Strategic Development Plan 2011-2030, which identifies the petroleum sector as a basis for our nation's sustainable development, the Tasi Mane Project aims at establishing a national petroleum industry and associated supporting infrastructures, skills development and service capability, becoming a major contributor to the economy of Timor-Leste. Tasi Mane is a multi-phase integrated project comprising of three industrial clusters located along a 155km stretch of the southern coast of Timor-Leste, from Suai in the district of Covalima to the west, to Beaçó in the district of Viqueque to the east. The project encompasses three industrial clusters: Suai Supply Base cluster, Betano Refinery and Petrochemical Industry cluster, and Timor-Leste LNG cluster in Beaçó, and planned additional facilities for each site.

The Tasi Mane Project is a major strategic initiative of the Government of Timor-Leste spanning a wide range of economic impacts at national and regional level and at the same time providing direct economic benefits from Timor-Leste's natural resources. The project will increase national gross domestic product (GDP) and export earnings, while creating employment opportunities during construction and operation, as well as providing a catalyst for further development in the south coast region. It is projected that up to 10000 direct jobs will be created from Tasi Mane projects, and more than 50000 indirect jobs can be generated with the transformation of petroleum sector development from extractive to industrialization.

In addition, the Tasi Mane Project will generate indirect benefits, influencing broader economic performance as a result of spillover effect to other industry sectors. Spending by project participants, employees, Govern-

ment and private beneficiaries will lead to "multiplier effects" as the economic activities associated with the project impact on economy generally. Investment in productive physical assets (such as power generation facilities, roads and airports) and in social assets (for example improved education and health services) will also benefit the economy by enhancing the productivity of economic factors. One of the significant impacts of the project will be the opportunities it will create for local businesses. These opportunities include outsourcing of services such as catering, engineering, security, fuel supply, managerial, professional and technical services. TIMOR GAP was mandated by the Government to manage and administer the Tasi Mane project. The company will support the creation of industries and the development of the necessary human resources to operate efficiently the petroleum sector.

It is expected that the existence of these basic infrastructures will stimulate and provide incentive for commercial investment in the other Tasi Mane projects. This will transform the current nature of the petroleum sector in Timor-Leste which is simply extractive, and allow it to evolve to a more diversified and industrialized petroleum sector, including the development of a refinery and associated petrochemical complex in Betano and of the Timor-Leste LNG in Beaçó.

The Government of Timor-Leste, as the proponent of the Tasi Mane integrated project, will finance some of these projects, such as the basic infrastructures, e.g. Suai supply base and airport. The rest of the Tasi Mane projects will be invested by way of project financing & other forms of private investment.

4.2 Suai Supply Base

4.2.1 Overview of Suai Supply Base

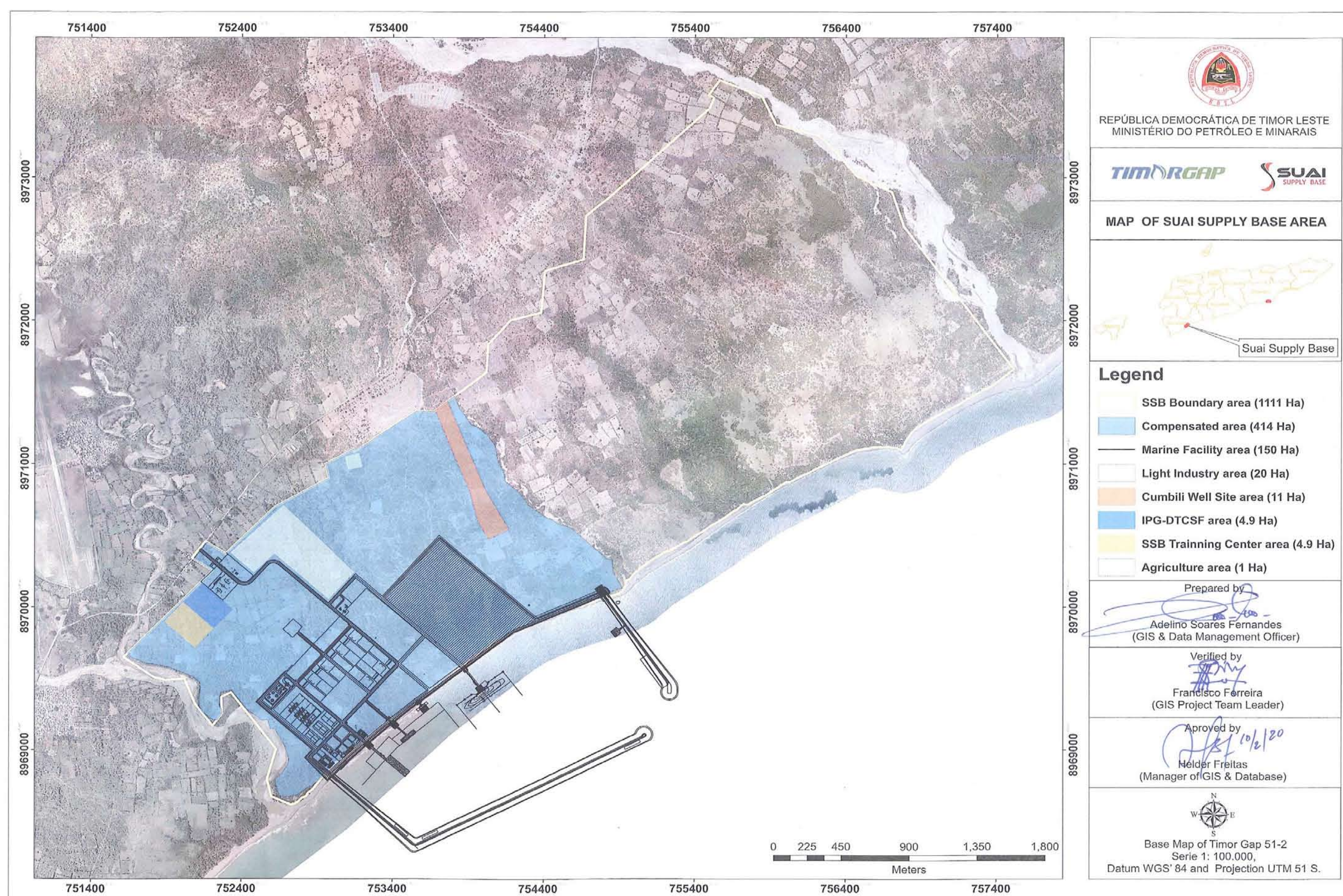


Figure 4-2: Map of Suai Supply Base area

The Suai Supply Base (SSB) facility constitutes an important role within Timor-Leste's Government Strategic Development Plan (SDP) and is recognized as a notable project and a future landmark in the south coast. The settlement of Suai Municipality is located approximately 135 km south-west of Dili, 22 km from the Indonesian border and 5 km inland from the Timor Sea (southern coastline). Suai will become a center for the petroleum industry in Timor-Leste providing services, logistics, fabrication facilities and human resources for both offshore and onshore oil and gas activities. The project includes the building of a sea port, a housing complex in Camanasa, a rehabilitated and expanded Suai airport, a heavy metals workshop and ship building and repair facilities.

The SSB will provide an entry point for the materials and equipment that will be required to build and maintain petroleum industry infrastructures and plants, serving also as an entry point to accommodate the supply chain management of other two planned industrial clusters activities in Betano's refinery and petrochemical complex and Timor-Leste LNG complex in Beaço.

The Suai cluster will be a platform in driving and stimulating job creation opportunities, generating hundreds of

new jobs, support a national economic development, and potentially upgrade skills of local workforce through the establishment of a training center in the project area, providing training in fields such as steel fabrication, marine and civil construction, mechanical and electrical engineering, etc. Furthermore, other non-oil industries, such as commercial fisheries, are expected to be incorporated to the SSB marine shore facilities, especially in the east area of the breakwater.

The SSB project was subject to extensive studies and assessments, such as the Front-End Engineering and Design (FEED) completed in 2010, and the Environment Impact Assessment, with the Environmental License granted in 2013. A second extension of the Environmental License was requested by our technical team and is still in process and under the Secretariate of Environmental office portfolio

The construction works for the SSB project suffered a major delay when in 2015, under the preliminary review procedure, the Audit Chamber issued a ruling pursuant to which it was decided not to approve the Design-Build Contract for the SSB, a decision later revoked on July 2017 by the Court of Appeal in response to the appeal

lodged by the Government, and thus granting prior approval to the SSB contract. As the entity mandated by the Government of Timor-Leste to manage and administrate the Tasi Mane Project and therefore the SSB construction,

we remain confident that the project will be handled successfully, and further guidance is awaited from the Government in regards to the project next steps.

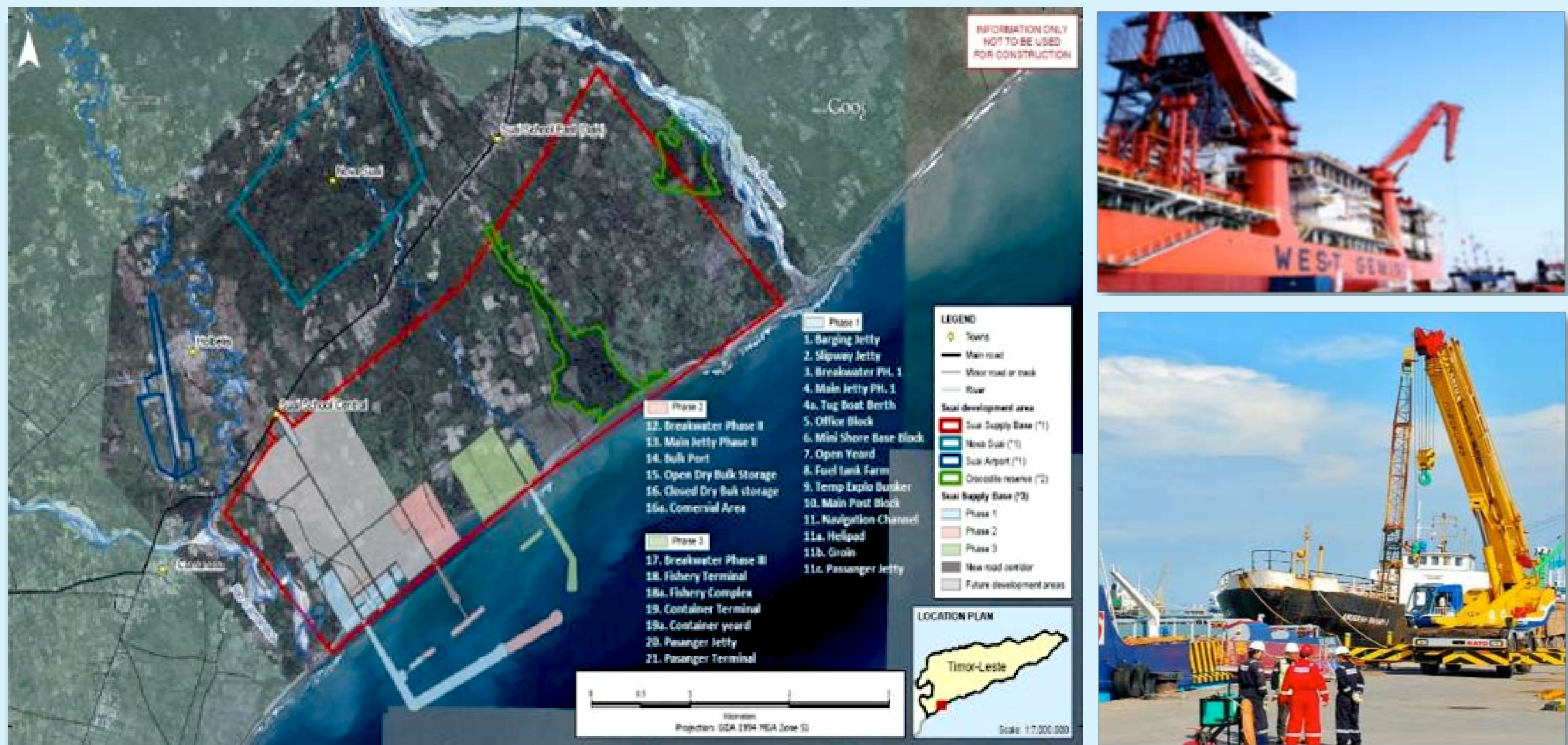


Figure 4-3: SSB layout (left) examples of services to be provided by the SSB (right)

The SSB is expected to be a standalone and fully self-supporting integrated supply base facility, providing multiply services and support the development of Oil and Gas Industry in the South Timor Sea for the next 50 years. The project comprises:

- **Onshore facilities** – such as operations building, covered warehouses, mini shore bases, fuel tank farm, water storage tanks, waste management system, open areas, recreational and community facilities, and others;
- **Offshore facilities** - three jetty structures consisting of, a main jetty, barge jetty and LCT Ramp that supports with a tug boat berth, passenger boat berth and a shore connected rock breakwater in order to provide shelter from the waves, creating a safe, calm and protected harbor for the facility.

4.2.2 Land Title Clearance and Community Liaison

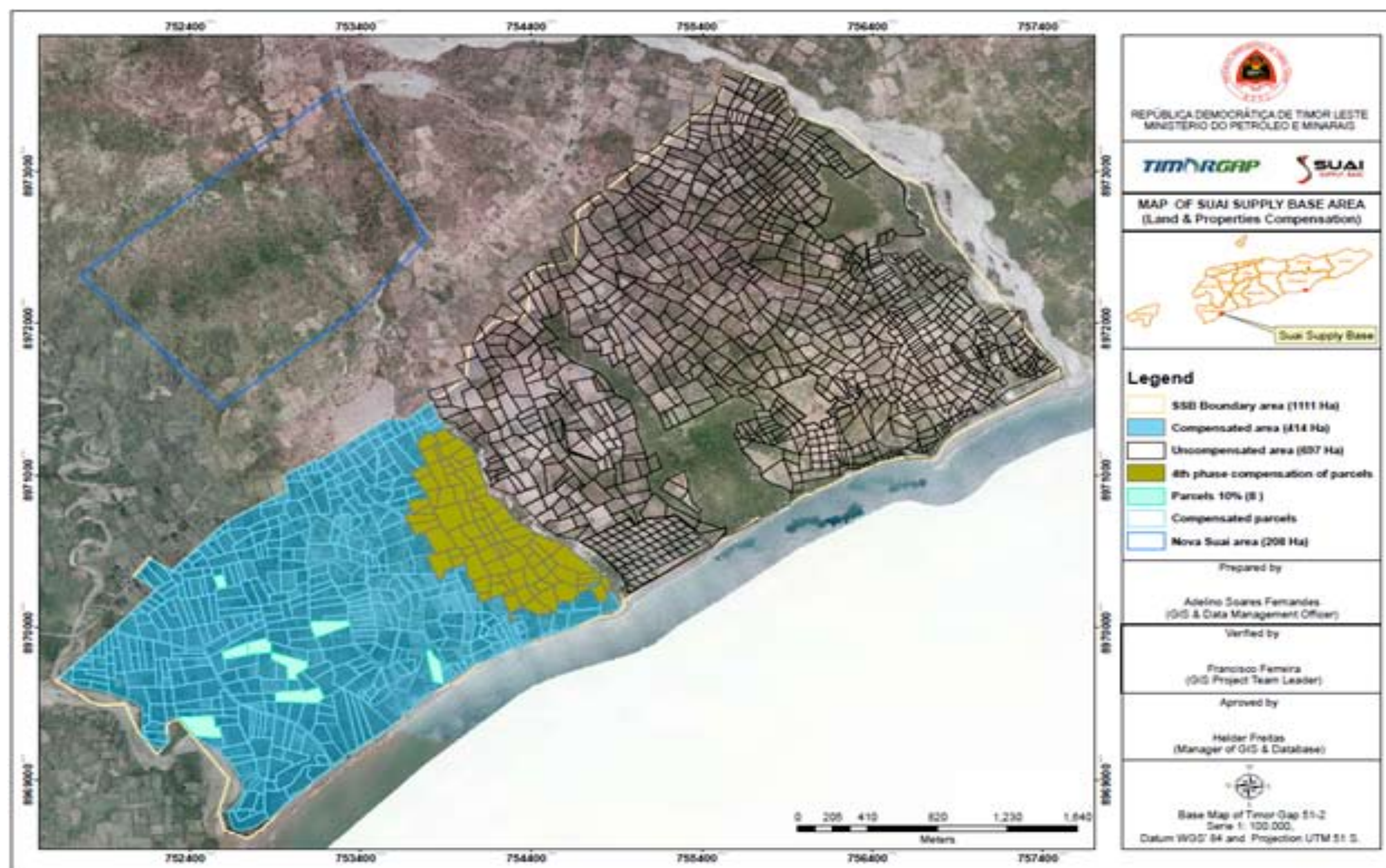


Figure 4-4: Map of the land & title compensation for the SSB

While awaiting for the Government's decision on project's next steps, the SSB team continues to pave the way for the project implementation by proceeding with the land title clearance process in close coordination with Inter-Ministerial Working Group (Ekipa Konjunta Interministerial Alargado), participating in several meetings, field trips, public consultations and liaising with the local authorities, relevant stakeholders and affected community.

The fourth phase compensation process of the beneficiaries who decided to change from 10% share option of their land to sell ("S3" Option) was initiated and concluded in 2019, the compensation payment comprises of 84 land & properties contracts and 3 livestock contracts signed with the beneficiaries from the affected community of the Village of Camanasa, on the second quarter of 2019. Under the terms of the agreements signed, the local community will release a total area of 65 hectares, corresponding to 84 parcels of land, excluding houses and 3 cowsheds. The compensation payment for the aforementioned contracts was executed from October until December 2019. As of 31 December of 2019, of the 1,113 hectares required for the construction of the SSB project and industrial park, a total of 414 hectares of land were already compensated.

In regards to the community who opted to receive a 10% share of the SSB future proceeds (calculated based on the size of the land plot of each landowner), TIMOR GAP

has been implementing a community support program operations phases, in which the project is not expected to generate profit. This support is provided in the form of initiatives developed mainly within the agriculture and fisheries sectors. In the fishery sector, TIMOR GAP intends to support the local development of this activity through the construction and set up of a fish farming pond, anticipated to be jointly used and managed by the affected community. For this purpose, a survey was conducted on the Wee/Bee-Mout area, with the finding indicating that the area is suitable to accommodate the proposed project. The fish farm pond is expected to occupy an approximately area of 500 square meters.

In regards to the agriculture sector, the SSB team engaged the community in the allocation and preparation of a farming field with a total area of one hectare, located in Camanasa, Suai. This project includes field preliminary and general works, construction of fencing to protect the area, construction of a storage building and a public sanitary facility, installation of electrical & water supply system, and provision of start-up farm equipment & raw material. The field preparation works were concluded on 2 October 2019, and with the supply of the adequate equipment and seeds facilitated by TIMOR GAP, the community was able to plant crops and organic vegetables, for trading in local markets. A cooperative composed by the community members was established with the aim to

manage the agribusiness program, and to future maximize its production and profits. In addition to this, the agriculture support program also facilitates an internship

program for trainees from the Claret Salele Training Centre, located in Suai.



