

Terms of Reference

The Development of Environmental Impact Assessment (EIA) for Greater Sunrise – Beaço Pipeline project

Date	Rev	Prepared by	Verified by	Approved by
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23 February 2018	0	JC	TF	DL
30 April 2018	1	JC	TF	DL

DOCUMENT HISTORY

Rev. No.	Section No.	Description of amendment	Date/mm/yy	Amended by
1	Document Header	Updated (TERMS OF REFERENCE FOR EIS & EMP FOR SUNRISE-BEAÇO PIPELINE PROJECT)	30/04/18	Pipeline EIA Study Team
	Executive summary	Removed.	30/04/18	Pipeline EIA Study Team
	Section I, Introduction	Numbering format changes and also replace TOR for EIA to TOR for EIS and EMP.	30/04/18	Pipeline EIA Study Team
	Section 2, Background Information	<ul style="list-style-type: none"> Since Sub section 3.1, the project component such as new town and upgrade of Airport existing need to be omitted and should be applied as alone project this information has been removed. Section 3.1(project overview: Timor - Leste LNG) has been changed to section 2 (Background Information). 	30/04/18	Pipeline EIA Study Team
	Section 2.2 Needs and Objectives	<p>Updated:</p> <p>The needs of the subsea gas pipeline from Greater Sunrise to Beaçó are:</p> <ul style="list-style-type: none"> Maximize Socio-Economic benefits to Timor-Leste. Extract maximum value from the Greater Sunrise Resource. Greater Sunrise to form “foundation” of long term LNG/economic development of Timor-Leste. 	30/04/18	Pipeline EIA Study Team

		<ul style="list-style-type: none"> Provide a foundation project to enable development of common infrastructure on the south coast. 		
	Section 3, Proponent details	Section 5 (Proponent details is updated to section 3).	30/04/18	Pipeline EIA Study Team
	Section 4. Details of consultant	Section 6 (Consultant details is changed to section 5).	30/04/18	Pipeline EIA Study Team
	Section 5 Legal requirements	<ul style="list-style-type: none"> Section 4 (Legal requirement) is changed to section 5. Added a new bullet point “Special Regime for Land Entitlement (Lei N.º 13/2017 de 5 de Junho, Regime Especial Para a Definição da Titularidade Dos Bens Imóveis)”. 	30/04/18	Pipeline EIA Study Team
	Section 6	<ul style="list-style-type: none"> Added study Timeline (Table of TOR study timeline). Added “The EIA study area will cover the total length of ± 231 Km of pipeline route with ± 200-250 m pipeline corridor from Greater Sunrise field to Pipeline landing point at onshore Beaçõ”. 	30/04/18	Pipeline EIA Study Team
	Section 7	Replaced MCIA with VMDpHOA and MPRM with MP.	30/04/18	Pipeline EIA Study Team

DISTRIBUTION LIST

Document No.	Revision No.	Distributed to	Date	Withdrawn on

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1 INTRODUCTION

This Terms of Reference (ToR) is developed to prepare the Environmental Impact Statement (EIS) and Environmental Management Plan (EMP) for the development of Timor-Leste LNG project with four major components, namely Sunrise-Beaço Pipeline, LNG plant, Marine Facility and New Towns. However, as Sunrise-Beaço pipeline project is quite distinct and located offshore, thus its ToR will be created and submitted independently from the other three major components, which are described within this ToR. This project proposed by the Government of Timor-Leste through TIMOR GAP, E.P. and is planned to be developed in Beaço, Viqueque, on the South coast region of Timor-Leste.

The ToR describes the objectives and needs of the proposed project, the scope of works and methods for carrying out the EIA study, the existing environmental conditions, the potential impacts of the proposed project and the mechanism for conducting public consultation with the public, the stakeholders and the affected community. Also, the ToR outlines the contents of the EIS/EMP reports to meet the requirements of the EIA process as required by the Environmental Licensing Law overseen by Environmental Authority of Timor-Leste or known as NDPCEI (National Directorate of Pollution Control and Environmental Impact). In this ToR, the project is classified under Category A projects based on the results of the Project Document submitted to NDPCEI.

Thus, this ToR is developed based on the scoping phase carried out during the public consultation, which is in concordance with project document requirements process. This ToR reflects the public opinions on the EIA study in order to have better formation of EIS/EMP activities framework and identifies any impacts that may require further investigations in the EIA survey phase. A section of the public opinion on the EIS/EMP study will be added to this ToR after project document screening for determining the Category of the environmental study for the proposed project; in which the project screening stage is still in the process.

The development of this ToR is in accordance with the requirements of the Environmental licensing process established by the Environmental Authority to govern or manage any

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impacts of the proposed project development in a designated area, particularly for projects that may have significant or moderate environmental impacts. The objectives of the ToR is to define the scope of works and schedule for the EIS/EMP study as well as to establish strategies for the EIS/EMP on the Sunrise-Beaço Pipeline project from both technical and social or public opinion on any environmental issues that may arise from the project development. Also, to help in providing guidance to the project proponent and its consultant in preparing reports with relevant project specific data that are informative, compact and straightforward to comprehend. This ToR is expected to cover all environmental related features for the Sunrise-Beaço pipeline component of the Timor-Leste LNG project.

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2 BACKGROUND INFORMATION

2.1 Project Overview

The government of Timor-Leste aims to develop the gas from Greater Sunrise field through the building of a subsea pipeline to onshore Timor-Leste, and with the establishment of an LNG plant to process the gas on the south coast at Beaçó, the Municipality of Viqueque (200 km southeast of Dili). It is stated in the Timor-Leste 2011-2030 Strategic Development Plan (PEDN – Plano Estrategico Desenvolvimento Nacional) that the Petroleum Sector which includes the Tasi Mane Project is to become a key pillar of the nation’s future development and is envisaged to bring petroleum development to Timor-Leste shores and provide direct socio-economic benefits derived from petroleum industry activities.

The Tasi Mane project foresees the development of three clusters/hubs of petroleum sector industry in the south coast of the country. It includes Timor-Leste LNG Project in Beaçó to process the gas from the Greater Sunrise gas field. Timor-Leste would like to build Beaçó as the LNG-hub for its gas development to stimulate socio-economic development of the country.

The purpose to build offshore pipeline from Greater Sunrise is to transport gas in Greater Sunrise field via a 24-inch subsea pipeline. The distance of Pipeline route is about 231 km through Timor trough with maximum water depth -3,022 m. The pipeline design life is 50 years and to transport dry gas at 900 MMCFD flow rate during normal operation.

