



The United Republic of Tanzania
Ministry of Livestock and Fisheries

Livestock and Fisheries Commodity Value Chain Briefs

Brief No. 6



CAPTURE FISH

Key Message:

- The fisheries sector contributes about 10% of the national export earnings. The production has remained stagnant at around 350,000 MT per annum for almost 30 years with high overexploitation, illegal fishing and postharvest losses. Sectoral priorities should be positioned on inclusive regulatory frameworks and sustainable conservation of resources. The overview profile in subsector is as follows:

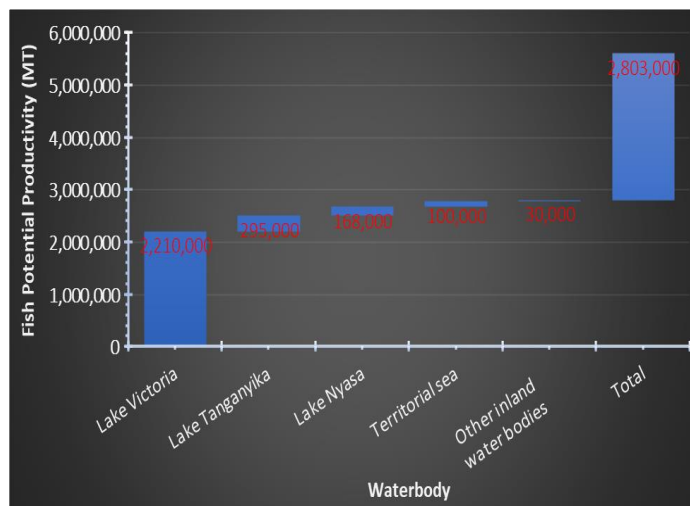
SUMMARY STATISTICS

Number of fishers	Number of artisan fishing vessels	Annual production (MT)	Per capita consumption (Kg)	Number of companies in the value chain	Annual export (MT)	Annual export earnings (TZS)	Annual import (MT)	Annual import bill (000'TZS)
202,053	58,930	389,459.40	8.2	16	38,114	15,629,958,705	22,752	12,929,315

INTRODUCTION

Tanzania is one of the top **10** countries in Africa in capture fish production. It is gifted with **945,000** square kilometers (**Km²**) of the land in which **62,000** Km² is covered by various water bodies, diverse river system, and numerous wetlands. Marine water resources include **1,424** Km long coastal line (which makes the country reasonably rich in marine and inland fishery resources), **64,000** Km² of territorial water area and the Exclusive Economic Zone (EEZ) estimated at **223,000** Km². From 1998, the sector grew at a rate of **4.3%** and is estimated to contribute to about **2.7%** of the GDP. In terms of animal protein, the fish contributes about **30%** of total animal protein and accounts for about **10 %** of the value of national exports¹.

PRODUCTIVITY AND PRODUCTION SYSTEM



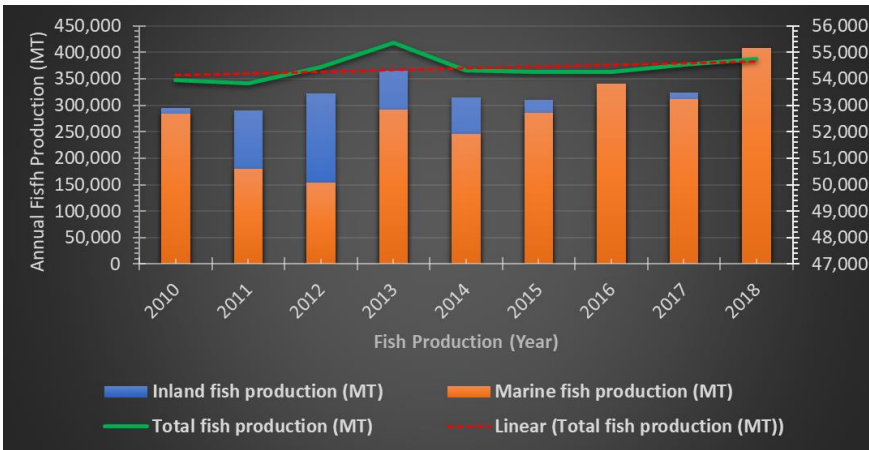
Tanzania fishing industry has estimated production potential of **2,803,000** MT (Figure 1) and an average annual fish landing of over **389,459.40** MT with a value of TZS 1.83 trillion. This means that the extraction rate is about 14% annually which is sustainably reasonable. The survey for potentiality of Tanzania EEZ is not yet done to estimate the full potentials of fisheries sector in Tanzania. Comprehensive survey for fisheries resource in Tanzania would mandate the social and economic prospects of fishing industry.