Figure 4-5: Community agriculture support program in Camanasa, Suai

4.2.3 Temporary Benchmark for Suai Industrial Estate

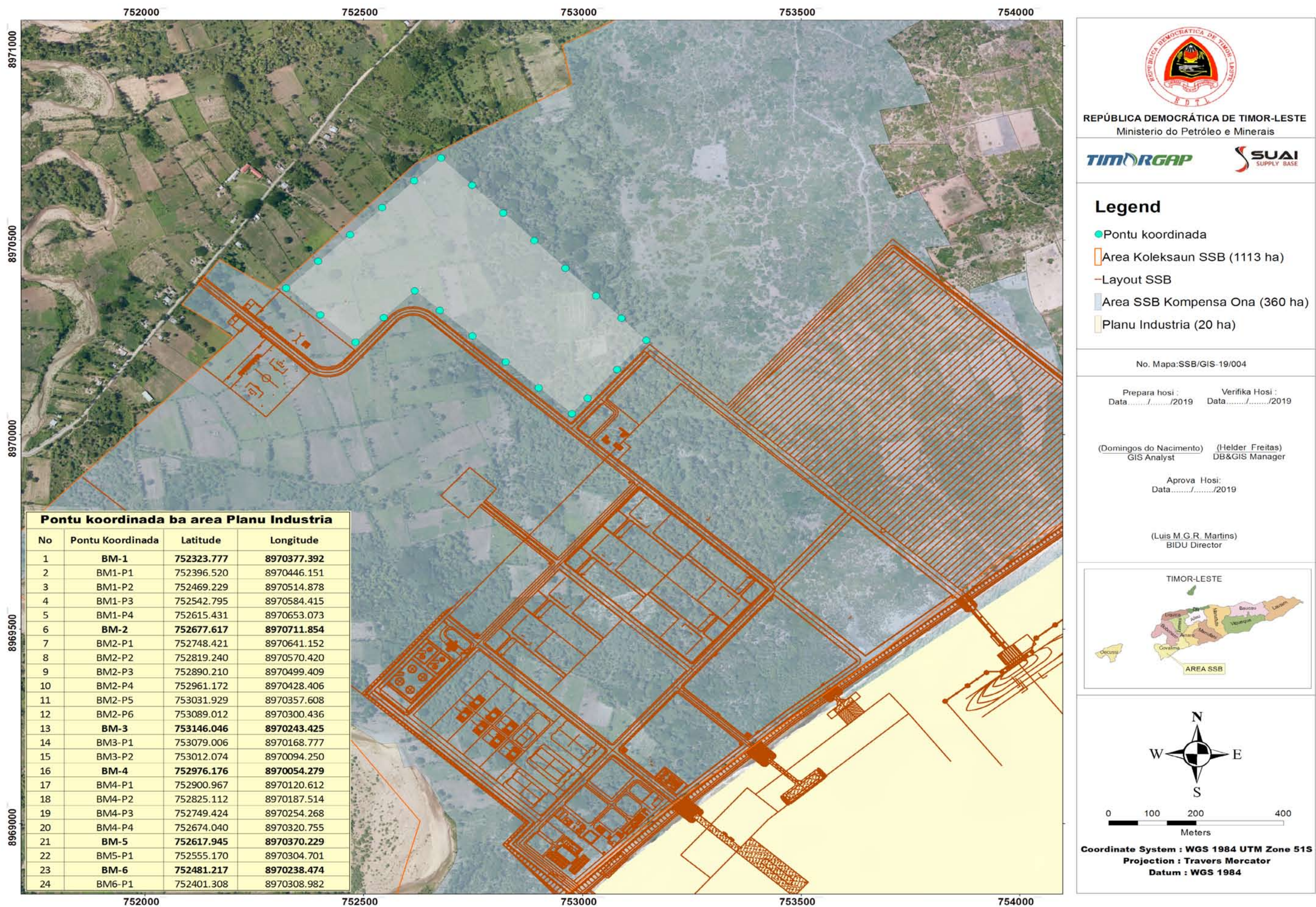


Figure 4-6: SSB light industrial layout and area

As part of future development at the Supply Base, a light industrial estate will be developed adjacent (north-east) to the SSB land-based facilities. The light industrial state is intended to provide facilities for small and medium-sized local businesses to benefit from the infrastructure and transportation networks associated with the Suai Supply Base.

The installation of a temporary benchmarking for the Suai light industrial estate was undertaken in 2019, as a result of several field trips, meetings and coordination with community leaders and relevant stakeholders held throughout the year. The area designated for the industrial area covers 20 hectares of State-owned land. The temporary benchmark installation was concluded on 30 April 2019.

4.2.4 SSB Supporting Infrastructures: Suai Airport

In addition to the supply base, the Suai industrial cluster is envisaged to include a new town in Camanasa, Nova Suai, and the rehabilitation of the Suai Airport, which was concluded on 2017 and is fully operational since. The new terminal building became operational in April 2019 and the flight calibration process was completed in November 2019. With this, on 31 March 2020, the Suai Airport was fully handed over to the Government, under the Air Navigation Administration of Timor-Leste (ANATL).

Subject to an extensive upgrade, to cater for an expanded passenger & freight services, the Airport is strategically

located to provide logistic support flights to companies working on oil and gas platforms in the Timor Sea due to its proximity to the oil rigs operating in the region.

The Ministry of Petroleum and Minerals Resources, through TIMOR GAP, integrated the interministerial team responsible for the execution and supervision of the Airport rehabilitation project, being entrusted with the task to liaise with the local community affected by the project, in the matters related with the new resettlement areas.



Suai Airport

The “Commander-in-Chief of FALINTIL Kay Rala Xanana Gusmão International Airport” located in Suai, Covalima Municipality, operates regular domestic and charter flights operated by ZEEMS and MAF, and an international flight from Darwin, Australia, operated by Northern Oil & Gas Australia (NOGA). The latter provides daily helicopter flights from Suai Airport to the oil platforms in the Timor Sea and crew change flights thrice a week, allowing NOGA to set up its base of operations in Suai and therefore, promoting and boosting economic growth of the south coast.

Safety and security are a main concern and thus, are set as a priority in every operation conducted in the Suai Airport.

4.2.4.1 Construction of Infrastructure Facilities for the Support of Suai Airport

In order to allow the planned upgrade and enhancement of Suai Airport, it is envisaged the construction of a new residential neighborhood to resettle the community of Lohorai and Holbelis villages affected by the project. The new resettlement area for the Lohorai affected community has been fully completed and handed over to the community in 2017, encompassing 72 new houses and accommodating approximately 324 residents.

The second phase of the construction of infrastructure facilities for the support of Suai Airport corresponds to the Holbelis resettlement project, which comprises a total of 68 houses of 3-bedroom with outdoor kitchen, a chapel, community centre building, kindergarten school, and the construction of infrastructures and utilities, such as internal and external drainage, electrical and water supply system, and a 5m wide road with concrete pavement finishing, including connection to the existing road network. This project is set to be developed on 5.4 hectare flat area at Holbelis Village-Suai, Covalima Municipality, about 1Km from main road. The land title acquisition and compensation process was completed in 2018.

On 25 February 2019, the company CHL was awarded the contract to design the Master Plan for construction

of infrastructure facilities for the support of the Suai Airport, at Holbelis. The scope of works provided in the contract includes the site clearing and technical studies, such as soil investigation and topographical survey covering an area of 7.1 hectares. The technical studies and Master Plan were concluded on 28 May 2019.

Upon the conclusion of the technical studies and Master Plan, TIMOR GAP worked together with ALGIS Consultant to prepare the architectural design and detail engineering documentation for the project. The design will include the detailed engineering, architectural design, buildings’ construction and the required fit-out, road, drainage, power and water supply, in accordance with the national and international best standard practices applicable to building and associated utilities foreseen in the scope of works. The design and Bill of Quantities (BOQ) were finalized on 4 December 2019 and submitted to National Development Agency (Agência Nacional de Desenvolvimento, ADN) for approval. The construction works are expected to commence on 2020.

The new residential area of Holbelis aims to provide a safe and quality housing infrastructure while providing access to training, employment, affordable housing and social

welfare to the affected communities. This is achieved by producing building materials on location, using local labor and training the local community through active involvement in the delivery of the houses. With this, it

anticipated that the project enhances community development and provides sustainable housing which is safe and healthy.



Figure 4-7: Map of the master plan for the new residential neighborhood in Holbelis

4.2.4.2 Phase II of the Permanent Cemetery in Suai Airport Area

The phase II of the permanent cemetery in Suai Airport area foresees the construction of new fencing, stone masonry wall, and one Chapel to be built in the Airport area, in Suai, Covalima Municipality. A public tender aiming to secure the provision of construction services for the re-

ferred phase II of the project for the permanent cemetery was concluded on the last quarter of 2019 and the construction contract awarded to the company JOIA Camenasa, UNIP on 11 February 2020. The construction works are envisaged to commence on 20 of February 2020.

4.3 Betano Refinery and Petrochemical Complex

4.3.1 Overview of Refinery and Petrochemical Complex in Betano

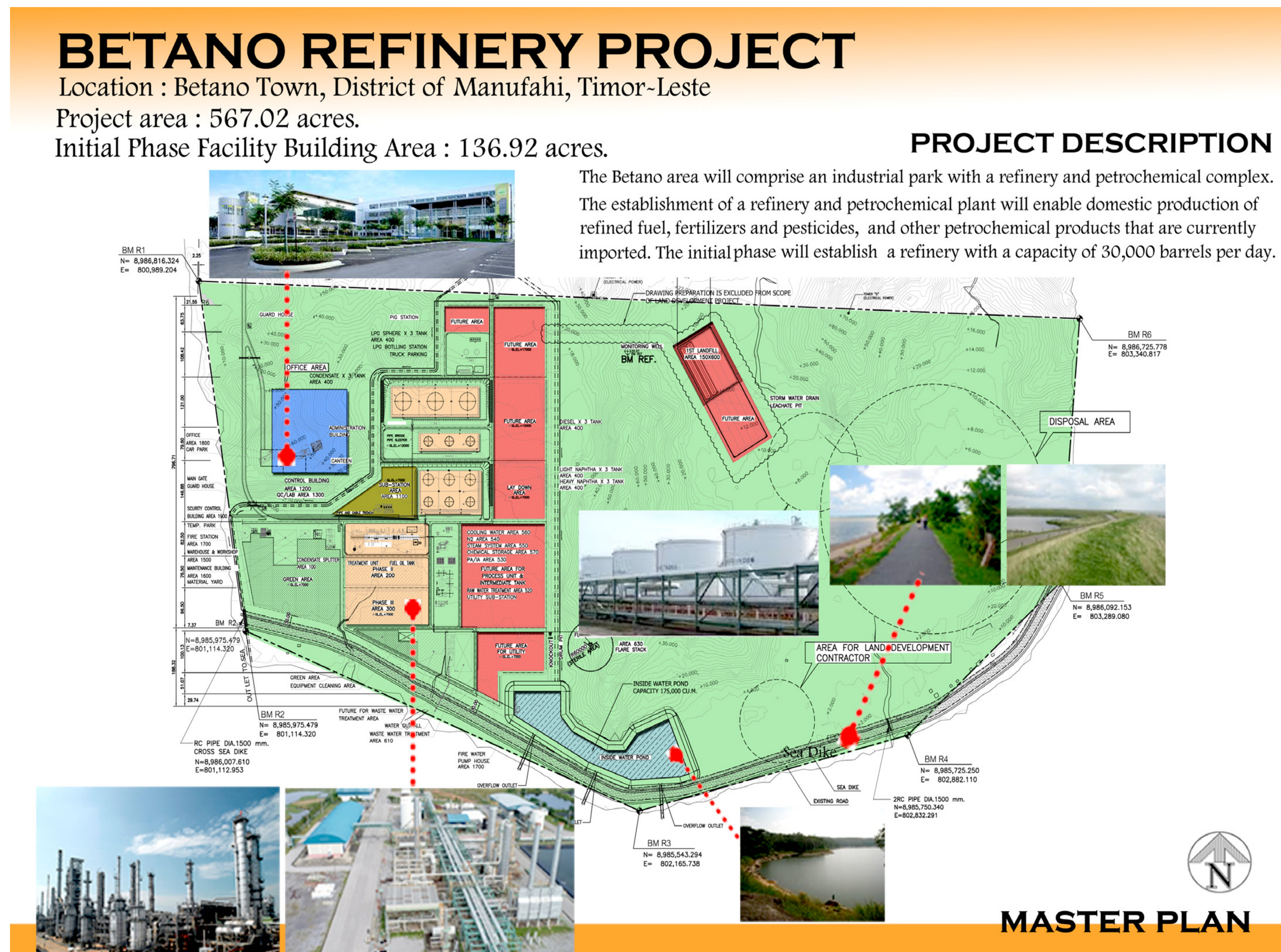


Figure 4-8: Betano Refinery project master plan

Located on the coast in the Manufahi District, approximately 70 km south of Dili, the Betano Petroleum Refinery and Petrochemical Complex are here identified as the second industrial cluster of the Tasi Mane project, with the purpose to convert condensate, piped to the site from fields in the Timor Sea, to a range of fuels and other products. It is expected that the project will make Timor-Leste self-sufficient for unleaded petrol (ULP) and diesel, with room to meet any further increased demand.

The refinery site has an area of approximately 230 hectares. The refinery main complex consists of the process unit and support units such as utilities units, waste treatment unit, tank farm, fire water and land fill for solid waste management. The complex will have supporting facilities such as Warehouse, Operation Building, Administration Building, Laboratory Building, Fire and Safety Office and Canteen. Water for the operation of the refinery will be supplied by the Water Supply Project from Quelan River, about 10 km from the refinery. Water will be conveyed by gravity through a pipeline from the river intake structure

to the raw water storage pond (capacity 175,000 m³) at the refinery.

The initial development phase will establish a refinery that will produce fuel for domestic use (diesel, gasoline, LPG and Naptha), to be used both locally and for export. The initial capacity for production is 30kbpd of product with a maximum capacity for 40kbpd.

The development of the refinery will be supported with the construction of a new town, Nova Betano, which will house up to 14,500 staff, contractors and their families and cover an area of approximately 1,065 ha. The existing Betano airstrip will also be upgraded to the status of regional airport with a new runway and terminal facilities.

The Environmental License was granted in 2018 for the four project components: Betano refinery plant, condensate and petroleum products pipeline system, water supply system and Nova Betano.

The refinery cluster in Betano will be established through a commercial venture, entrusted to TIMOR GAP to cater the development. A Final Investment Decision (FID) for the Betano Refinery is still to be made. The refinery project requires a financing solution and a scheme for development, hence TIMOR GAP is investing further in looking for financing solutions and potential investors, in addition to the partnership with PTT Thailand.

The construction of the first refinery in the country will contribute and guarantee the country with energy security, added value to domestically produced condensate field, contribute to economic growth, and creation of direct and indirect employment, releasing and improving the current unemployment rate condition.

4.3.2 Optimization Design for Refinery & Petrochemical Complex Project

Betano Refinery and Petrochemical Complex has been subject to extensive and comprehensive technical studies, including the Front End Engineering Design & Cost Estimation (FEED), Land Survey, Land Development & Cost Estimation and Market Study. Throughout 2019, TIMOR GAP continued with the execution of the Optimization Design for this project.

The Optimization Design for the Refinery and Petrochemical Complex project was developed by TTCL Public Company Limited (TTCL), an engineering company based in Thailand. The purpose of the study was to investigate optimum process configuration for the complex as well as to perform cost estimation with estimated accuracy of +/- 50% and economic evaluation. The Optimization Design Report was finalized and presented to

TIMOR GAP's Management in the first quarter of 2019. In addition to the elements abovementioned, this report includes overall material balance showing process unit feeds and product Block Flow Diagram, required area and overall plant layout, high level project schedule and recommendations for next step EPC and financing approach. Upon its submission to TIMOR GAP, the referred report was subject to further review and update, and an Optimization Design final report was endorsed in mid-2019.

As part of the arrangement with TTCL, the second group of four employees from TIMORGAP were seconded to TTCL to experience first-hand about the execution of the study and also to make timely decisions when input from TIMOR GAP as project owner was required.

4.3.3 Land Title Acquisition and Compensation

TIMOR GAP continues to pave the way for the Refinery and Petrochemical Complex project construction, by proceeding with the land title acquisition and compensation process. Reaching the compensation point, involved a lengthy and thorough process which started by informing the local community, through presentations, regarding the Land Title and Compensation program after which the actual Identification and Publication of the project site took place. From a total of 253 hectares for the refinery project site, 125.734 hectares was identified as inhabited land for which its owners had a rightful claim for compensation. The next step involved the Verification of the Publication, only after which contracts were signed on site from 3 to 18 July 2019.



Figure 4-9: Signature of the land title contracts with the affected community for the Betano Refinery project

A total of 163 contracts corresponding to 132 contracts for plots of land and vegetation, 18 contracts for houses,

and 13 contract for livestock, were signed between the affected community and on behalf of the Government of

Timor-Leste, DNTFSC, Ministry of Public Works and Ministry of Agriculture and Fisheries of Manufahi Municipality. The land to be cleared affects the sub-villages of Be-Metan and Selihassan. Following the contracts signature, a list of beneficiaries was compiled and, together with the required documentation, was submitted to the Major Project Secretariat and afterwards to BNCTL for subsequent compensation payment, a process finalized and completed at the end of 2019. The total compensation amounting US \$4,564,998.11 inclusive of tax which was paid to the beneficiaries in October 2019.

Prior the payment to the beneficiaries, TIMORGAP engaged the affected community by facilitating two workshops with the objective to provide information on economic opportunities for the beneficiaries “Dezeminasaun Aktividade Ekonomia Produtiva ba Komunitade Afetadu”. The first workshop was in August 2019 and presented by BNCTL and Loja das Agrikulturas from the Ministry of Agriculture with the subsequent workshop in October 2019 presented by SECoop and IADE. It is hoped that the information can assist the beneficiaries to invest their payment for their long-term benefit.



Figure 4-10: Workshops on “Dezeminasaun Aktividade Ekonomia Produtiva ba Komunitade Afetadu” for the Betano community

4.3.4 Community Development

TIMOR GAP is committed to continuously improve the living standards of the communities where we develop

our projects and, in line with this, strongly promoting and developing community support programs.

4.3.4.1 Community Clean Water Program

One such is the clean drinking water program. The access to reliable, safe drinking water at villages in the refinery project site is still challenging and thus, TIMOR GAP is working towards the implementation of a clean water program to ensure that safe drinking water is supplied to the local communities. This community-driven program will benefit 579 households from the villages of Be-Metan and Selihasan, Suco Betano.