The project particularly aims to increase economic growth that can contribute to the development of the country. Another benefit would be indirect employment to local community members, through a multiplier effect from the downstream activities, such as local entrepreneur, which include mini market, kiosk, pharmacy, restaurant, etc. that inevitably lead to improvement in the living conditions of local population in the project area.

The offshore pipeline system from Greater Sunrise to Onshore Timor-Leste is shown in sketch below:



Figure 1 - Greater Sunrise to Timor-Leste Pipeline Sketch

Pipeline from nearshore section to shoreline will be installed by using appropriate shore pull methodology. An onshore pull method has been selected as appropriate method to install 24-inch pipeline at nearshore section. The pipe will be welded onboard the pipe lays barge and a minimum of 721 Te winch will be used to pull pipeline to onshore. The shore pull activity will be started after the pre-trench activity and onshore Beaco site preparation are completed. The activity covers the excavation of the shore approach section of the pipeline by utilizing excavators on modified shallow barge or swamp backhoes. For the trenching works at the nearshore section, the pre-trench section will be excavated by utilizing Landing Craft Tank (LCT) dredger with clamshell excavator.

2.2 Needs and Objectives for the proposed project development

The needs of the subsea gas pipeline from Greater Sunrise to Beaco are:

- Maximize Socio-Economic benefits to Timor-Leste
- Extract maximum value from the Greater Sunrise Resource

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- Greater Sunrise to form “foundation” of long term LNG/economic development of Timor-Leste.
- Provide a foundation project to enable development of common infrastructure on the south coast.

The purpose of the subsea gas pipeline from Greater Sunrise to Onshore Beaço, Timor-Leste is to transport dry gas from Greater Sunrise field and feed into an onshore LNG plant located in south coast of Timor-Leste at Beaço. Design capacity of pipeline is 900 MMSCFD¹ with 50 years of operation. The feed gas will be fed into a 5 MTPA of LNG plant to produce LNG with the temperature about -160 °C.

2.3 Project Major Component

The pipeline system from Greater Sunrise to onshore Timor-Leste will consist of a subsea direct connection pipeline between the onshore and offshore facilities. The overall system includes:

- ✓ Metering and compressor on Greater Sunrise offshore production facility
- ✓ A deepwater offshore pipeline system from Greater Sunrise field to Beaço Onshore Production Facility (BOPF)
- ✓ An onshore pipeline system from shoreline to pig receiving facility
- ✓ A fiscal metering and receiving terminal at BOPF
- ✓ A Supervisory Control and Data Acquisition (SCADA) and Satellite
- ✓ Telecommunication System (STS)

The pipeline from Greater Sunrise field to onshore Timor-Leste will cross the Timor trough with the maximum water depth of -3,022 m in the interest region. This large water depth and the need to mitigate geohazards associated with the trough make this a world-class pipeline project with unique challenges.

¹ MMSCFD – Million Standard Cubic Feet per Day

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3 DETAILS OF PROPONENTS

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TIMOR GAP, E.P. (TIMOR GAP) is Timor-Leste’s state-owned petroleum company, which was established under government decree law No.31/2011 on 27 July 2011, and started fully operational in January 2012. TIMOR GAP’s main business objectives are to develop

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upstream and downstream petroleum activities, provide services to the industry, and engage in onshore and offshore activity in the Timor-Leste area, JPDA and International.

Being a stated owned public institution, TIMOR GAP is deeply committed to the social and economic development of Timor-Leste. It also contributes to the nation’s development with professional and efficient management of resources by developing its staff through skill and technological transfer, and creating jobs and business opportunities.

In supporting the implementation of 20 years National Strategic Development Plan, TIMOR GAP has also been mandated to manage and administer the Tasi Mane project – three clusters of oil & gas infrastructure and services in the southern coast of Timor-Leste.

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4 CONSULTANT DETAILS

The detailed information of the Consultant for the EIA study will be provided upon the completion of the project tender/bidding. The project tender process and procedure will follow procurement procedures and guidelines of TIMOR GAP in selecting the potential consultant to carry out the EIS/EMP study.

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5 LEGAL REQUIREMENTS

The EIA study will be conducted in accordance with the Government of Timor-Leste Decree Law no. 5/2011 ‘Environmental Licensing’. As defined in Annex 1 of the decree law, all petroleum projects are classified as Category A and therefore, require assessment by means of an EIA.

Article 8 of Decree Law no. 5/2011 defines the following phases of an EIA:

- ✓ Presentation of the project for the evaluation and application for environmental licensing
- ✓ Public Consultation
- ✓ Technical analysis and opinion by the evaluation committee
- ✓ Decision on the procedure of environment impact assessment and allocation of the environmental license

Likewise, there are also a range of legislation and guidelines that are deemed applicable for the EIA study for the proposed project. The legislation and guidelines are grouped into three distinct categories – namely International Standards and Guidelines, National Regulation, and International Agreement and Conventions – which are described below.

1. International Standards and Guidelines

- European Union (EIA Directive);
- World Bank guidelines (Environmental Assessment Sourcebook)
- IFC (International Finance Corporation) Performance Standards (Social and Environmental Assessment and Management Systems; Pollution prevention and abatement);
- ISO 14001; Environmental Management Systems
- ISO 9001 Quality Management System
- OHSAS 18001 Occupational Health and Safety Management System

2. National Regulation

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- Decree Law No 5/2015 Environmental Licensing
- UNTAET Regulation No 19/2000 on designated protected areas
- Government Resolutions No 25/2011 Protection of Culture Heritage
- Decree Law No 11/2003 Telecommunication Law
- Decree Law no. 18/2008 Article 17 Protection of Agriculture & Fisheries Area
- Downstream Law No. 1/2012
- Environmental Basic Law No 26/2012
- Traditional Regulation and Custom ‘Tara-Bandu’
- Port Decree Law No. 19/2003
- Road Transport Decree Law No. 2/2003
- Preparation of environment impact assessment of petroleum activities in the JPDA area.
- Special Regime for Land Entitlement (Lei N.º 13/2017 de 5 de Junho, Regime Especial Para a Definição da Titularidade Dos Bens Imóveis).

3. International Agreement and Conventions

- United Nation Framework Convention on Climate Change (UNFCCC) 1994(Control of Greenhouse Gas Emission)
- United Nations Convention on Biological Diversity
- UNESCO Convention Concerning the protection of the world cultural and Natural Heritage

Aside from the above legislation and guidelines, the contractor is also required to provide other relevant environmental law and regulation as well as guidelines that will be applied for the proposed project.

