

## **4.2 Petroleum and Mineral Resources**

One of the pillars of Timor-Leste's future economic development is the petroleum and mineral resources sector, which will ensure the richness of natural resources will be used to build the Nation and provide progress and well-being to the entire Timorese people.

The national vision contained in the Strategic Development Plan (2011-2030) is that the infrastructure necessary for petroleum development should be implemented on the south coast of the country and will serve to generate direct economic dividends for the entire population, either through activities of the petroleum industry and the creation of related jobs, or through the development of support infrastructure on the Timor-Leste coast.

This development, called the Tasi Mane Project, is a multi-annual program which envisions creating three industrial poles, considered as the backbone of the Timorese petroleum industry.

In the short term and in order to realize this vision, the Government will continue to engage in negotiations with the companies involved in the Greater Sunrise process, to implement the special regime for the Greater Sunrise Fields established in the Treaty for the delimitation of maritime borders between Timor-Leste and Australia, which was signed in March 2018.

The Tasi Mane project will contribute not only to the development of the South Coast in general, but also to the petroleum industry in particular, but will also encompass a wide range of direct and indirect economic impacts at the national, regional and local levels, by providing economic benefits derived from the exploitation of Timor-Leste's natural resources.

This project will increase national Gross Domestic Product (GDP) and export earnings, while creating employment opportunities during the construction and operation of related infrastructure, as well as acting as a catalyst for the development of the South Coast. It is expected that up to 10,000 direct jobs will be generated from the Tasi Mane project, and more than 50,000 indirect jobs can be created, with the transformation of the petroleum sector, from the current stage of pure extraction to a more advanced stage of industrialization and creation of added value.

In addition, the Tasi Mane Project will generate indirect benefits, influencing a greater economic fulfillment of the country, as a result of the dynamization of other industrial sectors. The investment made by the participants in the project, as well as by workers, Government and private beneficiaries, will produce "multiplier effects" through the economic activities associated with the project will have an impact on the economy in general, resulting mainly from the acquisition of additional goods and services, both by the workers and by the companies, directly or indirectly, involved in the project.

Investment in productive physical assets (such as power plants, roads and airports) and social assets (such as the construction of new urban and educational centers, improved education and health services) may also benefit the economy, by maximizing the productivity of economic factors. One of the project's significant impacts is the opportunities it will provide to local businesses. These opportunities include subcontracting services such as catering, engineering, security, fuel supply, management, professional and technical services.

TIMOR GAP will continue to be tasked by the Government to manage and administer the Tasi Mane project. This Public Company will support the creation of support industries, and the development of

human resources necessary for efficient operationalization of the petroleum sector. It is expected that the construction of these basic infrastructures will boost and encourage commercial investments in other projects and areas, incorporated in the impact area of Tasi Mane. This reality will transform the character of Timor-Leste's current petroleum sector from a simply extractive dimension, allowing it to evolve into a more value-added, more industrial and diversified petroleum sector, including the development of a refinery and petrochemical industry hub plant in Betano, and the Liquefied Natural Gas (LNG) plant.

The Government of Timor-Leste, as proponent and promoter of the integrated Tasi Mane project, will participate in the financing of some of these projects, as well as the basic infrastructure, such as the airport and the Suai logistics base. The remaining Tasi Mane projects will be built and developed on a project finance basis and other forms of private investment or mixed investment.

In this sense, the Government will continue to develop studies and investment plans, considering all the necessary surroundings to carry out this project, including environmental impact studies, in order to minimize the negative impacts on the environment and humans.

**Tasi Mane Project consists of the following poles of development:**

#### **4.2.1 Development of a Logistics Base in Suai**

A logistics base will be built and operationalized at Suai, located in Camanasa, Covalima Municipality, which incorporates the construction of logistics and maritime facilities. This base will serve to support all petroleum activities, conducted in the Timor-Leste Exclusive Area and adjacent areas in the Timor Sea, as well as other general economic, commercial and industrial activities.

The Suai Logistics Base will also serve as an entry point to support management of the supply chain for the activities of the other two industrial groupings, namely the refinery and petrochemical complex and the LNG plant.

This logistics base will also include:

- Land facilities - operations buildings, covered warehouses, mini land bases, fuel storage tanks, water storage tanks, waste management system, parking areas, recreational and community facilities, among others;
- Marine facilities – three piers consisting of the main pier, pier for barges and ramps for landing craft supported by a mooring post for tugboats, a berth for passenger vessels and a breakwater with connection to the coast that would provide a shelter from waves, creating a calm, safe and protected port for the installations;

This project will have a huge social impact as it will be a platform for new job opportunities, generating hundreds of jobs, supporting national economic development and potentially improving the skills of local labor in areas such as the manufacture of steel, civil construction, maritime construction, mechanical and electrical engineering, among others. Other non-petroleum industries, such as commercial fishing, are also expected to benefit from offshore installations.