The clean water program is an initiative developed in close coordination with the affected community and therefore, TIMOR GAP team continued to liaise with the community leaders and focal points throughout 2019, conducting several coordination meetings. Therewith, we intent to ensure their active participation and involvement throughout each stage of the project and guaranteeing that, together with the community, we build a water program that includes responsible community development, lasting local solutions and ongoing monitoring and

resolution.

As a result of a site survey carried out previously, two water sources located in the hilly area of Selikiik and Seli-boot were identified as having potential to supply reliable and verifiable clean water to the local communities. The Terms of Reference (ToR) and detail drawing were completed this year as part of the detail design process. The procurement process for the construction works will be undertaken in 2020.

In parallel, the Central Government via the Ministry of Public Works has put forward a plan for the same activity. Therefore, in the coming year the Clean Water Program will not be executed by TIMOR GAP, however, the company continues its commitment to the community and will cooperate with the local authority for alternative possibilities in 2020.

4.3.4.2 English & Computer Skills Development Program

Based on the successful experience achieved in the two other South Coast Projects in regards to community development programs with the focus on English literacy skills, and as the Betano Refinery project approaches the pre-construction phase, TIMOR GAP plans to set up an English & Computer Skills Development Program for the community affected by the Betano Refinery project.

The English and Computer Skills Development Program is to be provided to the community in cooperation with the Ministry of Petroleum & Minerals (MPM). It is expected to be delivered by AHHA Education and foresees the establishment of a training centre in the Village Be-Metan, Betano, also benefiting the surrounding local

communities. Social consultations held with the community, confirmed their positive response and support to the program, as well as their willingness to actively participate in the latter.

By providing Basic English language skills we aim to empower the community and increase their prospects for future employment and entrepreneur opportunities brought by the development and construction of the Betano industrial cluster. Community participation is critical to project viability and sustainability. TIMOR-GAP in coordination with MPM will continue to work with the local authorities to prepare the training facility.

4.4 Timor-Leste LNG (TLNG) in Beçaço

4.4.1 Overview of TLNG in Beçaço

The Government of Timor-Leste aims to develop the gas from Greater Sunrise field through the building of a sub-sea pipeline to onshore Timor-Leste, and the establishment

of a LNG plant to process the gas in south coast at Beçaço, Viqueque (about 200 km southeast of Dili).

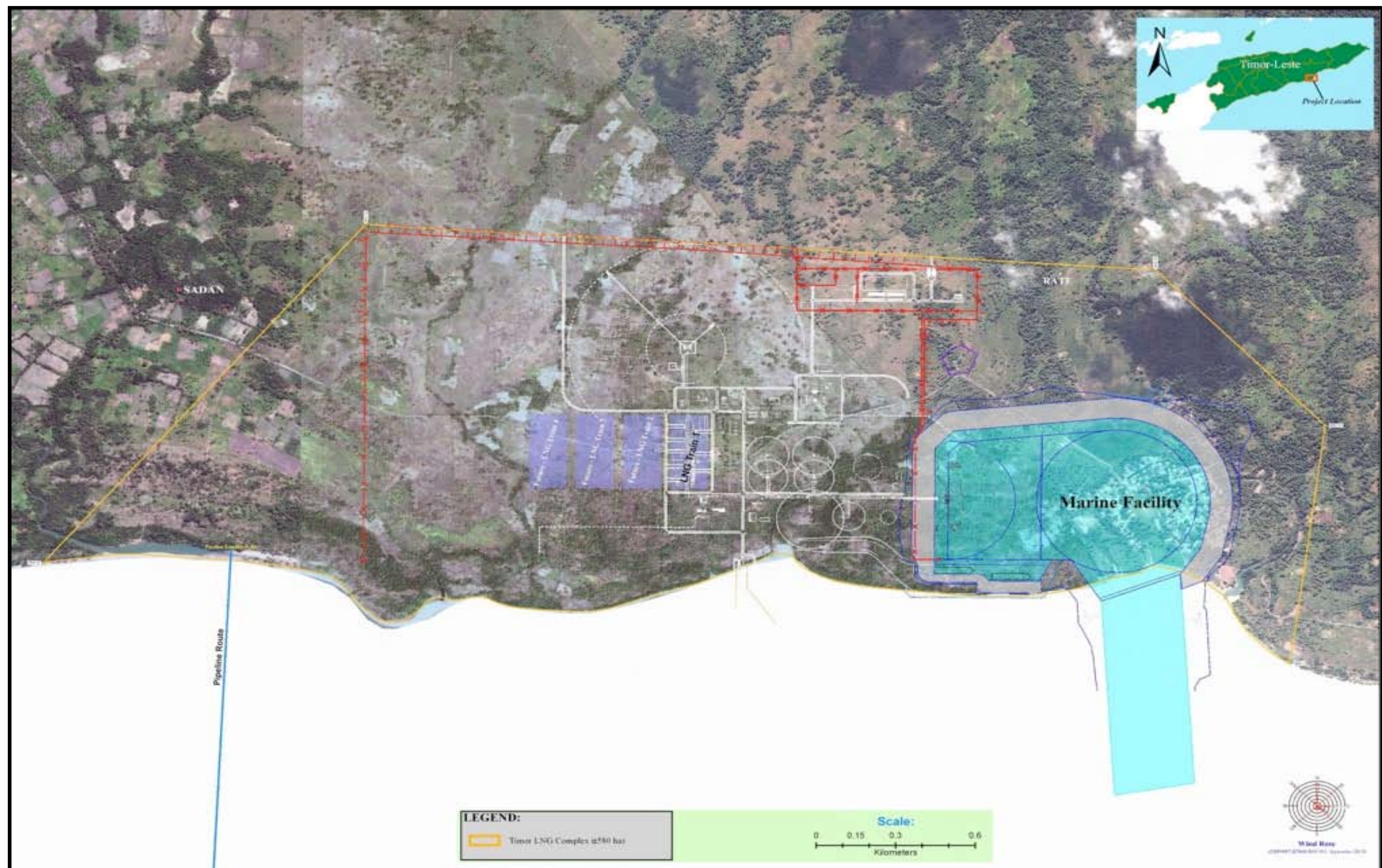


Figure 4-11: Map of Timor-Leste LNG Complex in Beçaço

Timor-Leste LNG (or “TLNG”) will be executed in two separated projects: the Upstream project, which will encompass the development of the subsea wells and associated production system and the offshore condensate processing and export facilities, using a single Floating Production Storage and Offloading (FPSO) unit with gas dew pointing and dehydration, gas export compression facilities, MEG regeneration and storage; and the Downstream project, which is anticipated to be built in Beçaço and will encompass the gas export pipeline to shore (across the Timor Trough), the LNG Plant facilities and the Marine Facilities for LNG export.

For purpose of this Chapter and the Tasi Mane Project, we consider the downstream project. The first phase of the LNG plant development will establish a production capacity of 5 million tons per annum (MTPA) or one train, which may be expanded in the future to a capacity of up-to 20 MTPA or four trains. Natural gas feedstock to the LNG plant first train is planned to be sourced from Greater Sunrise, through a pipeline with a route of approximately 231

km across Timor trough, which will transport dry gas at 900 MMCFD flow rate during normal operation.

The design maturity of the referred components is consistent with pre-FEED/FEED level of definition. The Front End Engineering Design (FEED) studies for the Gas Pipeline and Marine Facility were completed in 2013, while the pre-FEED study for the LNG plant was concluded in early 2016. In light of the positive outcome reached by Timor-Leste and Australia in regards to the settlement of the Maritime Boundary between the two neighboring countries, additional works were carried out with the view to optimize the existing design.

These studies were initiated in 2018 with the engagement of the Australian based engineering consultants Cardno and Peritus to assist TIMOR GAP’s Owner Engineering team in executing the aforementioned optimization, mainly focused in subsea pipeline and LNG plant, and continued towards 2019.

The TLNG downstream components are shown below.

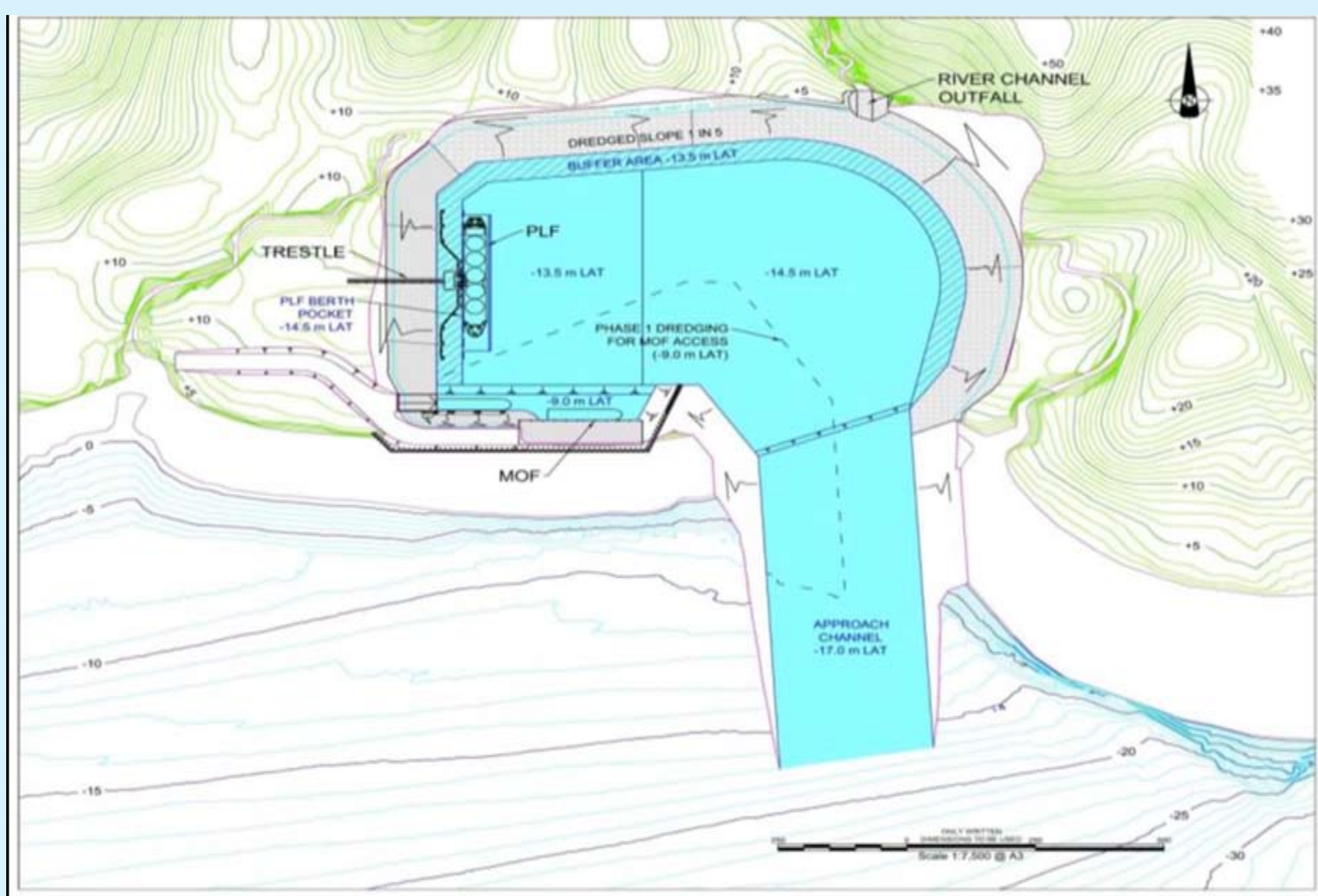
LNG Plant

The plant site will accommodate an initial 5 mtpa LNG liquefaction train, and will also provide expansion capability for further 3 x 5mtpa LNG liquefaction trains. This allows for future commercial development of regional, large, stranded gas fields, some of which were discovered and appraised many years ago, but which have not been developed to date due to lack of nearby infrastructures/facilities. Such “stranded” fields may include Evans Shoals and future discoveries in Timor-Leste’s own exclusive area.



Maritime Facility

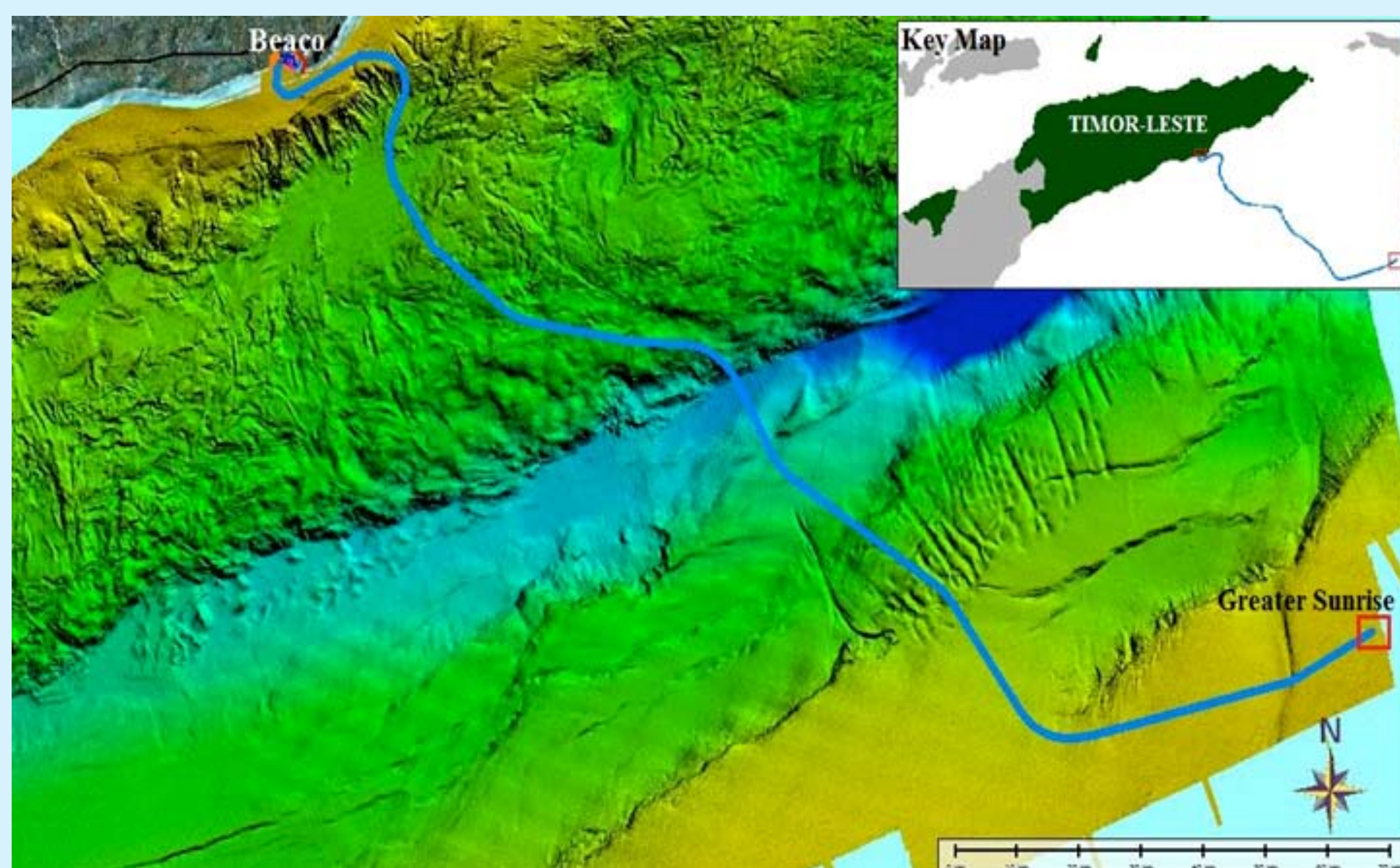
Marine facility design is based upon the creation of an inland basin, which offers both a low CAPEX and facility for future expansion. The main Product Loading Facility (PLF) wharf is 240m in length, capable of accommodating the largest LNG/LPG vessels, with an operating draft of -13.5m LAT within the basin. The Marine facilities are designed to withstand all anticipated seismic events with minimal damage, such that product offloading operations can be continue uninterrupted.



Pipeline

The offshore Pipeline system crossing the Timor Trough from the Field to the onshore plant site may involve either one pipeline of 24-inch (24”) diameter or two 18-inch (2x18”) pipelines. The base case is a single 24-inch rigid carbon steel pipeline.

The pipeline routing across the Timor Trough has been fully surveyed and used as a basis for pipeline FEED engineering.



In addition to the downstream components above-mentioned, the project also foresees the construction of new towns that are intended for resettlement of the local community, and the rehabilitation of the existing airport at Viqueque in order to operate as a fly-in-fly-out (FIFO) airport for LNG operators, serving also as a regional airport.

The presence of LNG project in Timor-Leste will provide energy security, clean energy and adding value to

Timor-Leste natural resources, while boosting the revenue and job creation in the country and increasing economic growth. Another benefit would be indirect employment to local community members, through various spillover effects from the downstream activities, such as local entrepreneur, that may include engineering service providers, pharmacy, restaurant, etc., thus leading towards improvement of the living conditions of the population not only in the project area but also in the country as a whole.

4.4.2 Environmental Impact Assessment (EIA)

Pursuant to the Decree-Law No. 5/2011, on Environmental Licensing, an Environmental Impact Assessment (EIA) is required to identify the aspects of the project that have an interaction, either negatively or positively, with the environment. The identification of environmental and social aspects, their impacts and associated avoidance, management and mitigation measures form the basis of how a project will be managed to reduce potential adverse impacts.

The application process for an Environmental License requires the execution of an EIA in order to prepare two stand-alone documents, an Environmental Impact Statement (EIS) and an Environmental Management Plan (EMP). These two documents are subject to endorsement by National Petroleum and Mineral Authority (Autoridade Nacional do Petróleo e Minerais, ANPM) as set forth

under the Decree-Law no. 14/2018, on the Organic Law of the VIII Constitutional Government, which empowers the Minister of Petroleum and Minerals, through ANPM, to carry out the environmental licensing process, including the approval of environmental licenses, in the petroleum and mining sector. Approval of the EIS and EMP by ANPM as the Environmental Regulatory Authority for the oil and gas sector is the condition for the issuance of an Environmental License to the project.

Aligned with the above, a detailed EIA study for the TLNG project components is ongoing. TLNG project has four major components: LNG plant, marine facility, Sunrise-Beaço pipeline and new towns. Whereas the Sunrise-Beaço pipeline project is quite distinct and located offshore, an EIA is being carried out independently from the other three major components.

4.4.2.1 EIA Study for LNG Plant

The EIA study for LNG plant includes the marine facility and pipeline landing point (onshore section) components.

As part of the environmental license procedures for the LNG plant, the following documents are to be prepared and approved, i.e. a Project Documents, a Terms of Reference (TOR), an Environmental Impact Statement (EIS) and an Environmental Management Plan (EMP). The TOR forms the basis of the EIS and the EMP.