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6 STUDY AREA

6.1 Geographical area

The Greater Sunrise fields are partially located inside the Joint Petroleum Development Area (JPDA), which is jointly administered by Timor-Leste and Australia government. The pipeline route begins at the Greater Sunrise field and crosses the Australian Continental Shelf (also termed as the Sahul Platform), the Australian Continental Slope and across the Timor Trough ascending the Timor Continental Slope land falling at point Beaçó on the southern coast of Timor-Leste. Timor-Leste south coast represents the nearest shore to the field. However, a pipeline from Timor-Leste will cross the Timor Trough, with a maximum water depth of -3,022 m in the region of interest. This large water depth and the need to mitigate geohazards associated with the trough make this a world-class pipeline project with unique challenges. Beaçó site is a flat land area with yellow sandy soil with fine grained. The road condition is fairly good but need maintenance and upgrading to support heavy load traffic.

6.2 Topography

The export pipeline route cross the area consists of the Timor Continental Shelf and Continental Slope, the Timor Trough, and the Australian Continental Slope on the northern edge of the Australian Continental Shelf. In general, the south east of the pipeline route is characterized by a broad, plateau region (Australian Continental Shelf) that extends north-west for approximately 20 km where it reaches a shelf break that marks the beginning of the north westerly dipping Australian Continental Slope. The slope gradient is low (approximately 5°), however locally it can be as high as 40° at fault escarpments. The slope gradient then shallows to less than 2° at the base of the Timor Trough. A sharp rise in seafloor gradient marks the transition to the Timor Continental Rise, which progresses into an area of prominent irregular seafloor bathymetry, including mounded seafloor and broad seafloor depressions. Locally this irregular seafloor transitions into an area of hummocky seafloor (the Timor Continental Slope) before a relatively sharp shelf break locally incised by steep

canyons. The Timor Continental Shelf then extends for approximately 5 km from the shelf break to the south coast of Timor-Leste.

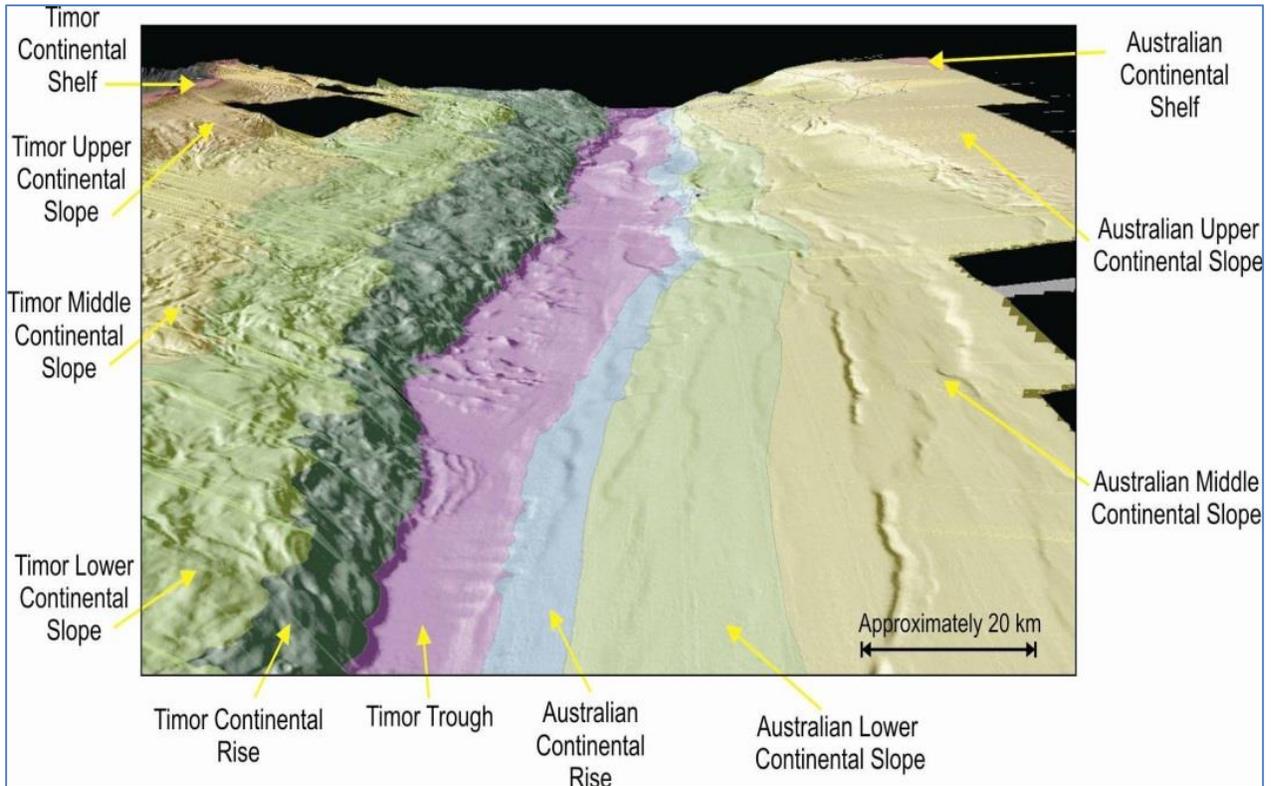


Figure 2 - Timor Sea Terrain Condition

6.3 Timeline of Study

The planned schedule for carrying out the EIS/EMP study is projected to be started in 2017; with a proposed length of study from about 12 to 16-months period. The EIA study area will cover the total length of ± 231 Km of pipeline route with ± 200 -250 m pipeline corridor from Greater Sunrise field to Pipeline landing point at onshore Beaçó.