Figure 1: Fish production potential in various water resources²

¹ National Bureau of Statistics (2015). Compendium of Agricultural Statistics Classifications for Tanzania Mainland

² Ministry of Livestock and Fisheries, 2019

Small-scale Fish Production



For past **10** years the estimated population employed in fishing industry is over than **202,050** fishers operating about **60,000** artisanal fishing vessels. The marine fisheries support about **53,000** artisanal fishermen operating almost **9,200** fishing vessels and landing an average of **55,677.08 (14.30%)** MT of fish annually.

Figure 2: Trends in fish production in Tanzania from 2010 to 2018

Inland water employs about **146,000** fishers operating in about **50,000** fishing vessels and landing an average of **333,782.32 (85.70%)** MT of fish annually (Figure 1). The population supported by other fisheries related activities such as fish processing, marketing and fish trade, boat building and maintenance and fishing gear mending is about **4,500,000** people².

EEZ Fish production

EEZ Fishing is operated by foreign vessels and the data for the productivity of Tanzania EEZ have been hardly available due to huge management constraints and highly illegal, unreported and unregulated (IUU) fishing. Most species available in Tanzania EEZ include albacore, bigeye, yellow fin, skip jack, black marlin, striped marlin, sword fish, sail fish and shark among others. The production data for albacore, black marlin, striped marlin, sword fish, sail fish and shark are barely available between 201-2014 reflecting on management uncertainty of EEZ territories.

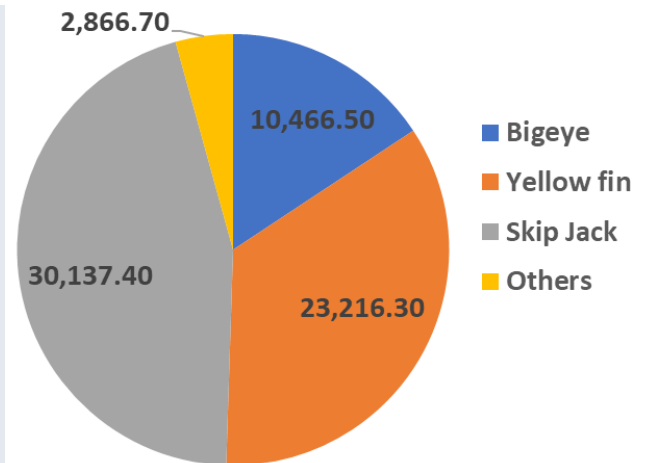
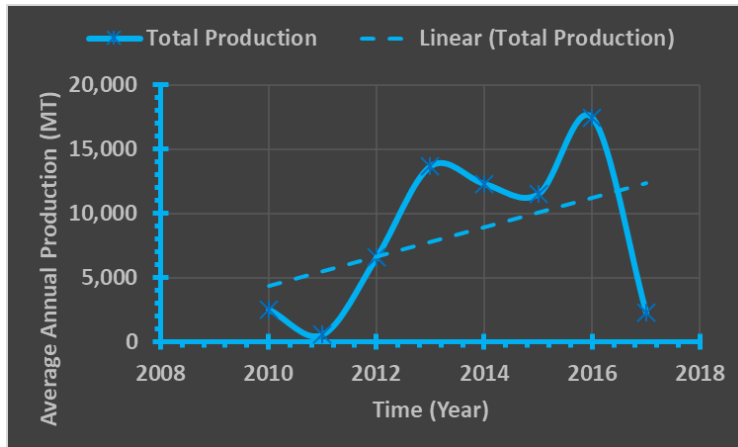


Figure 3: Average annual production of various species in Tanzania EEZ from 2010-2018

The IUU and bycatch discards also have been predominating in the fishing grounds. The EEZ is managed under Deep Sea Fishing Authority (DSFA) and is an autonomous authority

under partial Union matters in the country (managed both by Zanzibar and Mainland Tanzania)^{3,4}.



For proper management of EEZ fishing activities, the Government established Deep Sea Fishing Authority in 2010 and also working for building Fishing Port along Indian Ocean. Also, the re-establishment of Tanzania Fishing Company (TAFICO) align with increasing fishing efficiency in the territory. In full operationalization of TAFICO will harbor fishing infrastructure and operate in commercial basis.