The public consultation for the LNG plant TOR was held

with the affected communities in Viqueque and Beaço on September 2018. Following this, the TOR was revised based on the inputs and comments compiled from the referred public consultations and submitted to ANPM on the 4 April 2019.

Several rounds of reviews and clarifications were taken place on the TOR between ANPM and TIMOR GAP. Finally, on 29 October 2019, ANPM concluded its review which enables TIMOR GAP to proceed to the next process which is to carry out the EIA/EIS study.

4.4.2.1 EIA Study for Pipeline

This EIA study is conducted for the proposed development of subsea gas pipeline project from offshore Greater Sunrise gas field to onshore Timor-Leste in Beaço.

Similar to the LNG plant TOR, the TOR for the Greater Sunrise-Beaço subsea pipeline was revised to reflect the feedback and comments obtained from the public consultations held in Viqueque and Beaço on September 2018,

and submitted on 4 April 2019 to ANPM as the Environmental Authority for the petroleum sector, in accordance with the Decree-Law no. 14/2018, on the Organic Law of VIII Constitutional Government.

Several reviews were made by ANPM and clarifications were provided by TIMOR GAP. It was expected to review would be completed in the following financial year.

4.4.3 Land & Property Identification

Considering that the engineering design studies for the Timor-Leste LNG project have been progressed to Pre-FEED and FEED levels, TIMOR GAP has initiated the identification of land and property at the project site in Beço. With this in view, an Inter-Ministerial team was assembled and established in early 2019 following consultations with the Ministers and Secretary of States from the relevant Ministries with the purpose to support the activities related to the identification of land and property for the TLNG project in Beço. This Inter-Ministerial team comprises representatives from: a) Ministry of Petroleum and Minerals, through TIMOR GAP; b) Ministry of Public Works; c) the Ministry of Justice, through Secretariat of State for Land and Property; d) Ministry of State Administration, through the Local Authorities; e) Secretariat of State for the Affairs for National Liberation Combatants; f) Secretariat of State for Civil Protection; g) Secretary of State for Arts and Culture; h) Ministry of Interior through National Police (PNTL); and i) Civil Society Support Department under the office of Prime Minister.

As unanimously approved by the Inter-Ministerial team, TIMOR GAP, as the project owner, will lead the Inter-Ministerial team in conducting the land and property identification for Beço LNG site which includes the areas designated for pipeline landing point, LNG Plant, Marine Facility and New Towns (Nova Beço, Nova Knua Makaliku & Nova Knua Kailoibere) for community resettlement. The Inter-Ministerial team, TIMOR GAP and the local authorities will work closely, both among themselves and with the affected community, on the referred land & property identification and the analysis of the respective compensation of the affected community according with the legislation in force.

On 14 May 2019, TIMOR GAP and the Inter-Ministerial Team participated on the meeting with H.E. Prime-Minister of Timor-Leste in order to brief on the preparation that underwent for the identification of land and property in Beço. This meeting was followed by several Inter-Ministerial meetings held at Directors and Focal Points level from the relevant Ministries throughout 2019.



Figure 4-12: Briefing of the program to H.E. Prime-Minister of Timor-Leste, Mr. Taur Matan Ruak

On 16 July 2019, the first Socialization and Cultural Ceremony Launching of Beço land and property identification project was held in Beço, Viqueque, marked with the participation of the Minister of Public Works, Minister of Agriculture and Fisheries, Secretary of State for Land and Property, Secretary of State for Arts and Culture, Directors and focal points from all relevant Ministries, followed

by the pre-identification of land and property for Beço site area that was undertaken and completed from 17 to 31 July 2019. The pre-identification was conducted by an Inter-Ministerial team composed by the focal points from Ministry of Public Works, National Directorate for Land & Property and TIMOR GAP.

Data processing on Ground Control Point (GCP) coordinates and Photogrammetric from Drone survey were both completed in August 2019, and reports on the Beaço

first land and property socialization and pre-Identification were produced concurrently with Orthophoto map.



Figure 4-13: Pre-Identification of Beaço land & property

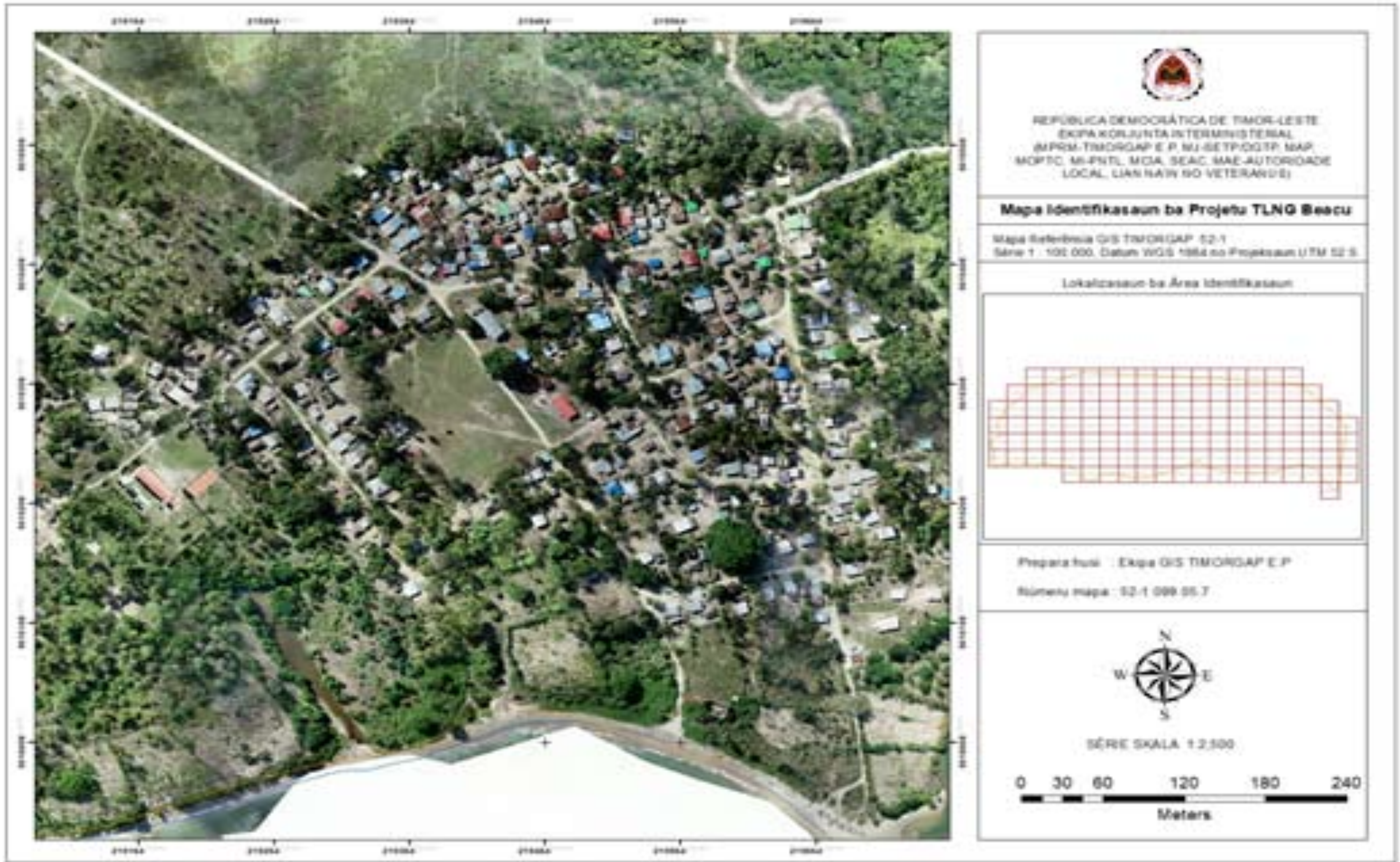


Figure 4-14: Orthophoto Beaço Area

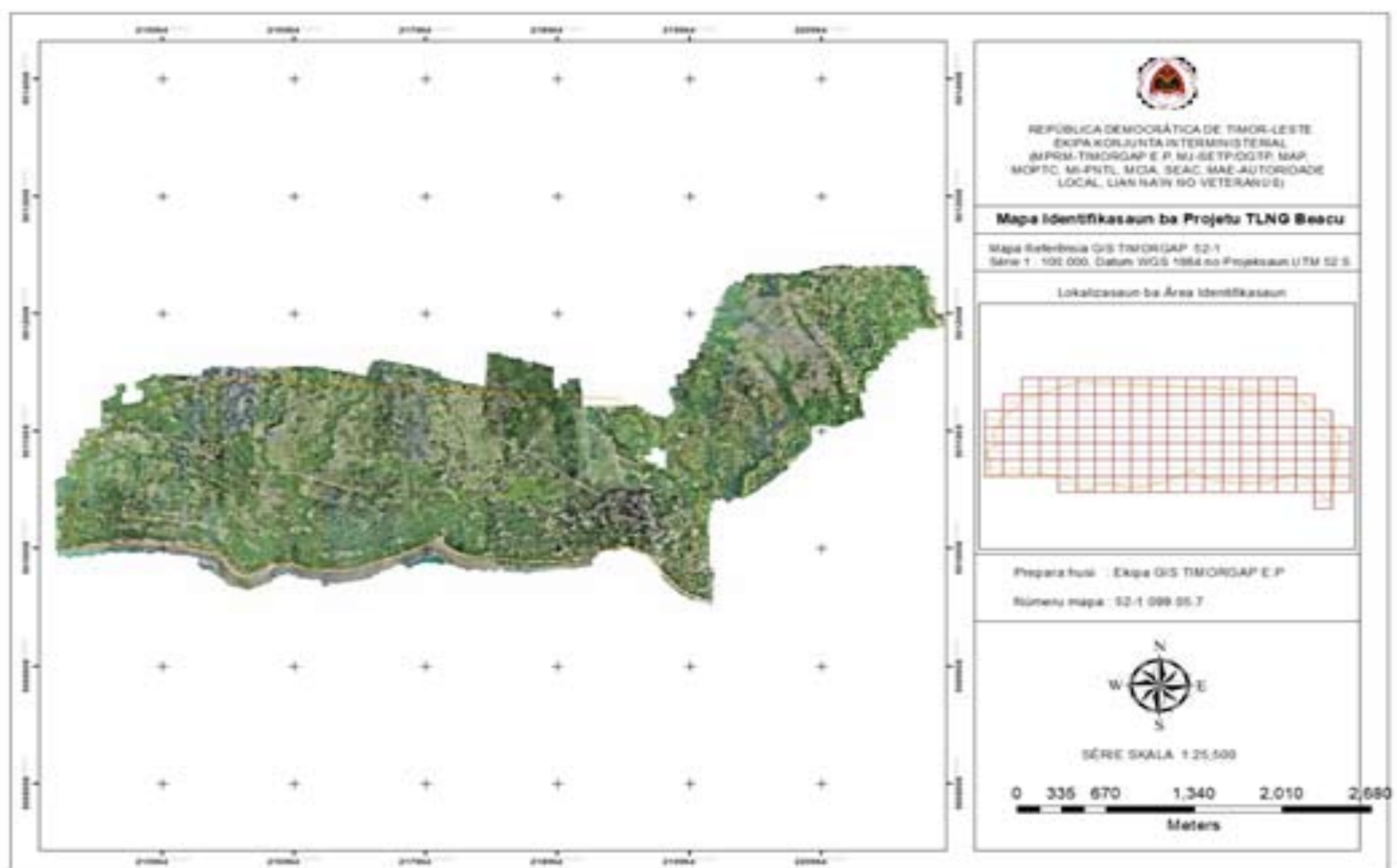


Figure 4-15: Orthophoto Maluru Village

4.4.4 TLNG Human Resources Development

One of the benefits from TLNG project is job creation in which Timorese nationals can have the opportunity to participate. Based on the local content study which forms part of LNG Pre-FEED study in 2015-2016, it is estimated that approximately 7,000 direct jobs can be created during the construction phase and out of which approximately 30% can be captured by local Timorese nationals. These figures have not taken into account potential jobs to be created by other components of TLNG such as the construction of Marine Facility (LNG port), installation of Subsea Pipeline and construction of other supporting infrastructures.

Although construction period is relatively short, approximately five (5) years only, by having thousands of Timorese employed in the project will not only tackle immediate issues related to the unemployment rate but also will enhance the living standards as well as improved professional know-how skills through transfer of skills and knowledge.

During the operation of LNG plant, approximately 300 permanent jobs will be created, and it is estimated that up to 70% can be captured by Timorese nationals during the first five (5) years of operation. Subsequently the number will be gradually increased and from year ten (10) onwards, Timorese participation is estimated to go up to 90% and this will include managerial roles.

In light of these, a number of training plans have been put in place. Due to the nature of works skills normally required during the construction phase, the training programs for these will not necessarily commence until one (1) year or less before the construction commences. However, for the operation phase, trainings on LNG operation and maintenance are required well ahead of time. A typical On-Job-Training (OJT) normally requires approximately two (2) years to complete.

Aligned with the above, TIMOR GAP plans to recruit and train up to 250 young graduates from technical schools and universities across all Timor-Leste Municipalities and RAE OA. For this purpose, TIMOR GAP contracted Cegelec Oil & Gas, a renowned French based specialized oil and gas training company, to undertake both recruitment and provision of fundamentals training, a program that is expected to be delivered in several phases. The first phase, mainly targeting young technical graduates from the affected community of Beaco, Village of Maluru, Municipality of Viqueque, was initiated in 2018 with the recruitment of 31 candidates. On 3 March 2019, the aforementioned 31 trainees commenced their fundamentals training at CNEFP Tibar for a period of four (4) months, having completed this training on 21 June 2019. The completion certificates were handed out to the trainees on 24 June 2019.

Upon the completion of the 4-months fundamentals training, it is anticipated that the best and top 25 out of 31 trainees will be sent to PT Badak LNG facility in Bontang, Indonesia, for 18-months of intensive OJT. Throughout the second semester of 2019, TIMOR GAP has liaised with Badak LNG to further discuss on specifics of the Contract Agreement between both Parties for OJT Program. TIMOR GAP was also involved with Cegelec Oil & Gas to discuss a Service Agreement, pursuant to which

the latter is engaged to assist TIMOR GAP in reviewing and inspecting, once in every two or three months, the OJT Training Program implementation in PT Badak NGL, Bontang, Indonesia. Both Contracts with PT Badak NGL and Cegelec Oil & Gas were subject to a comprehensive discussion and review through to the end of 2019. The OJT program is expected to commence within the year of 2020.



Figure 4-16: Trainees during their fundamentals training at CNEFP Tibar (top); Group photo of the trainees upon the handover of their certificates (bottom)

4.5 Highway

4.5.1 Overview of Highway

The Suai to Beaçõ South Coast road will be developed to connect Tasi Mane Project industrial clusters and support the growth of the petroleum industry. Once completed, the highway will open up this coastline area to allow socioeconomic development and the movement of services, goods and passengers in a safer, faster and more reliable manner. The upgrade of the road will be a development based through stages on logistic and economic needs.

The design speed is 100km/h for flat areas and 60 km/h for mountainous areas, with an estimated travel time of 2 hours from Suai to Beaçõ. The highway will have four lanes (two in each direction), each 3.6m wide, with a total pavement width of about 26m and a total length of 155.7km. It will include 28 major bridges with an aggregate length of about 5.661 meters, and a total of 240 culverts (199 reinforced concrete pipe type and 41 reinforced concrete box type).

For construction purposes, the highway will be split in four sections:

- 1) Suai – Fatukahu /Mola - 30.4 km
- 2) Fatukahu/Mola – Betano - 34.3 km
- 3) Betano – Clacuc - 34.5 km
- 4) Clacuc – Beaçõ - 52.6 km

The construction supervision and monitoring of the Highway project is entrusted to the Project Management Unit composed by representatives of Ministry of Petroleum and Minerals (through TIMOR GAP) and Ministry of Public Works.

The Phase I of Highway corresponds to Section 1 connecting Suai to Fatukahu/Mola, a 30.4km corridor inaugurated and open for traffic on 2018. Timor-Leste's first highway marks the achievement of an important milestone to the development of the country's transport infrastructures and physical connectivity.



Figure 4-17: Highway connecting Suai to Fatukahu/Mola

4.5.2 Highway Phase II

Phase II comprises the construction of the Highway Section 2 connecting Fatukahu/Mola to Betano, where the Refinery and Petrochemical Complex is anticipated to be built. The Section 2 has a total length of 34.3km, designed to include 6 bridges, road alignment and several intersections.

Due to the alterations planned for the design of Highway Section 2, which is currently in the procurement process for the provision of consultancy services, the opening bid will be held on 18 February 2020. The land title identification and acquisition process for the referred project is expected to commence upon the completion of the Highway re-design, in early 2020.

5. Institutional and Human Capital Development





HIGHLIGHTS OF 2019

- Several training and courses were delivered throughout 2019, covering a wide range of areas, such as project finance, exploration geology, drilling, accounting, etc.;
- Secondments and on-the-job-training were conducted for several employees with our renown partners from ENI, ConocoPhillips, Schlumberger, BGP, with the duration varying between 3 months to 1 year;
- A total of 5 employees are currently in Study Leave, undertaking their Master Studies in international accredited universities;
- Performed and completed the SAP Retrofit project by Ernst & Young, including an in-house training delivered to TIMOR GAP staff on this subject;



5.1. Overview

TIMOR GAP's success and resilience relies on the strength from its pillars. Institutional capability and human capital are the pillars on which our company is built on and thus, they remain at the core of our strategic investment since TIMOR GAP establishment.

To meet the company's needs and future plans, particularly in large projects envisaged in the Tasi Mane Project, the LNG Plant, the Refinery and Petrochemical Complex, and the Supply Base, TIMOR GAP continued to grow in 2019, recruiting the right talent, managing, training, developing, rewarding, motivating and retaining, and through this keeping a well-balanced team through equality, and equally boosting development, a way to promote shared prospect.

TIMOR GAP is proud in being the first national institution awarded with an International Organization for Standardization (ISO) Certificate for its Integrated Management System, a recognition we are committed to uphold by fostering a strong Quality, Health, Safety and Environment (QHSE) culture amongst all employees, regardless of their job duties or position. We have continued to ensure that all TIMOR GAP's activities are delivered and aligned with the highest quality, health and safety, and environmental standards, while conducting internal and external QHSE annual audits.

TIMOR GAP continues at the forefront of Information & Communication Technology by implementing an efficient and up-to-date Information Management System, aiming to maximize efficacy and productivity in our workplace. Our SAP system was further enhanced and upgraded this year.

5.2. Human Resources Management

As a key pillar to TIMOR GAP's sustainability and growth, our company has been developing, refining and implementing a strong and cohesive human resources management strategy, shaped on our belief that by empowering the right talents and providing them a conducive environment to grow, they will perform at their best, thus contributing to the company's successful execution of its mission and vision.