EIS and EMP Study Timeline

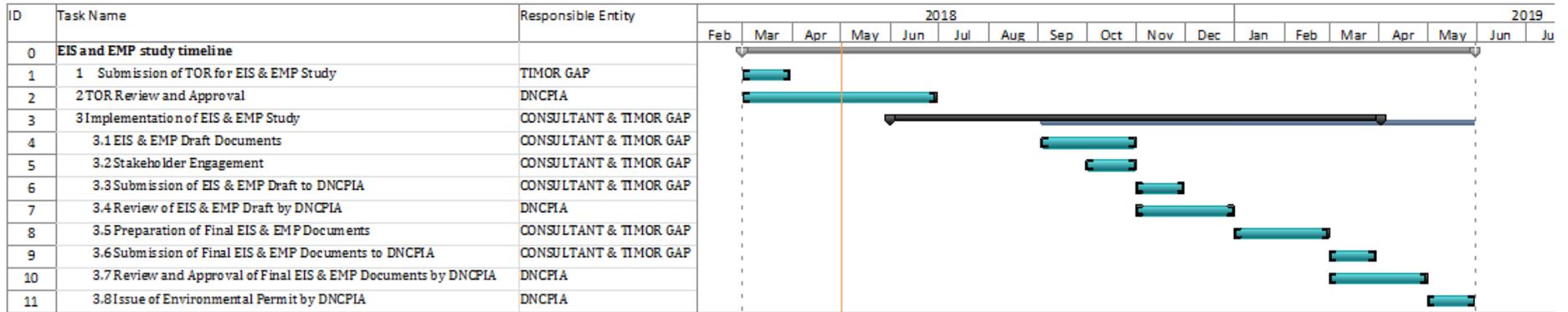


Figure 3 – Indicative EIS & EMP Study Timeline

6.4 Maps

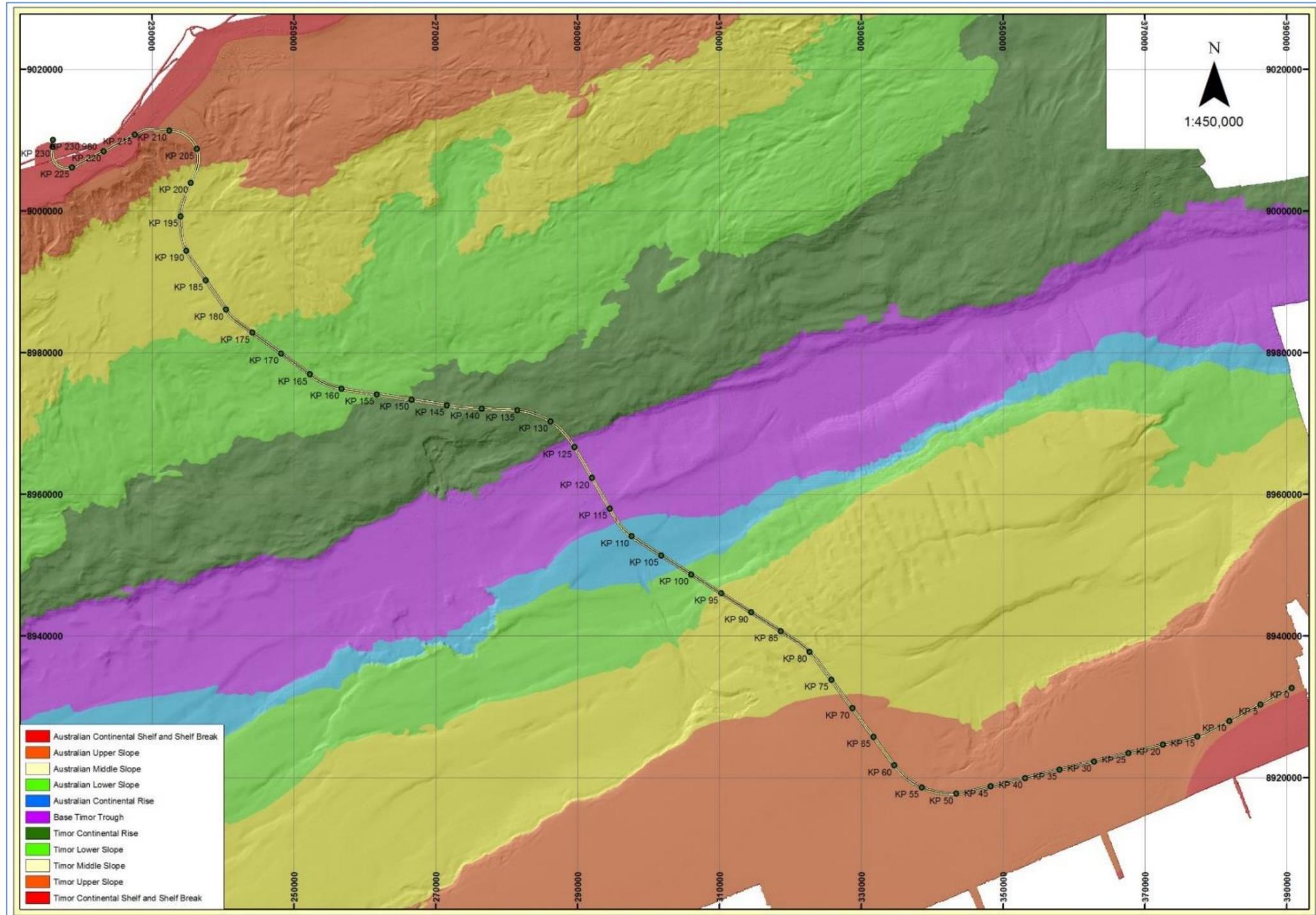


Figure 4 - General Map of Sunrise-Beaço Pipeline Route

6.5 Cross border significant environmental impacts

To identify any cross border significant environmental impacts, an adequate buffer zone would be encompassed from project location. Where appropriate, a study for noise, water quality, and soil quality will be conducted as the environmental effects may extend beyond project boundaries. As pipeline installation will cross JPDA area and near Australian administered water border there might be a potential cross border environment impact such as noise and vibration, which could be generated during pipeline installation. Pipeline is design to withstand external and internal pressure that can cause pipe leak during installation, hydrotesting and operation. A pipe leaks during operation has a potential impact on the cross border environment this can occur when the high-pressure gas is released.

6.6 Changes anticipated before the project commence

The anticipated changes that would occur for the project prior to construction and installation may include design changes of upstream and downstream facilities.

7 SCOPE OF WORK FOR EIA STUDY

7.1 Environmental Description

7.1.1 Climate

Timor-Leste has two annual seasons and three climatic zones, which are the result of monsoon activity. The two distinct seasons are the Northwest Monsoon (wet season) from November to May and the Southeast Monsoon (dry season) from April to September with brief transitional periods in between. Seawater temperatures in the Timor Sea region range from 25°C to 31°C at the surface and 22°C to 25°C below 150 m (OMV, 2003) and down to 10°C at the seafloor (Heyward et al., 1997). The majority of cyclones occur in the region between January and March, with the most severe cyclones most often occurring in the months December to April (SKM, 2001). The weather study for offshore and nearshore section should be conducted to define the weather condition that is going to affect to the project as the nature of weather characteristic between these two regions are likely different. Offshore weather condition is likely to be affected by the tropical cyclones around the region, however the impact is less significant compared to the nearshore region because the remotely force wave energy in the shallow section is more likely to be an issue. The soliton was identified in Timor Sea based on the previous study. The Soliton is defined as a condition of large internal wave that can cause a sudden increase in current speed and rapid change in current direction. However, a complete study of soliton has been conducted and the information is attached under attachment A (soliton mapping close to pipeline route). Also, an attachment of the general weather of Viqueque region is provided under attachment B (Timor-Leste mean annual temperature).