Figure 4: Average fish production in Tanzania EEZ from 2010-2018

Capture Fish Value Chain

The fisheries sector has various actors including fishers, processors, cold room storage operators, exporters and importers. There are **49** various fisheries products and byproducts of commercial importance including whole fish, fillets, frozen fish, live fish, and fish maw are either supplied in domestic or foreign markets. Also, there are **16** large fish processing factories especially for Nile perch filleting, **16** premises for holding live fish (prawns and crabs), **14** premises for holding live fish (aquarium) /ornamental, **24** cold rooms and **30** fish stores for dried fish products.

³ Per Erik Bergh, (2019). MCS Advice Memorandum #1/19 to of DG of DSFA on License fees for foreign tuna vessels fishing in the EEZ of the United Republic of Tanzania

⁴ Macfadyen, G, and Anganuzzi, A. (2014). Review of tuna fisheries in the western Indian Ocean (Framework contract MARE/2011/01 – Lot 3, specific contract 7). Brussels, 165 p.

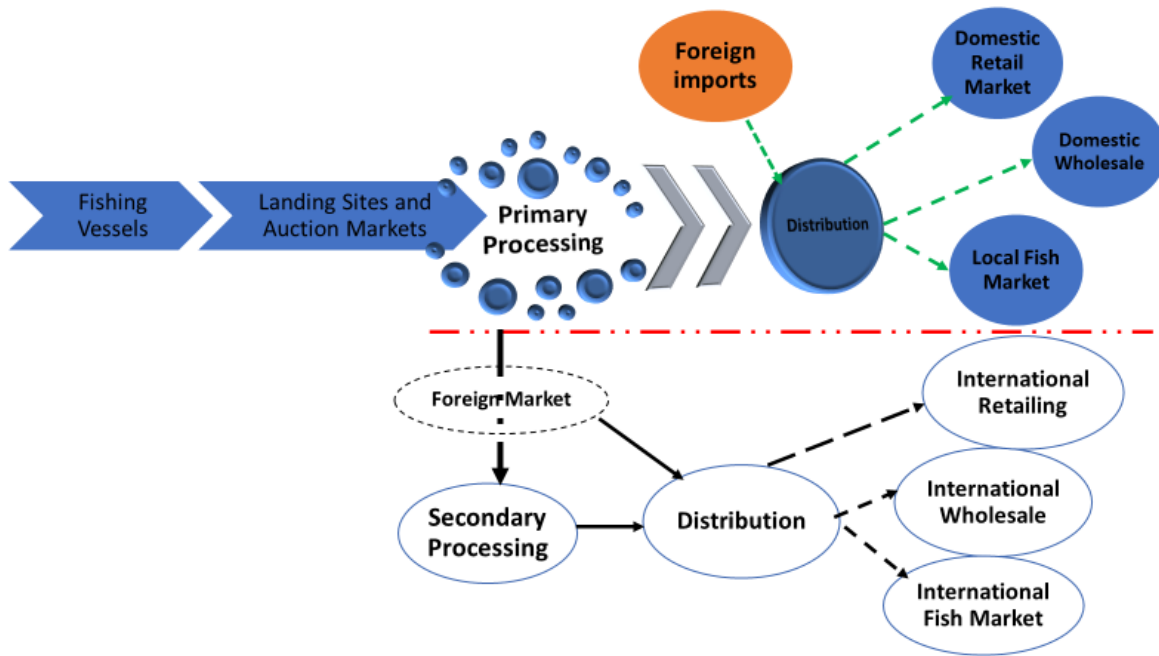


Figure 5: Value chain of (Nile perch)

The value chain of fish production is complex given the number of products and actors along the value chain. The simplified value chain in fisheries sector portrays the nature for foreign market fish products like Nile perch and prawn production (Figure 5).

Marketing and Trade

Tanzania consumes about 88 of fish products produced and also import some of the marine fish and farmed tilapia products from Asia. Most of exported species include Nile perch, octopus and farmed prawns to European markets and most Nile perch by products, lobsters, ornamental fish and crabs to Asian countries. The export of Nile perch depends on primary processing from 12 large fish processing industries agglomerated in Mwanza, Kagera and Mara regions. The daily processing capacity is 323 MT and their capacity has been changing annually based on availability of catch from the lake figure 6 below.