Aligned with the above, we based our human resources strategy on key areas as recruitment of right talent, development and training, performance management and career development. This is supported by inclusive and strong human resources policies and procedures in force in the company, providing us the guidelines and orientations to a fair application of our principles and values. Our human resources policies and procedures consist on a dynamic and flexible set of tools, subject to contin-

uous improvement and amendments as we move forward and where new challenges lay ahead of us. New policy and procedures were reviewed and endorsed on 2019, paving the way to its implementation in 2020.

Development and training are the cornerstone of our human resources strategy. The unremitting development of our employees' competences and know-how is a long-term strategy and priority adopted by TIMOR GAP and implemented through programs and trainings in several areas of the petroleum and gas sector; capacity building and on-the-job-training with external partners and joint venture partners; and secondments which are conducted through the cooperation with TIMOR GAP's international business partners. We strive to uphold our commitment to maximize the local content participation in our projects and this requires an early focus on training of nationals to ensure the required skills are available and thus, a local content plan is a key requirement under our agreements/contracts and negotiations with Joint Venture partners. Projects developed in the field, such as our Suai Fuel Station and Suai Airport Jet Fuel Depot, em-

ploy exclusively local staff, fully trained with our business partners.

In addition to the training opportunities offered by TIMOR GAP, we are sensible and encourage our employees' ambitions in pursuing higher education studies. Employees who wish to pursue accredited higher education studies, usually through prestigious scholarships awarded by foreign Governments, are entitled to take study leave for the period of their studies. We safeguard our employees' with job security, while they invest on their own professional valorization and future contribution to the company.

TIMOR GAP upholds a people-oriented and employee care concept, fulfills its responsibilities to employees, respect their legal rights and interests, promotes gender equality and non-discrimination culture, improves their working environment, and promotes employment of locals in the operation areas, so as to realize co-development of itself and its employees.



Figure 5-1: TIMOR GAP's Human Resources Core Values

5.2.1 Employees Overview

TIMOR GAP's staff is composed by experienced professionals and young graduates with varying skill-sets and expertise. We employ predominantly technical staff, highly qualified with Masters Degrees and Bachelors in a wide range of business and technical areas. In fact, 83% of our employees hold a higher educational degree, with Masters, Post-Graduate Studies and Bachelor, or are currently undertaking one of the previous mentioned degrees.

As of 31 December 2019, we employed a total of 131 employees with a gender breakdown of 36 female and 95 male (consultants are not included in this figure). This number is expected to rise in the next years as the company's continues to secure more upstream business opportunities, participating in new Production Sharing Contracts, this resulting of the ratification and entry into force of the Permanent Maritime Boundary Treaty, and as our major projects, mainly Tasi Mane, progress towards its implementation phase. In 2019, a recruitment and selection process was conducted in order to fulfill several positions within the company and its subsidiaries, with the new recruits anticipated to join our team in 2020. We standardize our selection and recruitment process, recruiting base on the needs of the company and through a competitive process with equal opportunities and gender equality.

TIMOR GAP pursues and works hard in the achievement of a greater local participation, by respecting and valuing the local content participation in its projects. Our projects prioritize local staff whenever appropriate as it is the case of our Suai Fuel Station and TIMOR GAP's Jet Fuel Depot in Suai Airport. These projects employ a combined total of 15 staff, all recruited locally and fully trained in the performance of their job duties and responsibilities.

Our staff is primarily recruited from the national talent pool, as 98% of our employees are Timorese citizens, while the remaining percentage corresponds to expatriate staff contracted to fill the technical skill void that nationals are yet unable to fulfill. Consultants with highly specialized skills and expert knowledge are engaged through Services Agreements to provide consultancy services for business units and/or specific projects, as the likes of the Greater Sunrise Project.

TIMOR GAP also receives young interns with the purpose to introduce real and professional working environments as means to better prepare new graduates for their future professional career path. This year, we received two Interns from FDCH, from 19 August to 30 November 2019, for an internship conducted with Gas Business Unit, and two Interns from UPN Yogyakarta, for a 3 months' internship under G&G team guidance.

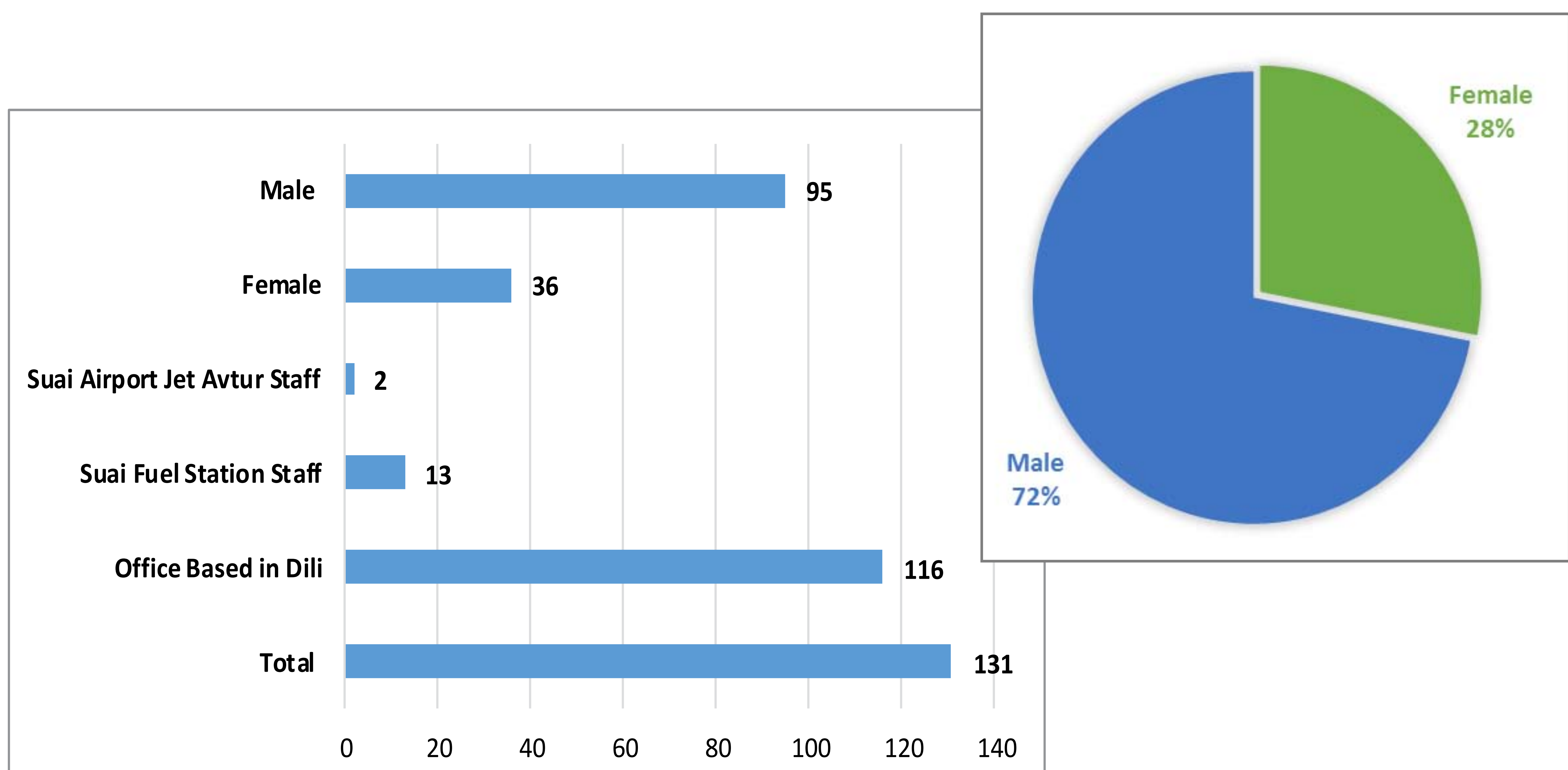


Figure 5-2: TIMOR GAP employees overview (left); TIMOR GAP employees distributed by gender (right)

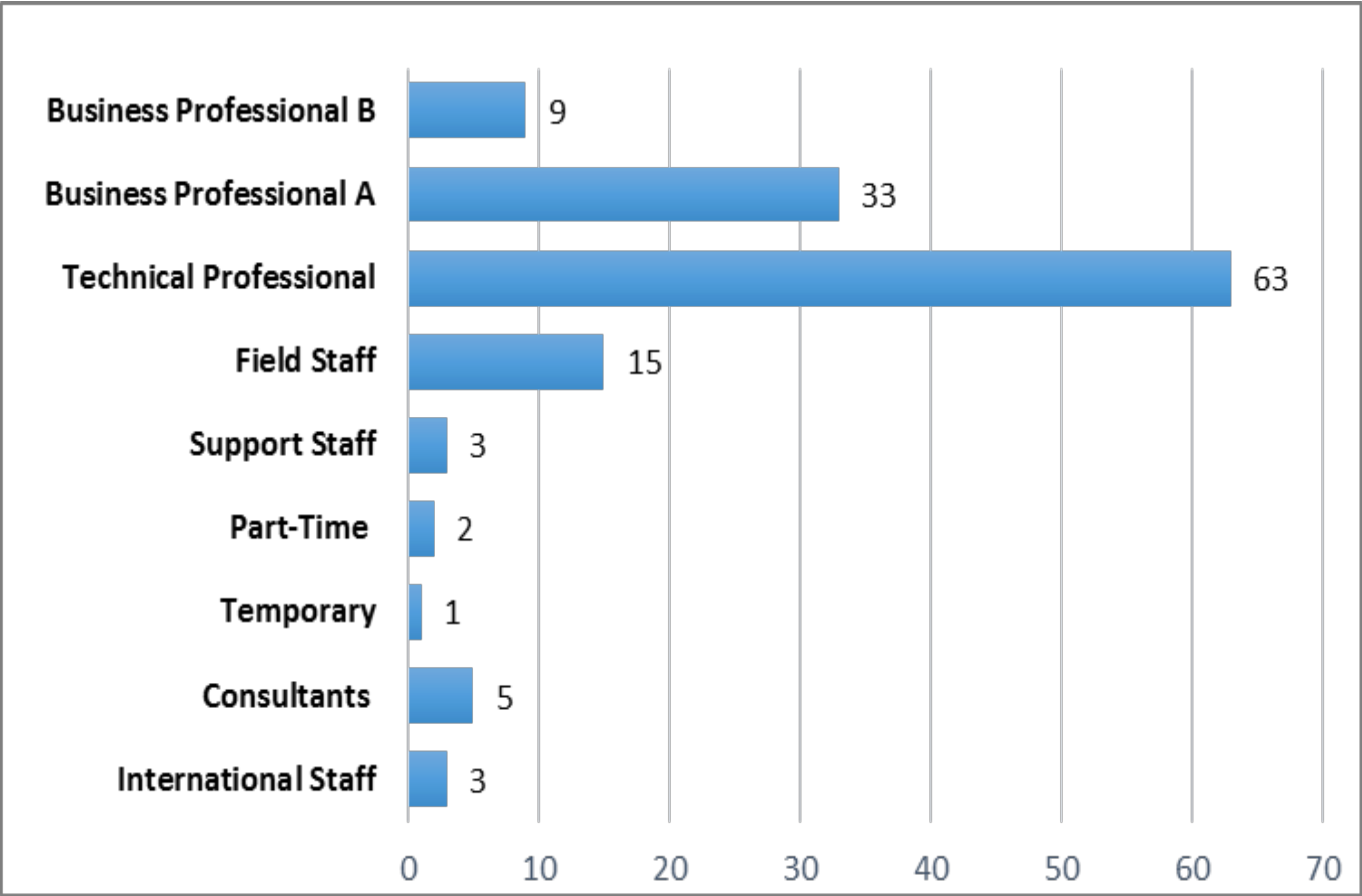


Figure 5-3: TIMOR GAP staff job category based on contract

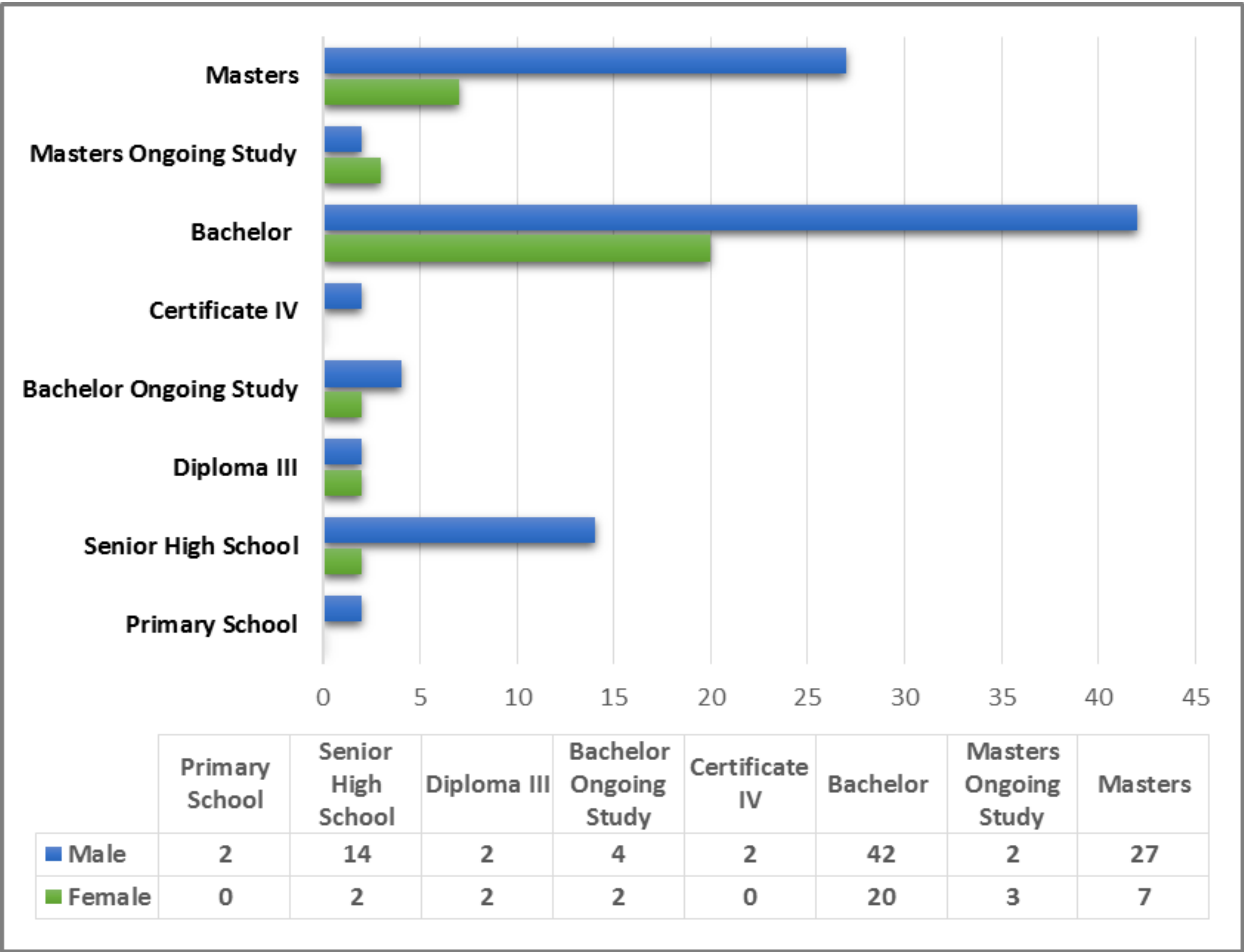


Figure 5-4: TIMOR GAP staff education background based on gender

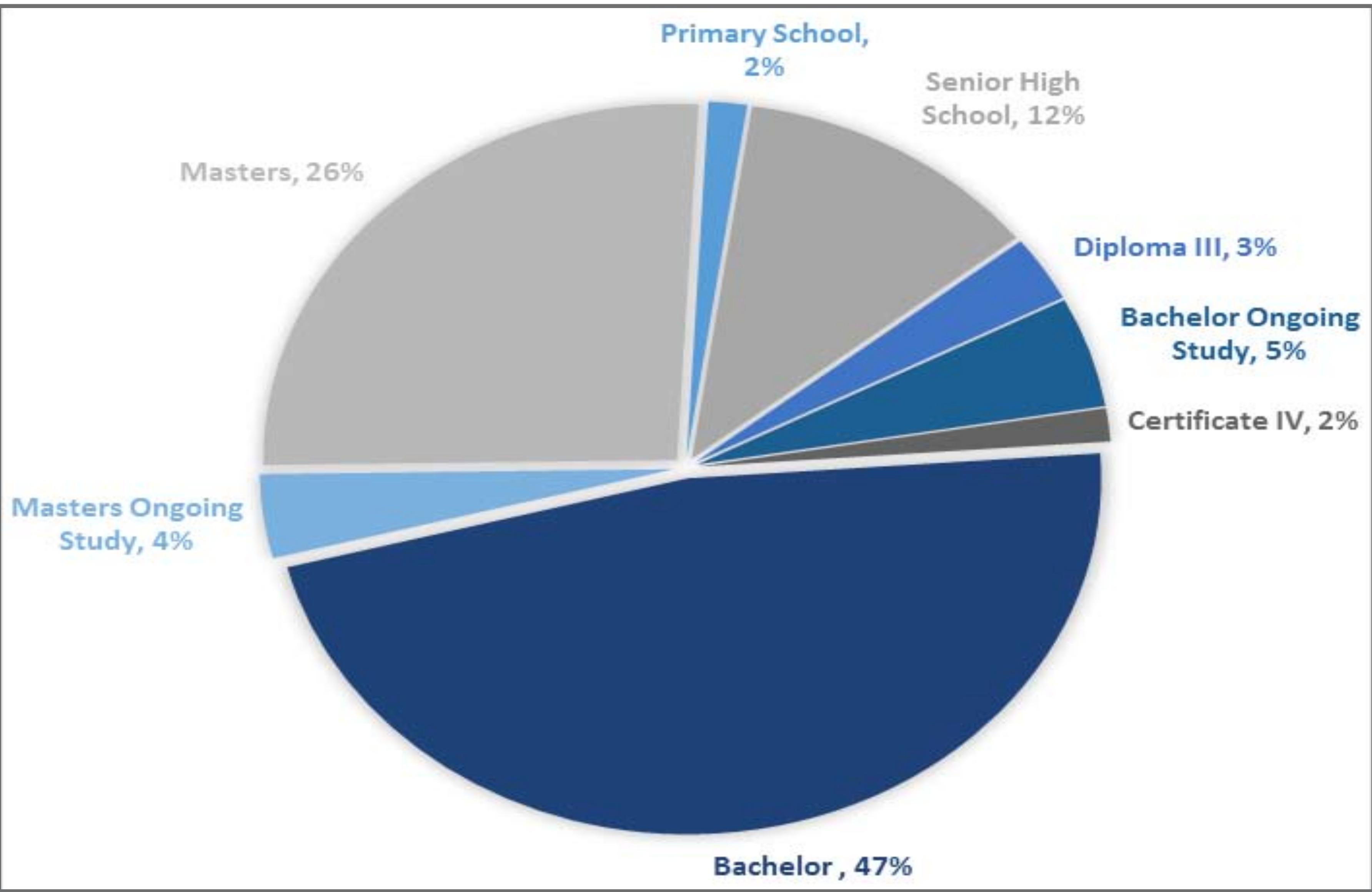


Figure 5-5: TIMOR GAP staff education background in percentages



***“The achievements of an organization are the results of the combined effort of each individual.”
Vince Lombardi***

Figure 5-6 : TIMOR GAP employees during the Tropical Basic Offshore Safety Induction & Emergency Training (T-BOSIET)

5.2.2 Career Development

TIMOR GAP aims to become a major employer in the country, recruiting and retaining the best from the national talent and skill pool and offering competitive and attractive career development opportunities.