7.1.2 Air Quality

During pipeline installation and construction in the offshore there is no specific air pollution emitted. Air pollutants such as carbon dioxide will be emitted mainly from the engines of vessels used in the offshore construction activities. However, the volume of carbon dioxide from vessels is to be assessed to determine the total emission and the consequences to the air

quality. A study of air quality at nearshore and onshore area need to be conducted especially during onshore construction activities such as site preparation works, site clearance and earthworks, trenching, leveling, vehicle movement and transportation of material to the site.

7.1.3 Water Quality

During pipeline installation and construction one of the main impact on water quality is sediment spreading which causes a short-term increase in water turbidity primarily in near bottom water within the vicinity of the pipeline which is expected to last in few days. A study of the onshore and nearshore water quality should be conducted specifically to assess the trench water caused by the trenching activities since the trench water may be having high-suspended solids concentration due to turbidity.

7.1.4 Soil Quality

The seabed intervention works, anchor handling and span rectification will cause some depressions and elevations on the seabed and some sedimentation of re-suspended sediments. The only permanent impact on seabed during operation is the occupation of seabed by the pipeline. At nearshore, the soil contamination can be generated from oil machinery leakage, dredging and trenching. A soil contamination scenario will be conducted to establish the potential soil contamination during pipeline installation, hydrotesting, operation and maintenance. Data and information of the soil studies will be provided as attachment C in the report.

7.1.5 Noise and Vibration

Since there has not been a study conducted in offshore and nearshore regarding the noise and vibration that could be generated during the piping installation, a study of the noise and vibration of piping installation will be conducted. An expert will carry out desktop study of similar case in order to provide a sense and guidelines on the impacts and techniques of the pipeline installation done in offshore.

7.1.6 Aquatic Ecology

During pipeline placement on seabed can cause impact of bottom dwelling fauna (benthos). Sediment spreading and subsequent sedimentation due to construction activities will have some impact on the bottom fauna adjacent to the pipeline. Specialist in the marine environment including the flora, fauna and marine microorganism will conduct a study of the aquatic environment or benthic animals in the deep water that would be affected by the proposed project development. The marine study will identify the key marine plants and animals that are currently listed and protected under the national environmental law of Timor-Leste. The marine environment study will cover the mapping of mangroves habitats, marine mega fauna, commercial fish community, exotic turtles, seagrass and benthic animals.

7.1.7 Water Resources

There are a number of creeks identified around Pipeline landing point area and water is running mostly during rainy season only. In addition, Water source used by Beaçõ community around the project area is ground water and majority of the community currently use it for their daily consumption. In order to provide exact data, it is recommended to investigate the possibility of water source around the project site prior to construction phase.

7.1.8 Socio-Economic Study

Positive Impacts

The socio-economic impact of the proposed project is beyond the immediate environmental impacts. This impact can affect not only the Beaçõ community, but also the Viqueque municipality and even the whole country could benefit from the project development. These socio-economic impacts include, creating job and business opportunities, improving community welfares, infrastructure and transportation development, and capacity building.

Negative Impacts

There might be an impact on commercial fishing during operation or after piping installation. There could be a shifting of commercial fishing route because it would be concerned with the interaction between the fishing vessel trawl and the pipe, or the pipe can become hooked with the fishing trawl. Fishing Interaction study has been completed during FEED and can be made available for review, updated as well as to predict future trends as required.

7.1.9 Transportation

Level of shipping in the Timor Sea is relatively low and major commercial shipping from/to Australia do not cross pipeline route. There are no charted military exercise areas or other specified sites in the vicinity of pipeline route. Two major shipping lanes around Timor-Leste are route-passing Kupang, West Timor and route passing Leti Islands (North East of Timor Island). However, in some occasions, vessels travelling between Dili and Petroleum fields in the JPDA in the Timor Sea may pass the proposed pipeline area as shown in figure below.

