

# **Financing Sustainable Blue Economy and Integration of Policies and Development - East Timor Maritime Cluster**

**Afonso de Bragança. [ahb@live.com.pt](mailto:ahb@live.com.pt) Fundação D. Manuel II**

## **1. Introduction**

Maritime industries are seen, for many, as basic for regional and global development. The complex nature of maritime industries - which includes key players (ports, shipping, oil, gas, forwarders, logistics, shipbuilding and repair, fishing) - emphasises the need for coordination and common strategy: ‘when companies are interconnected and have a common labour pool, they are considered to form a cluster’ (Porter, 1998). The role of a cluster in regional and local economies have undergone numerous analysis and been discussed in the literature. Cluster definition can also vary among different regions and industries.

In order to set a cluster’ limits, one first needs to select a core activity (i.e. financial services in London). In maritime clusters, firms share state of the art infrastructures and services, specialised customer markets, human capital resources, know-how and information. These shared resources create synergies between companies and fuse local strengths with global best practices (Lagoudis et al., 2019).

These concentrations of companies and related stakeholders (Universities, professional training, public sector) exist for decades globally, on different business sectors. Policymakers have embraced the cluster concept, identified regional clusters and developed policies and strategies to enhance them (Markusen, 1996).

## **2. Literature review**

Clusters are geographical concentrations of interconnected companies and institutions in a particular field. They also incorporate a range of linked industries and entities that are relevant to competition. The concept was first created by Michael Porter, who stressed

that regions with large concentration of similar companies and institutions enhance their economic strength.

According to Porter's Cluster model these regions lead innovation and form strong business networks. Economic clusters are known to bring together the production and exchange of goods, services, and tech while also attracting investments, industries, and innovations (Porter, 1998).

A successful economic cluster can benefit from an enabling environment that supports the needs of businesses and their workforces. These supportive environments promote sustainable collaboration on a multitude of levels, from individual or corporate, to environmental, and can also provide multiplier effects to drive regional and national economies.

The World Ocean Council (WOC) states that European clusters tend to be "well-structured in looking at global competitiveness, providing platforms that can link national maritime-level strategic interests to their government interest in economic development"

In the cases of small but dynamic Asian economies, the WCO says that they have "a very natural evolution of a triple helix between the industry, government, and research communities that was able to quickly develop collaboration facilitated by national policies".

For larger Asian countries, since developing clusters pose a "challenging process for their communities and dynamics at a national level", they use these emerging clusters as keys for maritime centres.

## **2.1 East Timor: History and Economy**

East Timor is located between Southeast Asia and the Northern part of Oceania. The island is divided between Indonesia, in the West part of the island, and East Timor in the Eastern part.

East Timor was a Portuguese colony since the 16th century. It was occupied by the Japanese, during the 2nd World War. In 1975, the 'Carnation Revolution' in Portugal declared all colonies independent, leading Indonesia to occupy Timor, as a pretext to

prevent communism. This gave rise to a Timorese nationalist movement that fought against the occupation for several decades.

Timor-Leste only secured independence in 2002, thanks to an international campaign. It is, therefore, a very young nation with just over 20 years of existence.

At independence, Timor-Leste's economy had very low levels of development, with extremely high poverty indicators. The economy was based on subsistence agriculture and fishing, with virtually no modern private sector.

Timor's economy was able to improve, in 2018, when both Timor and Australia settled the division of oil and gas revenues, from the found and mined on the maritime boundary in the East Timor Sea.

As of now, the major concern for oil and gas will be where they are processed. While East Timor looks to create a new petrochemical facility on the South part of the island, the international oil companies prefer to ship them to facilities located in Australia. Even though East Timor's oil and gas revenues ease the budget constraint, there are risks that can pose as obstacles to development.

## **2.2 East Timor: Maritime industries**

### **Fishing and Aquaculture**

As a poor coastal country, East Timor is dependent on fish for its livelihood, both their economy and sustenance.

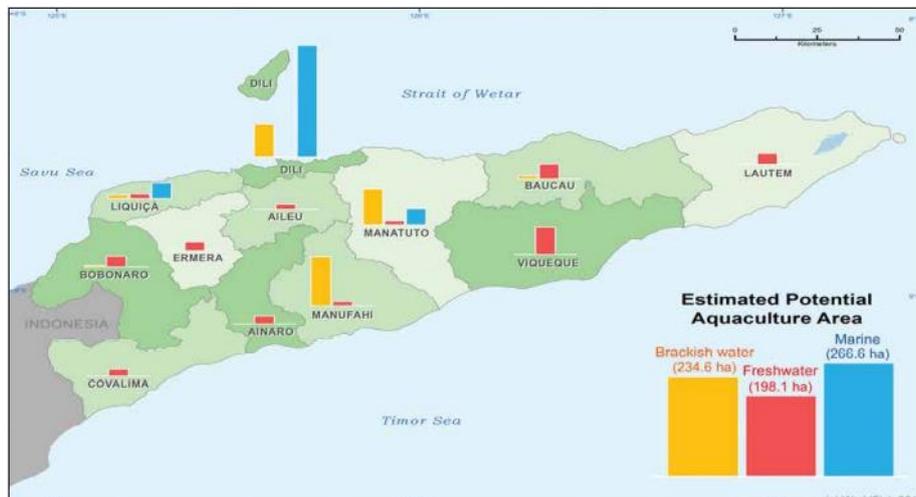
Timorese people that depend on fish as their primary livelihood have higher levels of well-being - linked to their income and food – than those who depend on other natural resources. The ocean provides excellent fishing opportunities for locals. Fish is one of the main sources of livelihood in the island, and its biggest market.