In line with the above, TIMOR GAP devises an individual development path which integrates selection, recruitment, training, assessment and progression/promotion. The objective is to align both individual career goals with the strategic objectives of the organization for an effectively and successful accomplishment of the company's mission and objectives, while promoting job satisfaction and motivation amongst our employees.

In 2019, we continued to conduct TIMOR GAP's annually performance review with the purpose of evaluating employees' work performance and recognizing achievements, covering the set objectives and key performance indicators (KPIs), which also supports planning staff development needs for the following year. By considering the results from the performance assessment, it is possible to manage more efficiently the career development of employees and plan their progression and promotion to-

wards a next new role within TIMOR GAP. The potential for growth is a significant motivational difference maker and we, at TIMOR GAP, acknowledge this by offering the opportunity to succeed.

We uphold a people-oriented and employee care concept and therefore, we offer to our employees' benefits set forth under the employment contract, in compliance with TIMOR GAP internal policies and the laws in force applicable to the employment relations in Timor-Leste. The company complies with the Social Security Contribution System procedures and regulations, in furtherance of the Law No. 12/2016, on Social Security Law.

In 2019, we continued to work on our internal policies and procedures to better reflect the company's human resources vision and strategy, as well as to maximize the potential and productivity of our staff. Time Attendance Management Policy & Procedures were reviewed, endorsed and approved by the Board of Directors in December 2019, and are expected to enter into force in January 2020.

5.2.3 Employees Training

Our employees are our most valuable asset as they are essential for the successful execution of the company's strategy. For the success of its strategy, it is essential that the company is equipped with the right skills to meet the challenges ahead. In view of this, TIMOR GAP will strive

to provide opportunities through training courses, workshops & conferences and secondments to further enhance professional capacity, performance and knowledge of its staff in their specific areas of expertise, as well as in the overall oil and gas industry..

5.2.3.1 Courses and Training

In 2019, training opportunities are identified both nationally and internationally which employees are encouraged to attend are as follows:

- a) **Fundamental of Field Development Planning:** 2 employees attended this training held for 5 days, in Dili;
- b) **Introduction to E&P Business Management:** 2 employees participated in this 5 days training provided by Oilsim, in Dili;
- c) **Surface Facilities and Gas Field Production Operations:** 1 employee attended this 5 days training conducted in Dili;
- d) **Best Practice in Accounting:** 3 employees attended this training for 5 days in Darwin and Perth, Australia;
- e) **Drilling Essentials for New Engineers and Non-Technical Professional in Oil & Gas:** 3 employees participated in this training during 2 days, in Malaysia;
- f) **Petroleum Geology:** 2 employees attended this 2 days training conducted in Malaysia;
- g) **Project Finance & Project Financial Modelling:** 1 employee participated in this 1 week training, in Singapore;
- h) **Probabilistic Simulation Model & Probabilistic Model for Greater Sunrise:** 2 employees participated in this training conducted during 2 weeks, in Perth, Australia;
- i) **Mud Logging:** 2 employees attended this course for 15 days, in Australia;
- j) **Exploration Geology Course (JOGMEC):** 1 employee from TIMOR GAP's Exploration & Production Unit attended a 8 weeks course in Japan;

- k) **Training Induction:** 2 employees attended this training with the duration of 5 days, in Darwin and Perth, Australia;
- l) **English Language Course:** 35 employees attended this English Language Course delivered by Lorosaê English Language Institute (LELI), conducted from January to March 2019, in Dili. Students were placed into Beginner, Elementary, Pre-Intermediate and Intermediate Level, according to their English Language proficiency level;
- m) **Tropical Basic Offshore Safety Induction & Emergency Training (T-BOSIET):** 5 employees participated in the T-BOSIET Refreshing Training during 3 days, Jakarta, Indonesia. The objective was to renew the participants' T-BOSIET certificates ending in November 2019 and January 2020. The training included the topics on first aid, fire fighting, boat safety, Helicopter Underwater Escape Training (HUET) and Emergency Breathing System (EBS). The new certificates are valid for four (4) years until 2023;



Figure 5-7: TIMOR GAP employees during the Tropical Basic Offshore Safety Induction & Emergency Training (T-BOSIET)



Figure 5-8: TIMOR GAP employees during the First Aid training delivered as part of T-BIOSET

- n) **System, Application & Product (SAP):** 12 employees participated in this in-house training delivered by Ernst and Young, during 2 weeks. The training focused on Sales and Distribution (SD); Financial Accounting and Controlling (FICO), Materials Management (MM); Human Capital Management (HCM) and BASIS.

5.2.3.2 Workshops and Conferences

Depending on the contents of conference/seminar, opportunities will be extended to staff to attend as deemed relevant and beneficial to their job duties and responsibility and the overall objective of the company.

- a) 8th Regional Process Safety Seminar, Kuala Lumpur, Malaysia;
- b) International Nuclear Safeguards Outreach, Dili, Timor-Leste;
- c) Risk Compliance Workshop, Kuala Lumpur, Malaysia;

In 2019, TIMOR GAP employees had the opportunity to partake in various workshops and conferences during the period:

5.2.3.3 Secondments and On-Job-Training

Secondments and job placement are a key component of our development and training strategy and thus, TIMOR GAP ensures that these are a compulsory requirement set forth under the agreements or/and contracts we establish with our international joint venture/business partners. Secondments are conducted worldwide, including on

offshore facilities, providing the opportunity to the employee to acquire first-hand knowledge and experience, delivered by experts working in the sector.

Secondments and on-the-job-training carried out during 2019 are described below.

a) Bayu-Undan Infill Wells Project, ConocoPhillips and Subcontractors, Australia

As part of the preparation for the Bayu-Undan redevelopment project for post PSC 2022, TIMOR GAP have improved the technical competency of its employees by setting up capacity building agreement with ConocoPhillips, current Bayu-Undan field operator to expose the

TIMOR GAP technical team to Bayu-Undan current operation. TIMOR GAP employees totaling around 6 personnel shared by both New Venture Unit and E&P Unit were sent to different domains in ConocoPhillips and its subcontractor such as Schlumberger and Baker Hughes.

i. Sample catcher, Schlumberger, Australia

This secondment program for sample catcher was provided by Schlumberger Australia as a Subcontractor for ConocoPhillips in relation to Bayu-Undan Infill Wells project. The secondment took place from 25 May to 20 November 2019. During this period the secondees were exposed to hands-on experience in performing sample

catcher tasks and other duties expected to be performed during drilling operation. Secondees were also involved in formal class training, web-based training and workshops. During this program period, they were involved directly on some drilling projects in Australia, especially on onshore area.



Figure 5-9: Secondee during hands-on training in the Workshop (left); Secondee during the job training onsite (right)

ii. Wireline Field Engineer, Schlumberger, Australia

The capacity building with Schlumberger involved on-the-job training with focus on Wireline Field Engineer. Two of the TIMOR GAP staff was sent to Roma, QLD, Australia for the duration of 6 months, from 8 March to 28 September 2019, to undertake this training. With this program, the staff was exposed to all operational

aspects of wireline field engineer job through intensive field exposure, hands-on training with the equipment and maintenance and some theoretical material (web-based modulus). The following are the learning and hands-on experience obtained:

- Quality, Health, Safety and Environment standards in relation to wireline operations which include but not limited to standard work for field operations, fatigue management, hazard identification, hazardous material, explosive, radiation, and environment;
- Perform and manage the field operations at the base location, which includes equipment maintenance, equipment preparation, and tool calibrations;
- Perform the field operations at the wellsite, which includes the operations of equipment at the well site (gun arming, tool installation/connection) rig up and rig down equipment;
- Theoretical material (web-based module) for technical aspects of the wireline operations, which includes Standard Working Instructions, logging element, logging unit, logging tools, depth measurement and control procedures, telemetry, acquisition system, and radioactive sources; and
- Gain exposure to different wireline job operations, which includes triple- and quad-combo job with Platform Express, MDT Tester, and perforation with gun system and charger.

TIMOR GAP's Geologist from New Venture Unit had the opportunity to focus more on the Wireline Field Engineer training in the Schlumberger's active drilling operations which took place in different states within Australia, including Roma in Queensland, Moomba in South Australia and Melbourne in Victoria. The Wireline training was con-

ducted inside the base (workshop) and wellsite operations (rig), providing the opportunity to gain exposure to field work and wellsite operations, including exposure to different rigs, different tools, different wireline jobs which are considered a valuable experience for the secondee and to the TIMOR GAP's future.



Figure 5-10 : New Venture Geologist inside the logging unit (left) and during the on-job-training with Schlumberger (right)

iii. Mud Engineer, Baker Hughes, Australia

The capacity building with Baker Hughes involved the placement of two of TIMORGAP staff in ENI offshore rig for duration of 6 weeks with 2 weeks' rotations between the 2 staff from E&P Unit and New Venture Unit. The program focused on the role of Mud Engineers on daily

operations. With this program, the staff were exposed to and learnt various aspects related to the role of the Mud Engineers during drilling operation. The learning experience are detailed as follow:

- Safety aspects of offshore drilling rig starting from emergency evacuation procedures, toxic gas escape plans and PPE
- Mud reports which covers checking mud properties, fluid system, regular check of sack store room, volume and mud weight;
- Observe and learn the communication between Mud Engineer and DFO such as Mud Engineers giving instructions to DFO for mud mixing, change of shaker screens and control mud pits volume and chemical treatments as well as the communication between Mud Engineers with company man and logistic on daily basis;
- Physically seeing the drilling fluid products and request whenever possible to ask the mud engineer to explain the function of each product.



Figure 5-11: TIMOR GAP's Geoscient during hands-on training in the Workshop (left); Mud lab on site (Kanase-1) (right)

iv. Exploration & Development and Drilling Training, ConocoPhillips, Australia

ConocoPhillips, as the operator of the Bayu-Undan field, also accommodated two TIMORGAP personnel to its office in Perth, Australia, on the department of Exploration & Development and Drilling. The secondment period lasted for a whole year of 2019 (from 7 January to 27 December 2019).

TIMOR GAP's Reservoir Engineer from the E&P Unit worked closely with the Exploration & Development Department have been involved in the following activities during the program in ConocoPhillips Perth Office, Australia:

- Mentored by the Senior COP Geologist building the Bayu-Undan Static Model from scratch;
- Mentored to perform quality checking to raw data prior to inputting into software's for further analysis;
- Perform Pressure transient analysis to one of the infills wells drilled in 2018;

- Learn how to build well performance model; and
- Learn and perform core activities of reservoir engineering such as model upscaling, simulation, well card update, history matching and forecasting.

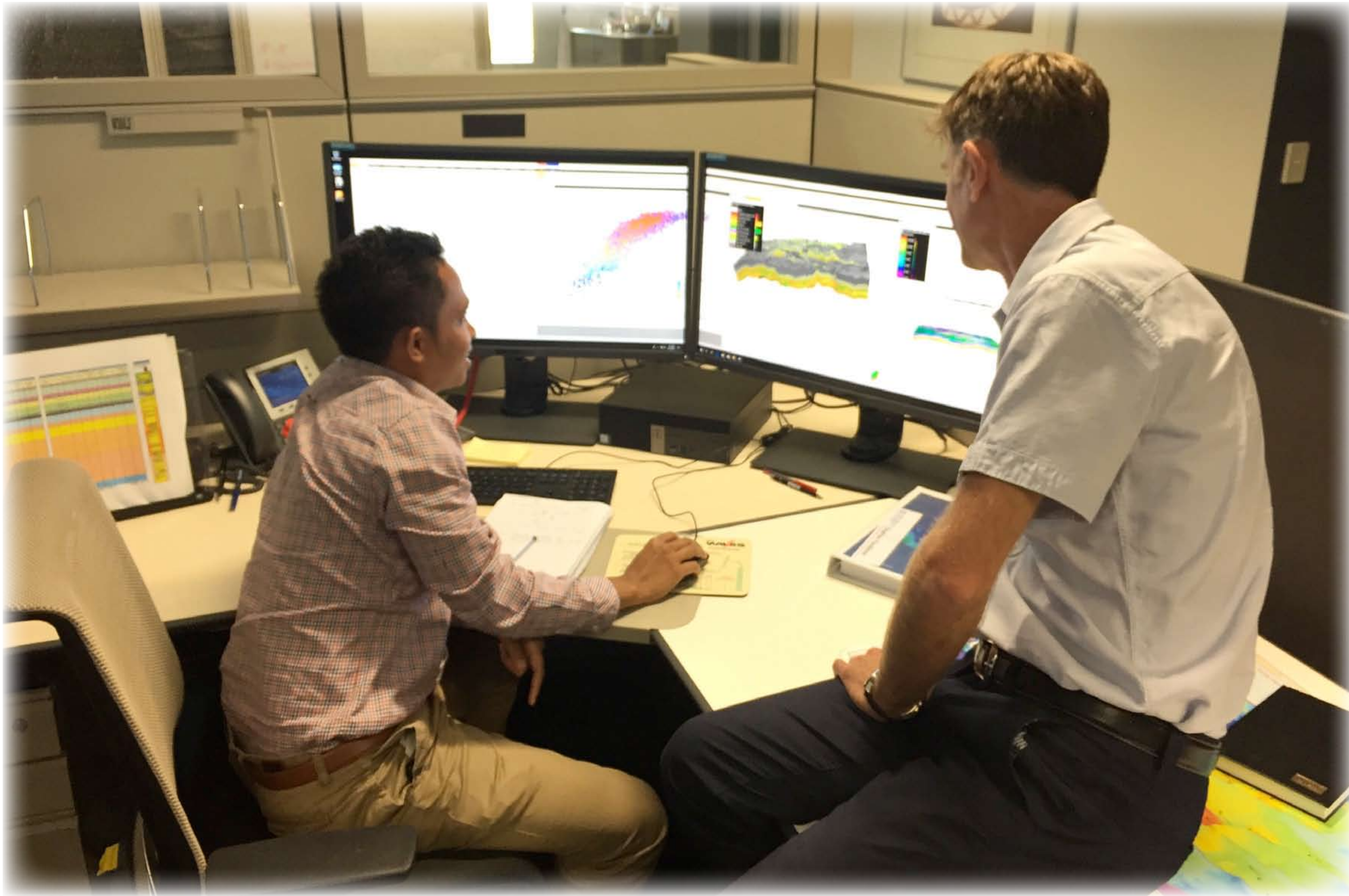


Figure 5-12: TIMOR GAP's E&P Reservoir Engineer discussed geomodelling with Conoco Phillips Principal Geologist Kim McInerney, September 2019

TIMOR GAP's Geophysicist from New Venture Unit had the opportunity to work closely with ConocoPhillips' Bayu-Undan Wells Team, and directly involved in the Bayu-Undan Well Abandonment Project. This project involved programs such as identification of Reservoir and Barrier formations, evaluation on current well condition especially the cement job on production casing across shale formation, construction of Basis of Design (BOD)

and Well Time Cost Estimate. Towards the end of program, the secondee also had opportunity to go offshore as part of Bayu-Undan well Intervention Program. During this program, he was able to assist and gained exposure to well intervention engineering and operation, and also exposure to the Bayu-Undan Production Facilities at CUQ and DPP platform.



Figure 5-13: TIMOR GAP's Geophysicist during his secondment with ConocoPhillips

b) Kanase-1 Drilling Campaign, ENI, Australia

Two of TIMOR GAP staffs successfully completed their secondment program that took place from 25 February till 24 May 2019 in Eni Office, Perth Western Australia. The Secondment program that was held in Perth, Australia, covered both exploration and drilling activities carried out during Kanase-1 Drilling Campaign. The main purpose of the activities is to involve and develop the capability of E&P Unit staff to learn and improve their knowledge as well as hands-on experience with regards

to PSM of Kanase Prospect. Familiarization with Kanase prospect (Plays and Targets), POS (Possibility of Success), understand of other G&G methods/data used in Exploration period, well location and path of Kanase-1 well for G&G secondee, whereas the Drilling secondee had the opportunity to be exposed and learn about well design concept selection, drilling basis of design, well control, and etc.