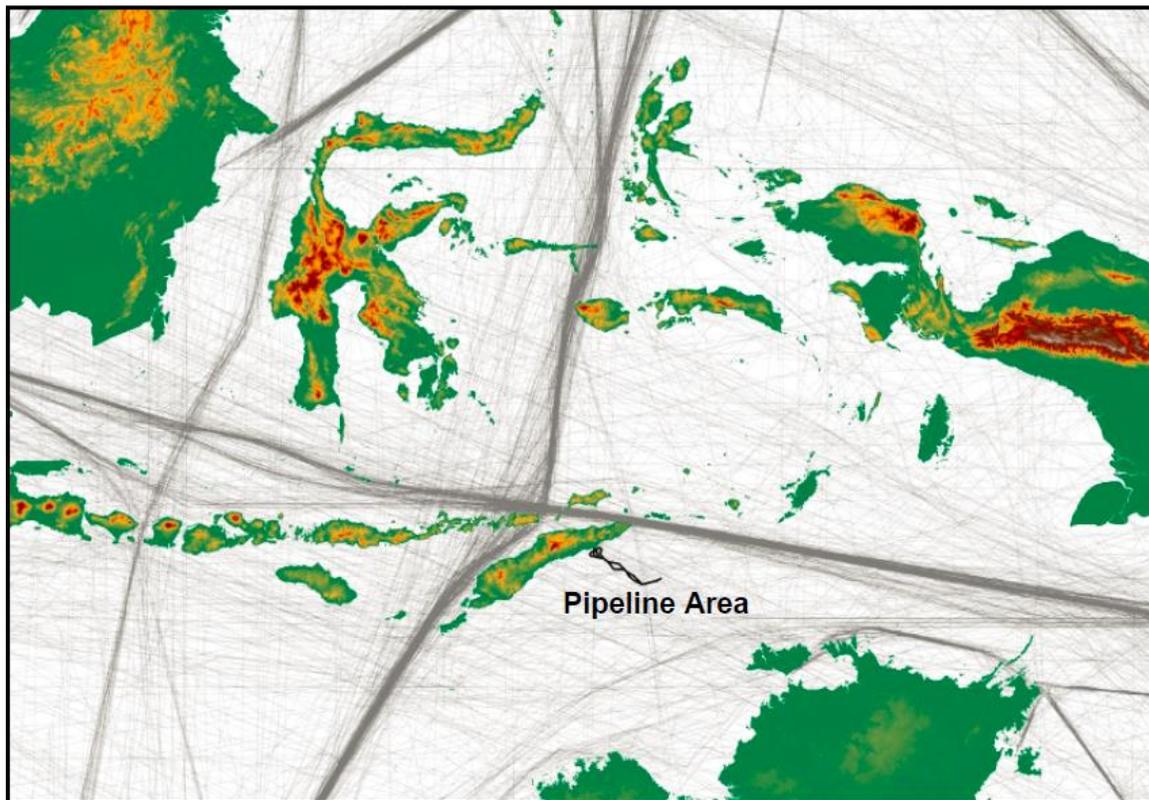


Figure 5 - Commercial Shipping Lane in Timor-Leste

7.2 Analysis of Alternatives

Any alternatives to the proposed project will be provided in the EIS. It would provide information that cover the assessment and evaluation of the aspects affected by the project such as, environment, cultural, social and economic. Alternatives to be considered may include:

- Technologies and methods used for the study
- Project specification and design
- The EIS will provide the rationale for using any of the alternatives mentioned.

7.3 Determination of the Potential Impacts of the Proposed Project

The EIS will identify and report related potential impacts of the proposed project. It will identify unavoidable or irreversible impacts and distinguish between significant positive and

negative impacts; cumulative impacts; cross-border impacts; and global impacts, including climate change impacts, long-term, medium-term and short-term impacts. Wherever possible the impacts will be described quantitatively in terms of environmental cost and benefits. The impacts will be addressed at the different phases of the proposed project components:

- Pre-Construction: temporary air and dust pollution, land clearance and waste generated during pre-construction activities.
- Construction: loss of marine flora and fauna due to the destruction or removal of marine habitats such as mangroves and seagrass;
- Operation and Maintenance: Pipe leak and gas vent to atmosphere, vibration from pigging activity, which may disturb the marine organisms.

A desktop study will be conducted to identify and analyze the potential impacts and provide mitigation or recommendation to any identified impacts related to the proposed project. The details of analysis will be provided in the EIS and the mitigations management system will be provided in the EMP report.

7.4 Assessment and Evaluation

The EIS will develop criteria for evaluating or assessing the environmental impacts at each phase of the project proposed, include pre-construction, construction, commissioning, decommissioning, operation and maintenance. The EIS will assess and evaluate the significance impacts with appropriate methodologies and criteria for those potential impacts mentioned in the previous section (section 8.4).

The environmental impacts will be summarized in a template form, which will list out the potential significant impacts, the relevant project phase impacts, and the mitigation or measures for the impacts.

7.5 Environmental Management Plan

The EMP will be a separate document that will be used as a guide to provide descriptive mitigation or measures for the environmental and social impacts of the proposed project. It

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will identify the feasible and cost-effective measures to prevent or reduce significant impacts to an acceptable level; actions that would be needed to implement identified measures at each phase of the proposed project, include pre-construction, construction, installation, commissioning, operation and maintenance and decommissioning. The EMP will also describe measures for monitoring the implementation of the environmental management system and plan at each phase of the proposed project.

7.6 Public Consultation

Public consultation is conducted with the objective to obtain constructive opinion or comments from the affected community, relevant stakeholders or public in general. The public consultation is carried out through community meetings in any related project activities, such as during pre-FEED and FEED studies, initial land identification and community capacity building (English course).

The first initial engagement was conducted in Beaçó in the years of 2008 and 2009, which involved the Beaçó community, local authority, and community elders. The objective of the initial engagement is to introduce the project plans, features and the changes or impacts of the proposed project development on the community and its village. This is most importantly to obtain general insights from the community of whether or not they are receptive to the proposed area to be used as the landing point of gas pipeline from Offshore Timor Sea and for the development of LNG industry.

The second initial meeting was then conducted on 21 January 2013. In the second meeting, TIMOR GAP brought in information of the project description and its components, such as pipeline, LNG plant, marine facility and new Towns; also the study results that have been conducted in the area. The studies conducted include Pre-FEED study for pipeline and FEED study results for Marine Facility.

The third meeting was conducted in February 2016. The objective of this engagement is to inform the community regarding the first phase of the project development, which is preliminary land identification and mapping of the new Towns area. In this engagement, the



affected communities were in agreement with the proposed activities and they were also directly involved in the process of land identification. The next public or local community engagement will be held upon the process of EIA study for obtaining the environmental license for the proposed project location.

Public inputs from first public consultation for scoping – to be added later after the 1st PC.

7.6.1 Identified Stakeholders

The following is the list of stakeholders and community to be involved in the public consultation:

- Local community: Maluru Village (aldeia; Loho-oan, Maluru, Makaloso, Makaliku and Kailoibere).
- Local Authority: Chief of Village, Administrator of Viqueque municipality, Administrator of Posto Administrativo Viqueque Vila, PNTL commander, and other relevant local authorities
- Local NGOs involved actively in environmental program
- Local government: relevant local government in Viqueque municipality
- National government: MP², VMDpHOA³, Agriculture & Forestry and other relevant government institution.
- Donors, Academic, trade association.

7.6.2 Mechanism for Public Consultation

The public consultation will be conducted during the preparation of scoping for EIS/EMP document. The public consultation is conducted to obtain the public opinion on the implication of the proposed project. The public consultation will be conducted in the project affected area or location; and will invite the local community in the project location, relevant

² MP : Ministerio do Petroleo

³ VMDpHOA : Vice Ministro Desenvolvimento para Habitação, Ordenamento e Ambiental

	<p align="center">TERMS OF REFERENCE FOR EIS & EMP FOR SUNRISE-BEAÇO PIPELINE PROJECT</p>	<p align="center">GAS BUSINESS UNIT</p>
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local and national NGOs, government officials, local authority, women and vulnerable groups.

The public consultation will be made public through media available in the Viqueque region and in the country. The notices of the environmental licensing process will be advertised on local television, radio and newspapers as well posted on the public facility that is reachable to the local community such is church, local school and local village administration office.

Records of the public consultation will be attached in the EIS document, these include detail of parties and stakeholder consulted, mechanism of consultation, public comments and opinions, and other issues or information that raise during the public consultation.

7.6.3 Public Consultation

Public consultation is conducted with the objective to obtain constructive opinion or comments from the affected community, relevant stakeholders or public in general. The public consultation is carried out through community meetings in any related project activities, such as during pre-FEED and FEED studies, initial land identification and community capacity building (English course).