However, due to the war, vessels were either destroyed or taken away, and only few remain functional. But, as more people see fisheries as a mean of life, more vessels appear on Timor's water, increasing the risk of overfishing.

Most vessels go to the southern part of the island, where the waters are shallower and easier to trawl, which damages the coral reefs ecosystem.

Similarly, to other sectors, aquaculture grew very slowly. Presently, there are three types of aquacultures in East Timor: Freshwater; Brackish; water - These represent a smaller number of farmers that engage in the culturing of shrimp or milkfish. Unfortunately, most of these farms are operated in an extensive way that results in low productivity and this culture has remained unchanged.

Aquaculture in East Timor, despite decades of effort in development, has yet to make a significant mark on its people and the country's economy for anyone to truly realize its importance. Similarly, to other sectors, aquaculture grew very slowly thanks to the poor economical state of the country and due to the existing political instability (PEMSEA, 2019)



**Figure 1** - Map of Potential Aquaculture Area in Timor-Leste.

Presently, there are three types of aquacultures in East Timor: (i) Freshwater; (ii) Brackish water; (iii) Marine.

### ***Offshore Oil and Gas***

The offshore gas and oil market make the biggest percentage of income for Timor's economy, approximately 66% of the country's GDP is made by these two offshore resources and fund 90% of the government's expenditures.

One previous concern was the long dispute East Timor had with Australia related to the maritime boundaries and who owned certain parts of the oil and gas extraction endowments in the area (PEMSEA, 2019).

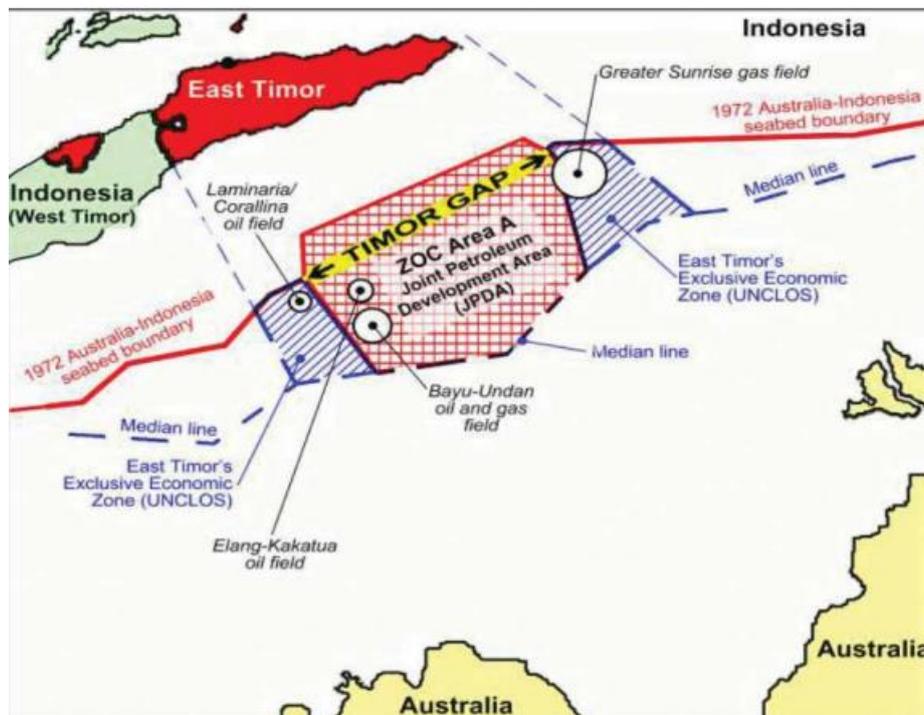


Figure 2 - Oil and Gas Exploration in Timor Gap.

As of now, the major concern for oil and gas will be where they are processed. While East Timor looks to create a new petrochemical facility on the South part of the island, the international oil companies involved prefer to ship them to processing facilities located in Darwin, Australia.

Even though East Timor's oil and gas revenues ease the budget constraint on the country's development, there are risks that can pose as obstacles to development rather than being an asset.

The first one is the possibility of leading Timor to what is known as "Dutch Disease", a "symptom" that occurs when there is an increase in domestic spending that leads to an increase in the price of non-tradable goods, resulting in the diversion of necessary resources to latter sectors instead of sectors that produce export goods.