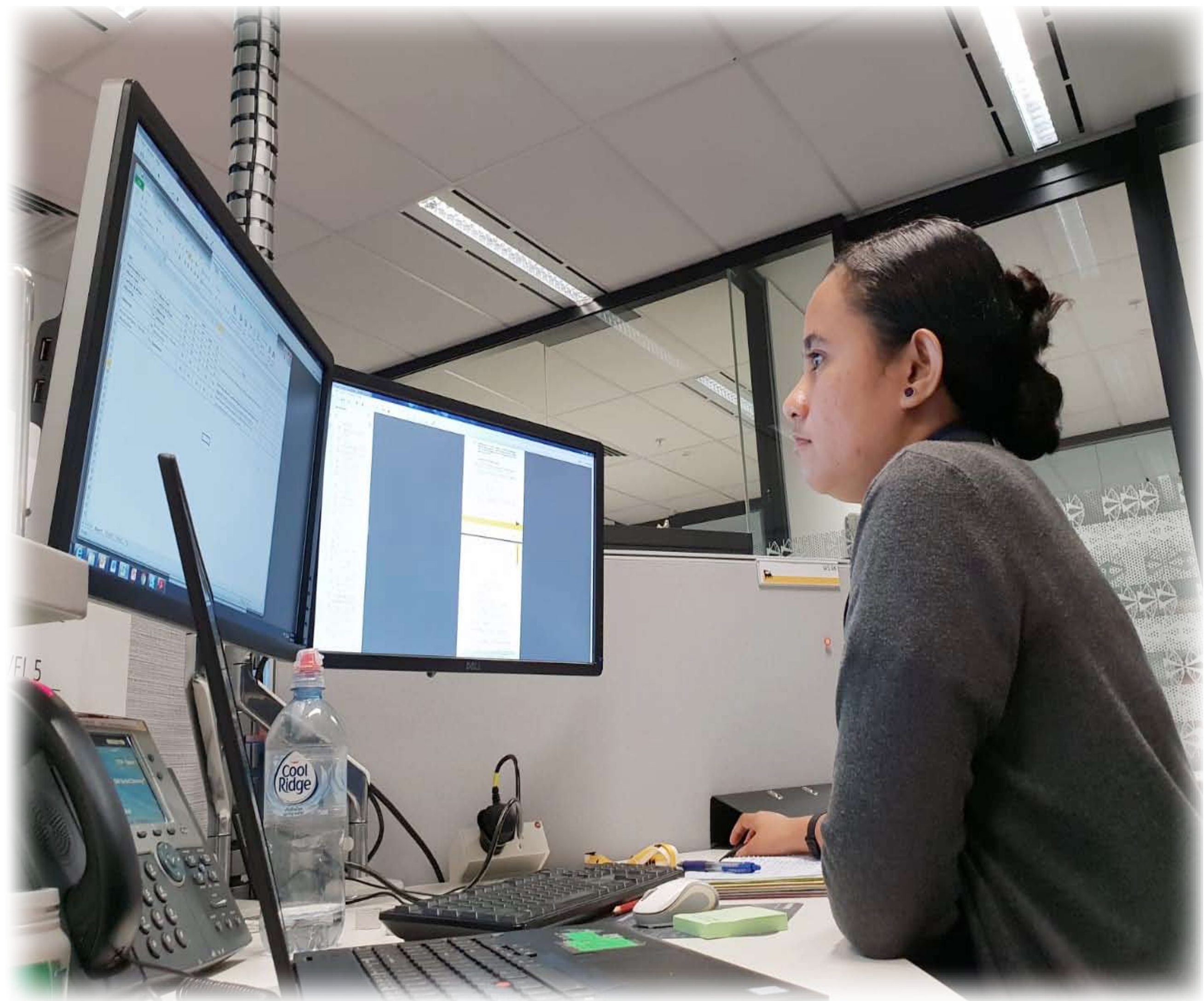
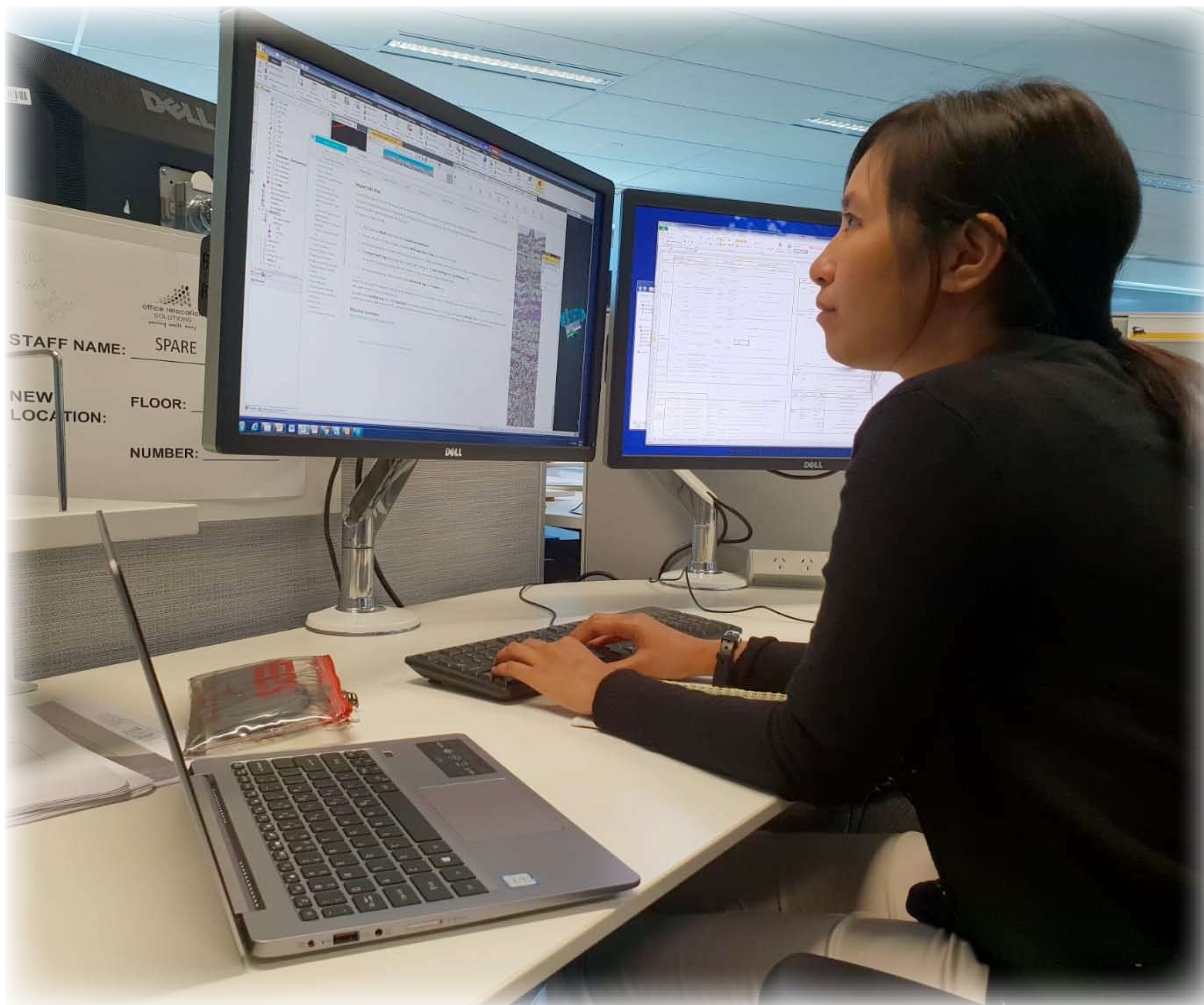


Figure 5-14: TIMOR GAP's Geoscientist (top right), analyzing G&G data from Kanase Drilling Campaign, and Drilling and Development Graduate Engineer (top left) assessing Daily Drilling Report from Kanase Drilling Campaign Two TIMOR GAP secondees with ENI Engineering and G&G Team at ENI Perth office (bottom)

c) Onshore Vibroseis 2D Seismic Survey, BGP, Timor-Leste

TIMOR GAP Seismic Services and its partner and PT.BGP Indonesia were awarded with a service agreement to conduct the onshore vibroseis 2D seismic survey for the PSC

TL-OT-17-08 (Block A) and PSC TL-OT-17-09 (Block C), both located on the southern coast of Timor-Leste. The second phase of the project corresponding to the 2D

seismic acquisition on Block C, commenced in the third quarter of 2019 and was completed on 19 October 2019. During the aforesaid period, three TIMOR GAP Seismic

Services engineers were involved in the field operations for an on-job training and hands-on experience throughout the acquisition process.



Figure 5-15: TIMOR GAP Seismic Services engineer inside (top) and in front of (below) the recording truck during the 2D Seismic Survey

d) Optimization Design for Refinery & Petrochemical Complex Project, TTCL, Thailand

As part of the arrangement with TTCL, the second group of four staffs from TIMORGAP were seconded to TTCL to experience first-hand on the execution of the Opti-

mization Design for Refinery & Petrochemical Complex Project and also to make timely decisions when input from TIMORGAP as project owner was required.

5.2.3.4 Study Leave

TIMOR GAP recognizes the benefits of staff development for individuals and the company as a whole, offers opportunities for employees to undertake personal and professional development. Our company's study leave policy provides a flexible arrangement in terms of job security

benefit for employees and to retain the best talented employees that enable them to improve and provide future contribution to the company.

In 2019, six employees returned to the company after completing the following Master's Degrees:

- Master of Engineering in Oil and Gas Program at University of Western Australia, under Australian Awards Scholarship Program;
- Master Degree in Educational Leadership and Management at Unitec Institute of Technology, New Zealand, under New Zealand Development Scholarship;
- Master Degree in Natural Gas Engineering and Management at University of Oklahoma, USA, under Fulbright Scholarship;
- Master Degree in Business Analysis and Consulting at University of Strathclyde, in Glasgow, Scotland, under Chevening Scholarship;
- Master Degree in International Commercial Law at University of Aberdeen, Scotland; and
- Master of Environment at Macquarie University, Australia, under Australian Awards Scholarship Program.

During this period, our employees continues and are successfully awarded competitive scholarships programs from countries such as Australia and New Zealand, and

academic courses in international renowned universities, as following:

- Master Degree in Petroleum Geoscience at Victoria University of Wellington, New Zealand, under New Zealand Development Scholarship;
- Master Degree in Computing at Institute of Technology of Auckland, New Zealand, under New Zealand Development Scholarship;
- Master of Professional Accounting at University of South Australia (UNISA), Australia;
- Master of Project Management at University of South Australia (UNISA), Australia, under Australian Awards Scholarship Program; and
- Master of Petroleum Geoscientist at University of Western Australia, Perth, under Australian Awards Scholarship Program.

5.2.4. Corporate Culture

Corporate culture is the soul of the company and what enables us to grow, adapt to the continuously changing markets and environments, and to shield ourselves from external adversities and challenges. A resilient company will respond better and more efficiently to challenges, overcoming them and adapting itself as a whole. TIMOR GAP adopted a **CAN DO** corporate spirit since its establishment, which represents our values (Competent & knowledgeable, Assessing and seizing the opportunities for business, Non-discriminatory & responsible, Doer & creative, Optimist) and how we aim to conduct our business. We promote and instigate this spirit in all activities we perform, aiming to set a healthy and strong corporate culture that values each employee in the organization, regardless of his/hers job duties, which results in employees working as a team to meet the company's and their own individual and professional goals.

TIMOR GAP strives to maintain a constructive, motivating and open working environment by organizing and promoting the participation of our staff in activities with focus on team building capability and strengthen relationship

among employees. This year, TIMOR GAP supported and participated in the Civil Service Commission Cup, a sport event organized by the Civil Service Commission for national civil servants from all Ministries and public institutions, comprising several sports modalities, such football, basketball and volleyball. Sports and social events as the likes of the preceding allow to create a space of social interaction outside office working hours, while encouraging an active lifestyle and healthy competition.



Figure 5-16: MPM's volleyball female team, composed by TIMOR GAP, ANPM and IPG

5.3. Information & Communication Technology (ICT)

Information & Communication Technology (ICT) is essential to the company's efficiency and productivity, as it remains a priority, in order to keep up with TIMOR GAP's growth, it is essential upgrade and install adequate hardware and software to meet the needs of all business areas, including support functions.

In line with the above, we continue to pay attention to our Management Information System, with particular focus on its Enterprise Resource Planning (ERP) and data management system, namely SAP (System, Application and Product). Following the assessment and diagnostic for TIMOR GAP SAP system that was completed in January 2019, TIMOR GAP continued to engage Ernst & Young, a multinational auditing and consultancy company, to deliver SAP Retrofit & Maintenance project. The SAP Retrofit was completed in September 2019 and all SAP modules, namely Sales and Distribution (SD), Financial, Accounting and Controlling (FICO), Material Management (MM), Human Capital Management (HCM) and BASIS, were successfully integrated and implemented and Go Live on 15 October 2019. User Acceptance Test (UAT) to modules were all accepted by end users and overall project was a success. As part of the project scope, an in-house training was delivered to TIMOR GAP's staff, comprising the SAP modules

above-mentioned.

As the company grows over time, TIMOR GAP continuously seeks for more efficient and innovative solutions to enhance its security system and protect the company's information and data. An ICT Security Audit was completed in 2019 by a third party consultant, COMPNET Indonesia, and the findings and recommendations for system improvement duly addressed by our IT Department.

Pursuant to TIMOR GAP's Strategic and Business Plan, we aim to implement an Information Management Strategy to assist and support the company in applying standards and governance to its data and assets professionally. For this purpose, TIMOR GAP contracted Schlumberger Australia, to carry out an Information Management Assessment with detailed reports and recommendations for improvements delivered by the Consultant.

As the next step of the Information Management Strategy, TIMOR GAP anticipates to produce a Data Governance and Policy Setup, with the aim to establish the Data Governance for company's key data assets in the context of business workflows, and policies and procedure for data quality management aligned with industry standards.





5.4. Quality, Health, Safety and Environment (QHSE)

Quality, Health, Safety and Environment (QHSE) values and principles are at the forefront of TIMOR GAP's priorities, remaining of a paramount importance to our operations and business activities. Our QHSE Business Unit is mandated with the implementation and follow-up of the QHSE requirements, however, ensuring their successful and efficient application is a responsibility of every employee and business unit within TIMOR GAP. The success of the QHSE management system depends on leadership, commitment and participation from all levels and functions of the company.

To assist on the above, QHSE unit developed its Action Plan 2019-2021, setting a direction for achieving TIMOR GAP's objectives and strategic goals. This Action Plan includes the QHSE goals to promote good standards and practices to protect employees, the environment, and

company's property; to generate human capital with the knowledge and competence to promote health and safety; and to change the company's culture from Pathological or Reactive to Calculative.

Considering QHSE high priority to achieve companies' objectives, QHSE plays an important role and responsibility as integral part of TIMOR GAP's activities, and in 2019, in order to fulfil the Objectives, Targets and Programs (OTP) set out for this year, QSHE unit continued to implement a few programs and actively participate in works with other business units; monitoring the company's activities; conducting IMS internal audit and surveillance audit; as well as to perform regular activities such as inspection of safety equipment and safety briefing, and promoting the reduction of plastic bottles, paper and electricity usage.

5.4.1. TIMOR GAP's QHSE 2019 Objective, Target & Program

5.4.1.1. Integrated Management System (IMS)



Figure 5-17: IMS Logo

We strive to promote good standards and practices in all company activities, this resulting on TIMOR GAP's Integrated Management System (IMS) being successfully recognized with the awarding of the International Organization for Standardization (ISO) certificate in 2016

from the international certification body DNV GL Singapore, one of the leading global providers for management system certification. TIMOR GAP is the first company in Timor-Leste to be awarded with an ISO certificate for its IMS, through which, the QHSE Unit can provide full support to other units' work to guarantee the quality of the work; the safety of the employees; protection of company assets and properties; and minimal effect of the projects to the environment.

The IMS has been continuously improved since its implementation, and continues in complying with the new

ISO standard requirements. In line with this, and following a surveillance and upgrading audit, in 2018, the standard ISO 9001:2008 transitioned to ISO 9001:2015, ISO 14001:2004 transitioned to ISO 14001:2015, and OSHAS:2007 transitioned to ISO 45001:2018 on Occupational Health and Safety Management System (OHSMS).

To evaluate the effectiveness of the implementation of the IMS, TIMOR GAP undertakes internal audits yearly, verifying the compliance of the company Projects and/or Process implementation are in line with ISO standard requirements. An internal audit was conducted from 7 to 11 October 2019 involving QHSE Internal Auditors from all units, fully trained and certified for this purpose.

Following the above-mentioned internal audit, a surveillance/external audit was carried out from 18 to 21 November 2019, with focus on IMS & all Units processes and its procedures. This audit is performed annually by the certification body, in order to review and ensure if the system is continuously maintained and improved and that it remains in compliance with the mandatory ISO standards requirements.

5.4.1.2. Occupational Health and Safety

TIMOR GAP adhered to the philosophy of "SAFETY FIRST", always putting safety and wellbeing of employees at the top priority. Health and safety issues arisen from various TIMOR GAP's activities can be appropriately identified, assessed, controlled and monitored. Numbers of procedures and guidelines were developed providing processes needed in the assessment and management of risk, incident and accident, either in the office environment or in the field and during operation. With this, TIMOR GAP now has an applicable system for managing Occupational Health and Safety and for managing any related records for either its identified risks or also incident

and accident that has occurred from its various activities, including its mitigation and controlling action needed and arisen from these risks, accidents or incidents.

Throughout its works, either field operation or daily activities, TIMOR GAP conforms to health and safety related code of conduct, oil and gas industrial best practices, ISO's requirements, Timor-Leste Labor Code Section IV-Occupational Safety, Hygiene & Health and any other international standards. In line with this, regular activities are performed routinely by the QHSE unit as better described in the table below.

Activity	Objectives
Safety Briefing	Delivering information about safety prior to departure in order to increase safety awareness during the journey
Safety Induction	Given to visitors to TIMOR GAP office to introduce the safety layout during emergency situations
Equipment Inspection	Conducting inspection to all vehicles used for field trip and fire extinguishers at TIMOR GAP office to ensure they are still in good conditions for use
First Aid Kit Provision	Providing First Aid Kits to employees travelling to the districts for medical treatment during journey
Emergency Drill	Carrying out regular emergency drill at the main office to help employees to be better prepare for any emergency situation. The drill help familiarize staff with the evacuation route and safety practices

Table 5-1: TIMOR GAP’s QHSE routine activities

TIMOR GAP took part on the annual emergency drill organized by Timor Plaza was conducted on 4 October 2019. The drills are intended to better prepare the TIMOR GAP employees to respond to the emergency situation when any real emergency situation occurs, by

providing better awareness and evaluate the effectiveness of the emergency response plan and the building’s emergency infrastructure and equipment. The referred drill was successfully carried out according to the applicable emergency protocol and procedures set.



Figure 5-18: TIMOR GAP’s employees and QHSE team during the emergency fire drill, conducted at TIMOR GAP offices in Timor Plaza



Figure 5-19: HSE inspection to TIMOR GAP's Fuel Station in Suai

TIMOR GAP adhered to the philosophy of “SAFETY FIRST”, always putting safety and wellbeing of employees at the top priority. Health and safety issues arisen from various TIMOR GAP's activities can be appropriately identified, assessed, controlled and monitored. Numbers of procedures and guidelines were developed providing processes needed in the assessment and management of risk, incident and accident, either in the office environment or in the field and during operation. With this, TIMOR GAP now has an applicable system for managing Occupational Health and Safety and for managing any related records for either its identified risks or also incident and accident that has occurred from its various activities, including its mitigation and controlling action needed and arisen from these risks, accidents or incidents.

Throughout its works, either field operation or daily activities, TIMOR GAP conforms to health and safety related code of conduct, oil and gas industrial best practices, ISO's requirements, Timor-Leste Labor Code Section IV-Occupational Safety, Hygiene & Health and any other international standards. In line with this, regular activities are performed routinely by the QHSE unit as better described in the table below.

5.4.1.2.1. Hazard Identification, Incident/Accident Management and First Aid

Hazard Identification, Risk Assessment and Control (HIRAC), Incident/Accident Records and First Aid are some of the components applied to manage occupational health, safety risk to employees and assets, and to mea-

sure the company's HSE performance. All these are part of the IMS implementation throughout the company activities. Further details for this year HSE performance are presented below.

a) Hazard Identification, Risk Assessment and Control (HIRAC)

TIMOR GAP's IMS encompasses a HIRAC form to identify risks through the process of finding, recognizing and describing the risks in the workplace, so they can be analyzed and evaluated prior to treatment to reach a tolerable risk level. This tool covers not only the safety issue but also the environment as well as quality of the process or activity. A total of twenty-four (24) HIRAC reports were collected during 2019. All reports were properly addressed in a timely manner by each responsible unit and actions taken accordingly.

b) Incident/Accident Management

An Incident/Accident report is produced when a work related event in which an injury or fatality occur or could have occurred, or an undesired event that results in harm to people (injury), damage to property, loss to production or harm to environment. During 2019, only one (1) incident/accident report was collected and properly addressed and closed. No major injuries, damages or fatalities were recorded.

c) First Aid

First aid is provided, either at the office or in the field, by competent or certified First Aider to other employees who are feeling unwell or are injured at workplace. No first aid assistances were reported this year.