The first initial engagement was conducted in Beaçó in the years of 2008 and 2009, which involved the Beaçó community, local authority, and community elders. The objective of the initial engagement is to introduce the project plans, features and the changes or impacts of the proposed project development on the community and its village. This is most importantly to obtain general insights from the community of whether or not they are receptive to the proposed area to be used as the landing point of gas pipeline from Offshore Timor Sea and for the development of LNG industry.

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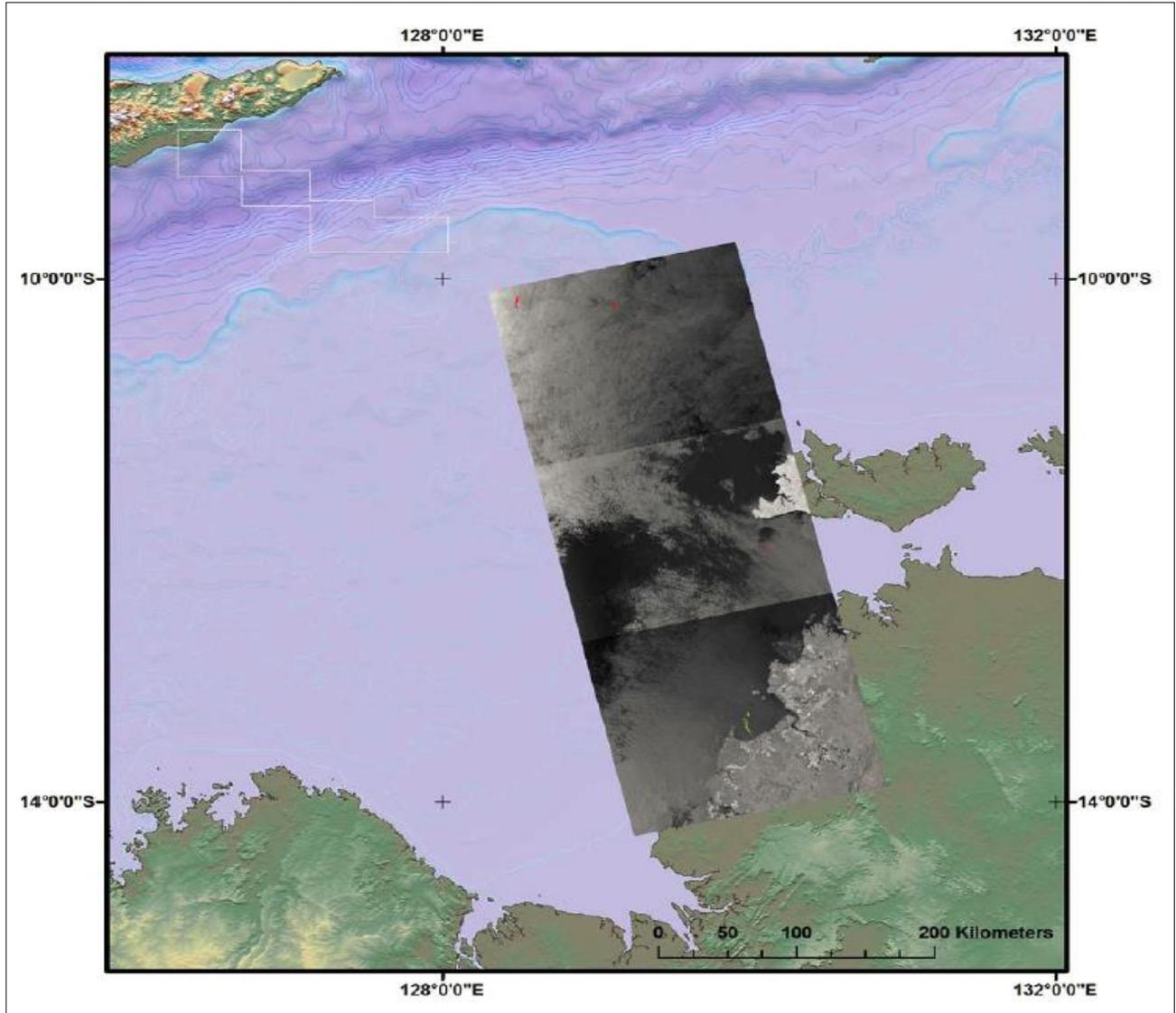
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8 FLEXIBILITY