Environmental impact studies and related public consultations on this project were carried out, and the environmental license was granted in 2013 and subsequently renewed in 2015.

#### **4.2.2. Development of a Petroleum Refinery and a Petrochemical Complex**

The second development pole of the Tasi Mane Project is composed of the Petroleum Refinery and the Petrochemical Complex of Betano, located on the coast of the municipality of Manufahi. These facilities are intended to convert condensate, transported to the site from the Timor Sea fields, to a variety of fuels and other refined petroleum products. The project is expected to make Timor-Leste self-sufficient in the supply of unleaded gasoline and diesel fuel, with scope to meet a future increase in domestic demand.

The refinery complex has an area of approximately 230 hectares. The main refinery facility consists of the processing unit and support units, such as utility units, waste treatment unit, raw material and petroleum products reservoirs, fire-fighting water and landfill for solid waste management. The complex will have support facilities, such as warehouses, operations building, administration building, laboratory, fire and security office and cafeteria. Water intended for refinery operations will be piped to the site from a water source 10 km from the refinery.

The initial stage of the development phase will establish a refinery for fuel production, not only for domestic consumption (diesel, gasoline, LPG and Naphtha), but also for export. The pole of the refinery in Betano will be implemented through a commercial partnership, in which TIMOR GAP will play the role of main driver for the development of the project.

Feasibility studies for this project have already been developed, as well as environmental impact studies, and public consultations have also been held. At this time, the environmental license is awaited for the start of the project.

#### **4.2.3 Development of a Liquefied Natural Gas Plant**

The Government remains committed to developing gas from the Greater Sunrise field by constructing a submerged gas pipeline to the south coast of Timor-Leste and building and operating a Liquefied Natural Gas (LNG) plant in order to proceed with processing.

This grouping will incorporate the LNG plant complex, including associated marine facilities, as well as new urban areas. The existing airport in Viqueque will be rehabilitated in order to have the capacity to operate “fly-in-fly-out” (FIFO) of the workers at the service of the LNG operators, also serving as a regional airport.

#### **4.2.4 Development of the Southern Coastal Zone**

There will be built and/or operationalized the necessary infrastructure to support the petroleum industry, making the link between the three petroleum clusters or poles. This will include:

- New cities to accommodate workers in the sector and to relocate local residents
- A highway with the purpose of connecting the three referred groups and supporting the growth of the petroleum industry along the south coast, enabling general economic development and improving the lives of the population. This highway includes the construction of more than a dozen major bridges; A multifunctional port at Suai to support the logistics base;
- An airport in Suai, which has already been completed, for safe operation of light aircraft and helicopters, to support petroleum activities. This airport will improve the transportation of passengers and goods, including a terminal with customs and immigration facilities, fire station, and a heliport with ambulance service facilities.

Also in this sector, the Government will:

- Continue to train professional staff and technicians and award scholarships in specialized areas related to the petroleum sector;
- Continue to empower the communities that are most directly involved in the Tasi Mane project;
- Develop a mechanism for the use of natural gas in the country's economic activities;
- Establish the national mining company Murak-Rai Timor-Leste SA, which will take care of the State's interests in the exploitation activities of the country's mineral resources;
- Increase study, research and promotion activities within the country and abroad, maximize investment both in the petroleum sector and in the mining sector;
- Guarantee compliance with the Extractive Industries Transparency Initiative (EITI), continuing to submit the necessary reports;
- Ensure synergies and international cooperation within the energy resources sector;
- Continuing research on the development of petroleum and gas in terrestrial and maritime areas of Timor-Leste, through TIMOR GAP and its partners, or other interested investors ;
- Ensure that revenues from the exploitation of petroleum and natural gas contribute to the country's industrialization and to the development of other national economic activities, and increase in exports;
- Develop additional legislation and regulations aimed at the efficient and transparent management of all activities related to the exploitation of petroleum and mineral resources in Timor-Leste, including:
  - (a) The revision of the Petroleum Activities Law and other complementary legislation;
  - (b) Approval of the Mining Code and the model contract for conducting mining operations and complementary legislation and regulations;
  - (c) To approve and implement the necessary legislation to ensure the implementation of the provisions of the Maritime Boundary Treaty between Timor-Leste and Australia, in particular as regards the transition from oil and gas fields in the former Joint Petroleum Development Area to the exclusive jurisdiction of Timor-Leste.
  - (d) Establishment of a Mineral Fund to ensure a better management of the revenues collected from the mineral activities in the country.