5.4.1.3. Environment Management System

TIMOR GAP abides with the applicable law and fulfills its responsibility with the environmental protection by conducting studies for all projects under its portfolio that assess the projects' potential impacts on the environment and social communities. Environmental Impact Assessments (EIA) have been carried out by TIMOR GAP and partners pursuant with Decree-Law No. 5/2011, on Environmental Licensing, the legal framework for regulating the environmental impacts of significant projects in Timor-Leste.

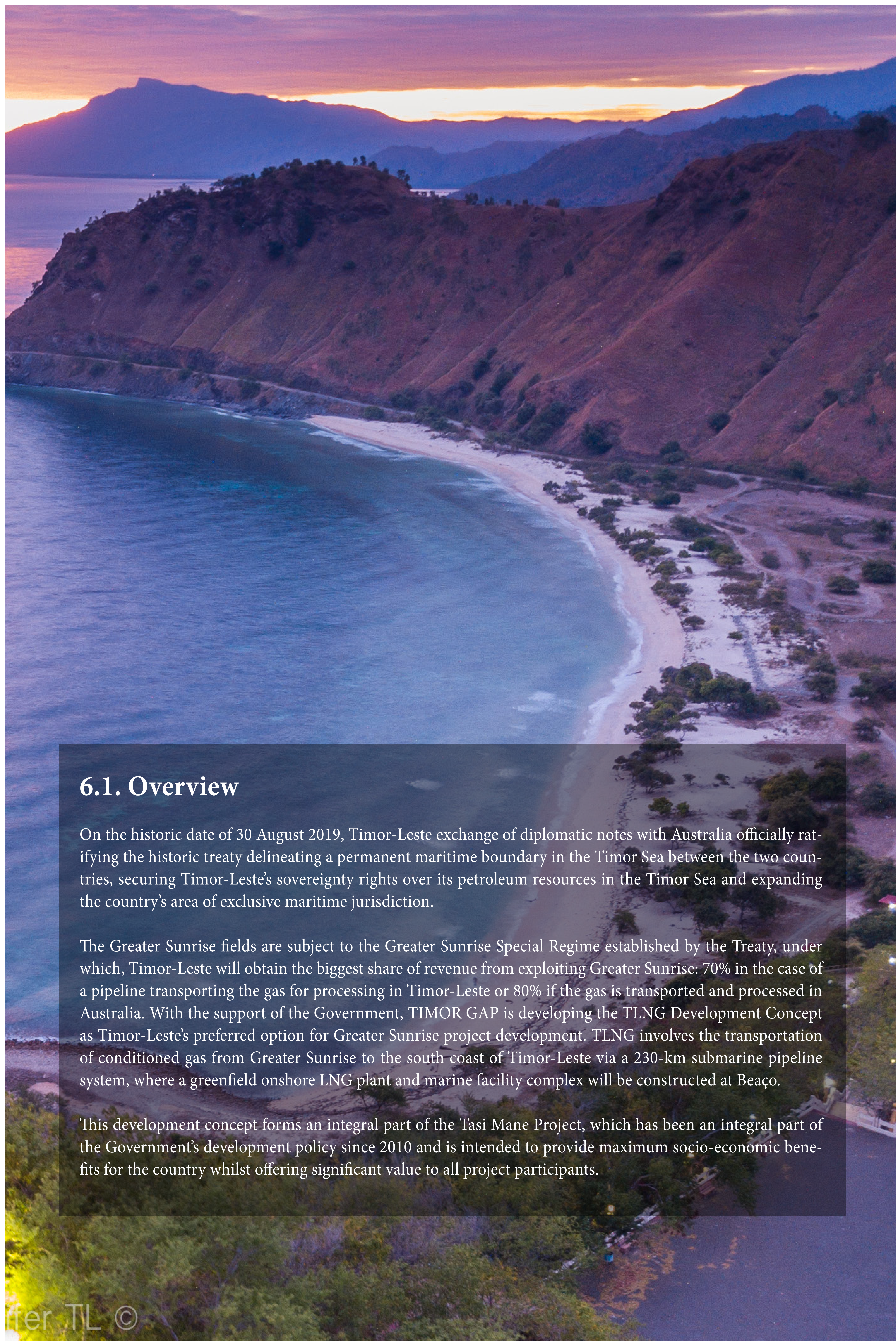
The EIA study identifies the social, economic and major environmental impacts that are likely to arise from the construction and operation of the projects, assess qualitative environmental impacts of the project on sensitive receptors including communities, and prescribes measures for management and mitigation to minimize likely adverse impacts. The EIA produces two standalone documents: an Environmental Impact Statement (EIS) and an Environmental Management Plan (EMP), which are presented for evaluation to the environmental authority. An Environmental License is issued to the project upon the EIS and EMP endorsement by the environmental authorities.

As project owner TIMOR GAP has followed thoroughly through all requirements of the EIA process such as public consultation and socialization with relevant stakeholders, open meeting, group discussion, survey or presentation and other requirements. In 2019, we continued to work towards the execution and completion of the EIA studies for LNG Plant and Greater Sunrise-Beaço Pipeline. The Terms of Reference (TOR) for both EIA studies, carried out separately due the offshore pipeline project complexity, were subject to further review and alterations according with ANPM latest comments and submitted to the latter for additional reviews and/or endorsement. More details on this subject are available under the Section "4.4. Timor-Leste LNG (TLNG) in Beaço" of this Report. TIMOR GAP proceeded with the environmental license renewal for the Suai Supply Base, an extension expected to be granted on 2020. For this purpose, the Suai Airport project was separated from the SSB project, as the Airport is completed and under the management of the Ministry of Public Works.



6. Permanent Maritime Boundaries Treaty & Greater Sunrise Special Regime





6.1. Overview

On the historic date of 30 August 2019, Timor-Leste exchange of diplomatic notes with Australia officially ratifying the historic treaty delineating a permanent maritime boundary in the Timor Sea between the two countries, securing Timor-Leste's sovereignty rights over its petroleum resources in the Timor Sea and expanding the country's area of exclusive maritime jurisdiction.

The Greater Sunrise fields are subject to the Greater Sunrise Special Regime established by the Treaty, under which, Timor-Leste will obtain the biggest share of revenue from exploiting Greater Sunrise: 70% in the case of a pipeline transporting the gas for processing in Timor-Leste or 80% if the gas is transported and processed in Australia. With the support of the Government, TIMOR GAP is developing the TLNG Development Concept as Timor-Leste's preferred option for Greater Sunrise project development. TLNG involves the transportation of conditioned gas from Greater Sunrise to the south coast of Timor-Leste via a 230-km submarine pipeline system, where a greenfield onshore LNG plant and marine facility complex will be constructed at Beço.

This development concept forms an integral part of the Tasi Mane Project, which has been an integral part of the Government's development policy since 2010 and is intended to provide maximum socio-economic benefits for the country whilst offering significant value to all project participants.

6.2. Permanent Maritime Boundaries Treaty Ratification

2019 marked the conclusion of a landmark process initiated in 2016 with the compulsory conciliation proceedings brought forward by Timor-Leste against Australia, under the United Nations Convention on the Law of the Sea (UNCLOS), an unprecedented chapter in the international law as it marked the first time that the compulsory conciliation process had been invoked.

Through the aforesaid process, the historic Treaty between Australia and Timor-Leste Establishing their Maritime Boundaries in the Timor Sea (hereinafter referred to as the “Treaty”) was subsequently agreed and signed on 6 March 2018, supporting Timor-Leste claim that a median line should be drawn between the two countries in accordance with the principle of “equidistance”, and demarcating, for the first time, permanent maritime boundaries in the Timor Sea.

In order to allow the ratification and entry into force of the Treaty, on 18 July 2019, Timor-Leste National Parliament passed and approved a legislative package, comprising bills developed to adjust the Petroleum Activities Law, Petroleum Fund Law, Tax Law and two laws regulating the taxation of the Bayu-Undan field exploration and to establish a Special Labor and Migratory Regime applicable to the exploitation of Bayu-Undan project, complemented by other legislations. These bills and amendments adapt the required existing legislation in force enabling the ratification of the Treaty.

On 30 August 2019, Timor-Leste’s twentieth anniversary of the independence referendum, the Treaty was officially ratified with the exchange of diplomatic notes between the Governments of Timor-Leste and Australia, thus confirming that both countries have fulfilled their respective requirements for entry into force of this Treaty, in accordance with the Article 13 of the Treaty. This is a landmark achievement as it marks Timor-Leste resolute determination in claiming its sovereign rights over the natural resources in the Timor Sea.

The Treaty will support Timor-Leste’s economic development by providing new opportunities for commercial and industrial development. Permanent maritime boundaries will expand Timor-Leste’s area of exclusive maritime jurisdiction, allowing the collection of 100 percent of the proceeds from future exploration and exploitation of oil and gas fields in the Timor Sea, such as Bayu-Undan gas and condensate field and Kitan field which are now transferred to Timor-Leste exclusive maritime jurisdiction. Considering the foregoing, the Treaty also encompasses transitional arrangements to provide stability and certainty, particularly to existing commercial interests operating in the area, ensuring that companies with investments in the Timor Sea are not at a disadvantage. In line with this, and pursuant to the provisions set forth in the Treaty, on 28 August 2019, Timor-Leste signed five new and revised Production Sharing Contracts with the offshore petroleum operators affected by the Treaty. The revised PSCs guarantee conditions and terms equivalent to those arrangements previously in place, and reflect both Parties’ interest in ensuring that the existing operations continue with minimal impact. In this occasion TIMOR GAP and its joint venture partners signed a revised PSC for the block 11-106, onwards designated PSC TL-SO-T 19-11 (PSC 19-11), previously located on Joint Petroleum Development Area (JPDA), and now under Timor-Leste exclusive maritime jurisdiction.

With the Treaty ratification, the Timor Sea Treaty and the International Unitization Agreement, signed between Australia and Timor-Leste in 2002 and 2003 respectively, ceased to be in force, consequently leading to the dissolution of the Joint Commission, which was established by the Timor Sea Treaty with the purpose to oversee and regulate petroleum activities in the former JPDA jointly administered by Timor-Leste and Australia. A last Joint Commission meeting for the JPDA was held on 15 August 2019, in Dili, Timor-Leste.

6.3. Greater Sunrise Special Regime

The Greater Sunrise fields are part of the rock formation known as the Plover Formation (Upper and Lower) that underlies the Special Regime Area and contains the Sunrise and Troubadour deposits of petroleum, discovered in 1974 and located in the Timor Sea, 140 km south-east of Timor-Leste and 450 km north-west Australia.

The Greater Sunrise fields are subject to the Greater Sunrise Special Regime established by the Maritime Bound-

aries Treaty between Timor-Leste and Australia. The Greater Sunrise Special Regime provides that Timor-Leste will receive either 70 or 80 percent of the upstream revenue from the direct upstream exploitation of petroleum produced in the Greater Sunrise fields depending on the development option selected, that is, whether by means of a pipeline to a liquefied natural gas (LNG) processing plant in Timor-Leste or Australia.

6.3.1. TIMOR LNG (TLNG)

The Government of Timor-Leste has clearly and consistently stated that Greater Sunrise fields must be developed via an onshore LNG development within Timor-Leste, using a submarine pipeline system across the Timor Trough, from the Greater Sunrise fields to landfall and LNG Plant at Beço on the south coast. The Greater Sunrise development forms a key part of the Tasi Mane project which the Government of Timor-Leste has initiated to facilitate and encourage the country's petroleum development, with subsequent general economic and social benefits for the country. Processing of the Greater Sunrise reserves to the south coast of Timor-Leste is therefore a major driver in

relation to the overall project development strategy.

The Timor LNG (TLNG) development concept will be executed as two separate projects: a) Upstream project, which will encompass the development of the subsea wells and associated production system, offshore production/processing facilities, and onshore facilities for processing and storage and offloading of condensate, liquids and MEG; and b) Downstream project, which will encompass the export pipeline to shore (across the Timor Trough), LNG plant facilities and marine/LNG export facilities. The TLNG development concept is shown schematically below.

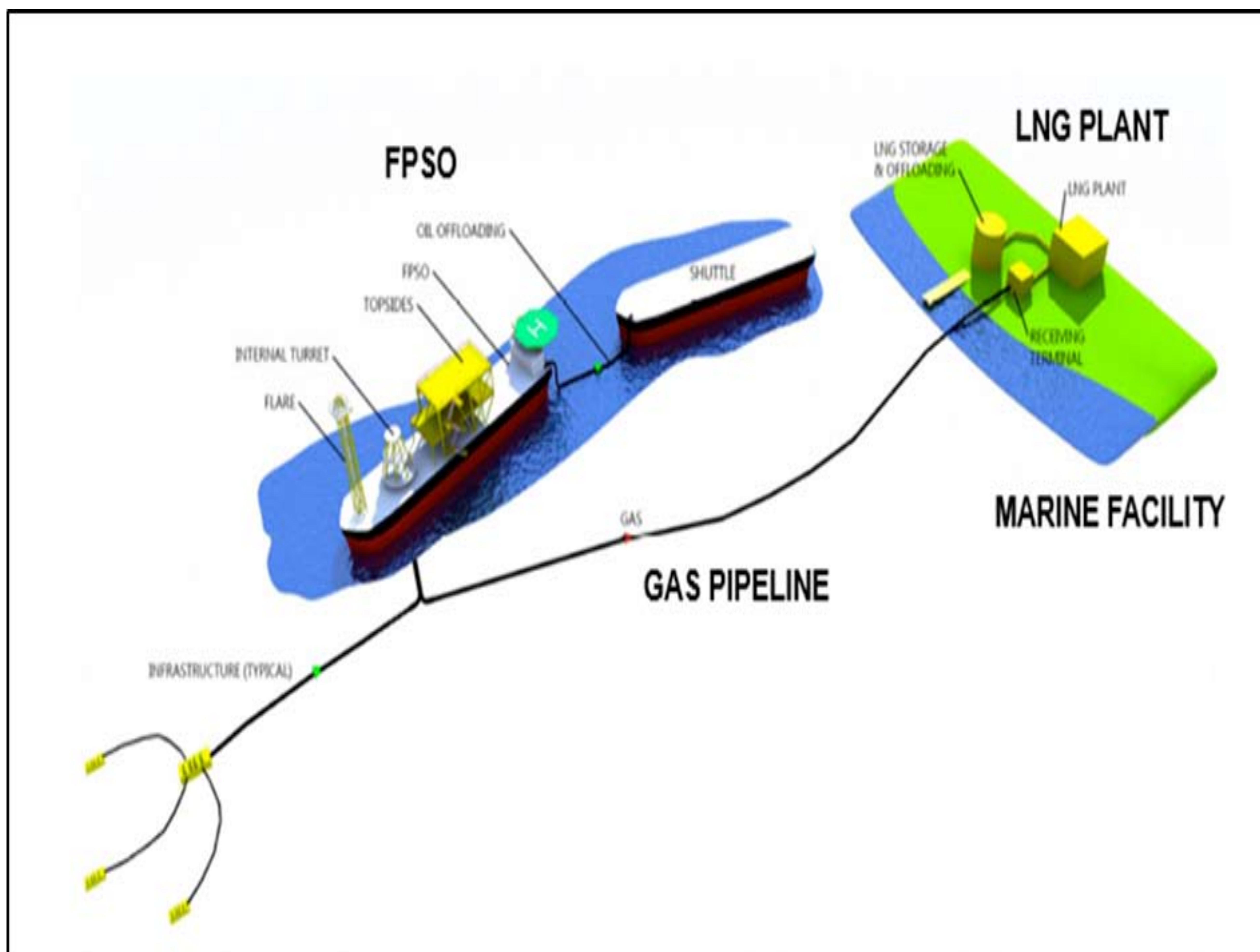


Figure 6-1: TLNG Development Concept

TIMOR GAP, as Timor-Leste's State owned national oil company, supports the Government's aim to process the Greater Sunrise gas in Timor-Leste, being elected to rigorously document the technical and commercial viability and competitiveness of the TLNG, and with the support of the Government, it has undertaken to present the TLNG Development Concept as Timor-Leste's preferred option for the Greater Sunrise project development. Over

the last years, the Timor-Leste Government, through TIMOR GAP, has undertaken a significant number of development studies in relation to the upstream and downstream project technical concepts, including the Greater Sunrise Timor LNG Development Concept completed in 2017, and the Optimization Concept Study for the TLNG Downstream project initiated in 2018 and currently ongoing.

The Treaty, and the progress made during the conciliation, allowed the creation of a platform to negotiate with the Upstream Joint Venture Partners, this resulting in the acquisition of Shell and ConocoPhillips' participating interests and rights in the PSC JPDA 03-19, PSC JPDA 03-20, Retention Lease NT/RL2 and Retention Lease NT/RL4 in the Greater Sunrise field, through a Purchase and Sale Agreements signed between the above-mentioned companies, its affiliates and TIMOR GAP's wholly-owned subsidiaries, exclusively created and constituted for this purpose: TIMOR GAP GREATER SUNRISE 03-19, Unipessoal, Lda.; TIMOR GAP GREATER SUNRISE 03-20, Unipessoal, Lda.; TIMOR GAP GREATER SUNRISE RL, Unipessoal, Lda.; and TIMOR GAP GREATER SUNRISE RL2, Unipessoal, Lda. With the aforesaid commercial

transition completed on 16 April 2019, and endorsed through the Government Resolution no. 20/2018, of 24 October, and Resolution no. 5/2019, of 30 January. TIMOR GAP holds a 56.56% participating interest allowing the company to proceed and favoring discussions with other Upstream Joint Ventures Partners, namely Osaka and Woodside, the Operator, on the future development of the Greater Sunrise resources.

TIMOR GAP continued to participate in the Greater Sunrise stakeholder discussions and negotiations in 2019, and we remain confident and positive that an outcome which delivers substantial benefits to Timor-Leste will be reached in the upcoming year.



Figure 6-2: H.E. Special Representative of the Government for the Petroleum Sector and Chief Negotiator for Maritime Boundaries, Mr. Kay Rala Xanana Gusmão, with the representatives from Shell and ConocoPhillips on the occasion of the signature of the Purchase and Sale Agreement of the participating interests in the Greater Sunrise fields



Figure 6-3: Timor-Leste team, Shell and ConocoPhillips on the occasion of the Purchase and Sale Agreement of the participating interests in the Greater Sunrise fields