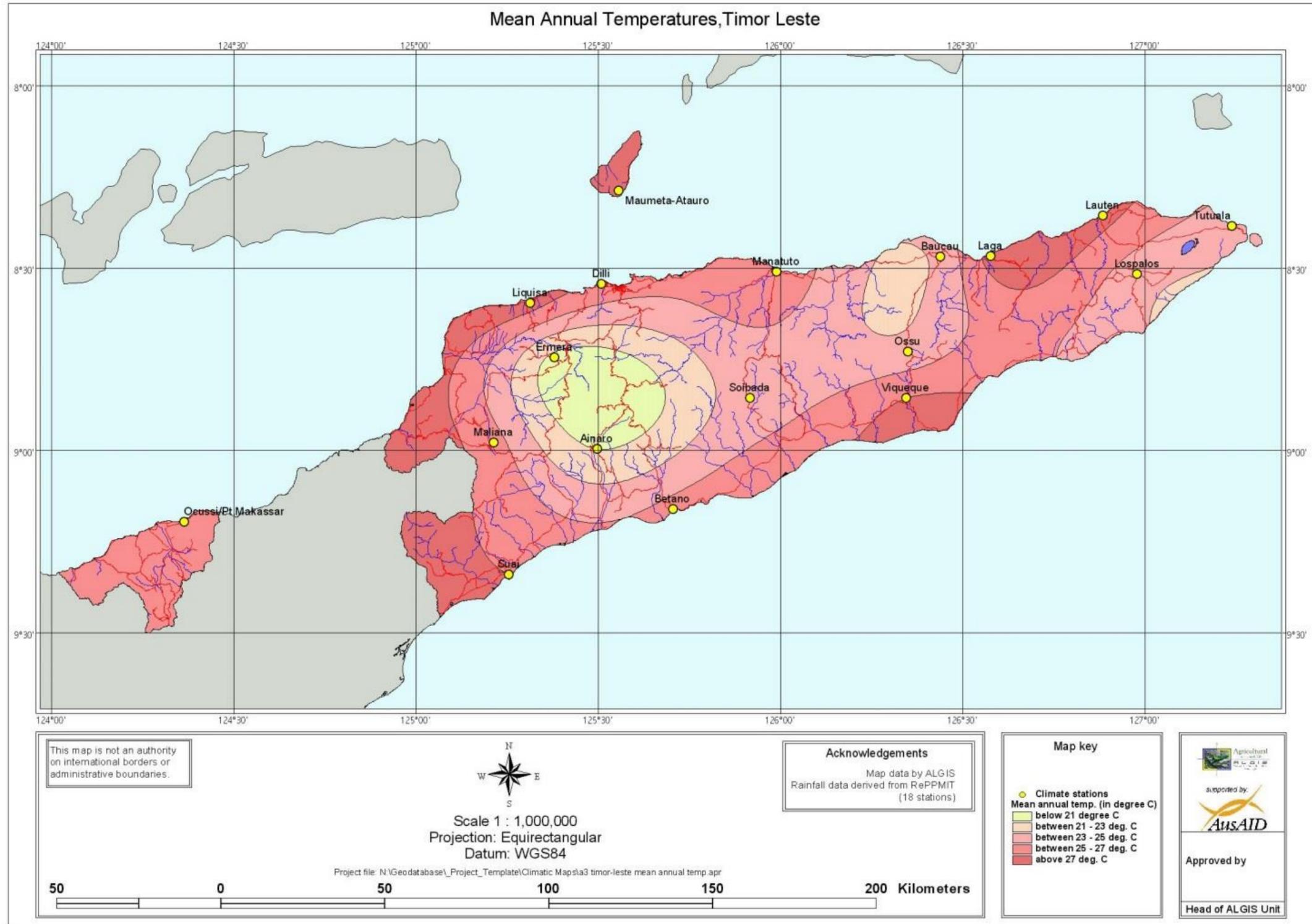
In the implementation of the study from collecting and analyzing environmental, social and economic baseline data and information, including potential impacts, mitigation, alternative analysis, environmental management plan and policy, study methodologies and technologies, and scope of work for the EIA study of the proposed project, certain components within the Term of Reference of proposed project may change.

Therefore, the proponent requests to maintain the right to make change or modification to the proposed Terms of Reference in the preparation of the EIS/EMP. This is to deliver a more comprehensible and meaningful study. A consultation with the Environmental Authority would be conducted prior to any changes or modification made to the propose project; and it would be documented in the EIS/EMP.

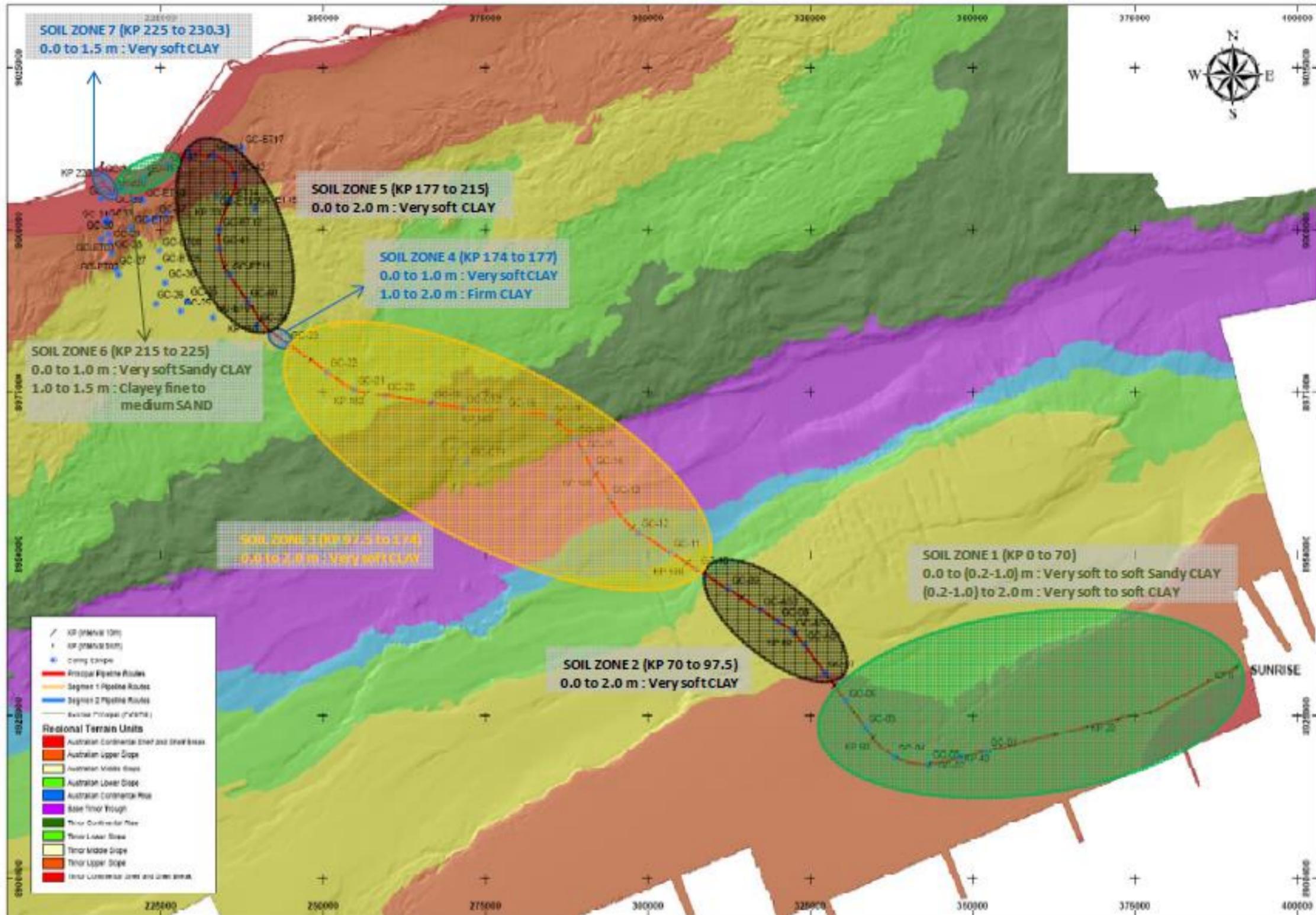
APPENDIX A – SOLITON MAP



APPENDIX B – MEAN ANNUAL TEMPERATURE MAP



APPENDIX C – SOIL ZONING MAPPING



APPENDIX E – NEARBED SEA WATER TEMPERATURE