A large revenue can also result in increased spending on poorly developed projects in the hopes of succeeding in it, blinding the bigger picture and other more relevant projects. Another risk that might be brought up is the corruption and political conflict that these

natural resources can bring as many different actors would start fighting over who should control them, deteriorating the quality of the institutions. The fact that existing oil and gas fields are starting to deplete means that East Timor must find a way to diversify and create opportunities for a sustainable employment and decent work in the future before its fossil fuels reserves dry up. Besides offshore oil and gas production, there are many other sectors that have been developed and/or are being developed in East Timor (Lundahl & Sjöholm, 2020).

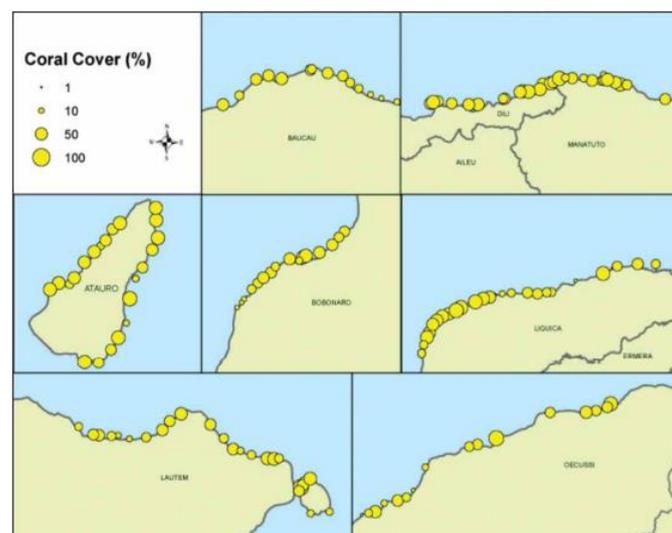
### ***Ports and Shipping***

Dili is the main and only international port of entry to the country. Capable of harbouring three cruise ships or commercial vessels, it possesses two roll-on/roll-off ramps and a yacht anchorage zone. The port does not possess any facility to handle bulk cargos and with no dockside crane, private companies must operate their own for loading and unloading of cargo (PEMSEA, 2019).

Projects for expansion and improvement are being made, though without much support. A new port has been projected specifically for container vessels.

### ***Coastal and Marine Tourism***

Being a tropical island, located within the Coral Triangle, East Timor has stunning beaches and some of the most pristine and ecologically diverse reefs in the globe (PEMSEA, 2019).



**Figure 2 - Mean Coral Cover at Site Surveyed.**

Timor's main appeal for coastal tourism is mostly its white sandy beaches in the region of Baucau and the Atauro<sup>1</sup> island, fishing, sailing and water sports are also big attractions, yet the main cause of tourism in Timor is due to its magnificent coral reefs.

The marine life in Timor's waters is abundant from open water species, such as tunas and mackerels, to whale sharks, mantas and turtles, even being able to see endangered elusive dugongs.

Colourful hard and soft corals cluster the waters from sheltered reef slopes to magnificent walls diving to underwater cliffs plunging into the abyss. All of this while sighting vivid arrays of reef fish in warm tropical crystal water.

### ***Tutoring and Education on the Importance of the Ocean***

During Indonesian occupation, most skilled teachers were not native to the isle of Timor and at the end of the conflict, many left the country, leaving behind a handful.

Half of East Timor population was born after the independence, and are coming of age with a new understanding of the intrinsic value of the environment.

East Timor possesses three main languages with each generation respectively speaking at least two of them. These languages are Indonesian, Portuguese, and Tetum (a mixture of both languages), the latter the most spoken one.

Foreign aid abled Timor to improve education, namely on the importance of the ocean.

### ***Offshore Renewable Energy***

One of the big objectives of the Government is to reduce the external dependency of energy supply, through the use of renewable energies sources. The Government intends to implement an extension plan to distribute energy, in order to increase the well-being and promote economic growth, as Timor possesses strong potential in the renewable energies (PEMSEA, 2019).

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<sup>1</sup> <https://www.ataurodiveresort.com/>

### **3. Timor's Blue Economy today**

As a member of the UN, East Timor has affiliated itself in the 'Blue Economy Initiative'. Timor isn't a large emitter of greenhouse gases, but still needs to consider how to reduce its dependency on fossil fuels. Timor is now part of the Blue Economy's initiative, a truly important initiative. Nevertheless, investments need to establish themselves in the island. For East Timor it is essential to apply the blue economy measures as the country needs strategies to reduce the effects of climate change. The creation of a maritime cluster that follows the models established by the blue economy can certainly guarantee to bring a positive outcome to the future of the country (UNDP, 2021).

### **4. Conclusion**

A maritime cluster can be an important policy tools to support sustainable growth and East Timor. Its existence will help Timor to develop its blue economy and future projects, by being able to reach carbon neutrality.

Education and training are also strategic activities in the future cluster.

With a newer, cleaner and bluer economy, East Timor could well be the example most countries need to inspire themselves.

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