Strictly speaking, the catch of Nile tilapia from Lake Victoria and other finfish products have been restricted for domestic market.

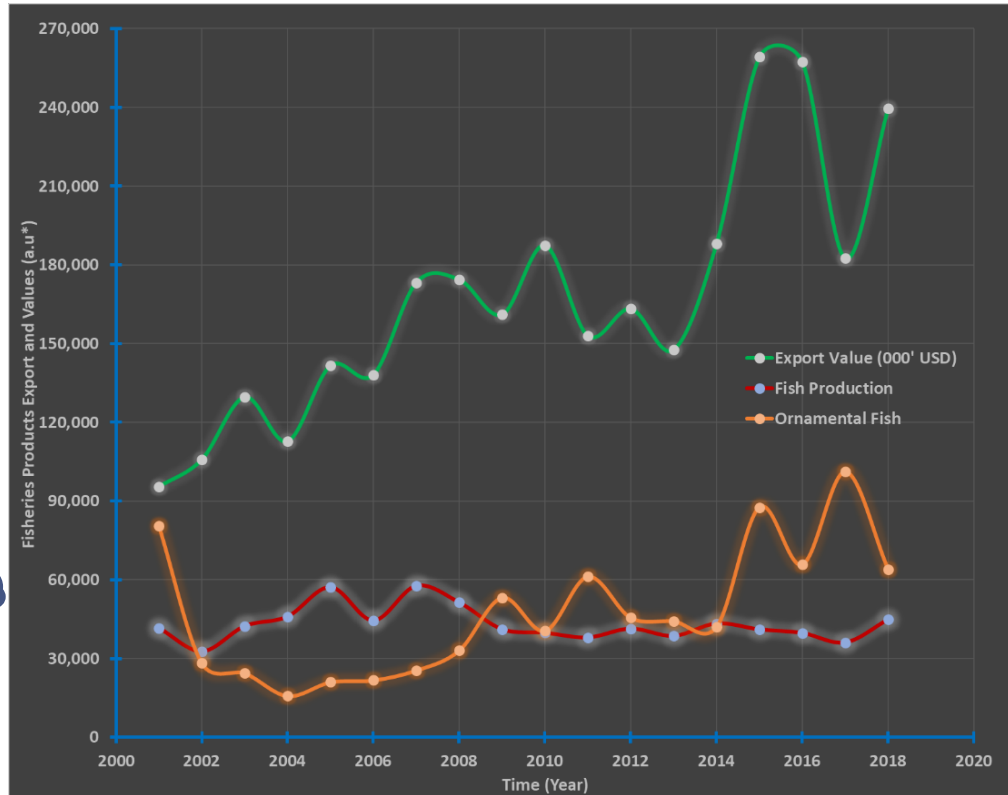


Figure 6. Trends of fish and fisheries product exports from 2001 – 2018

Capture fish importation

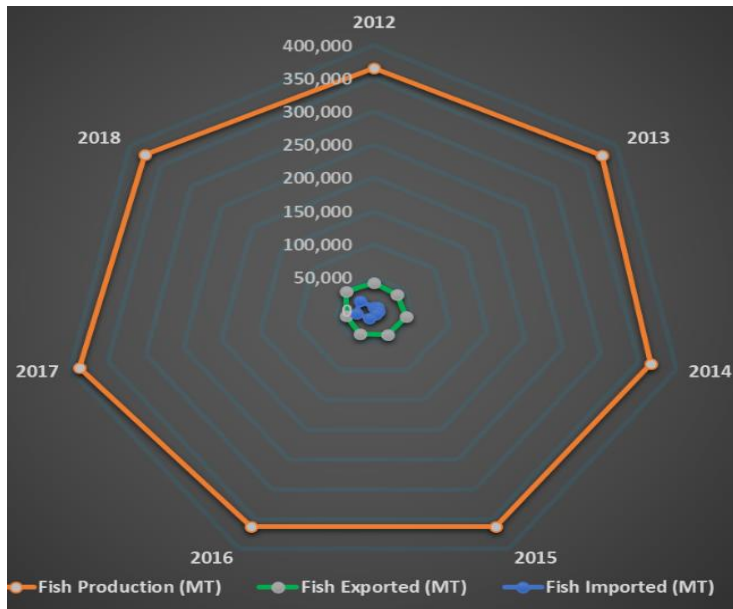
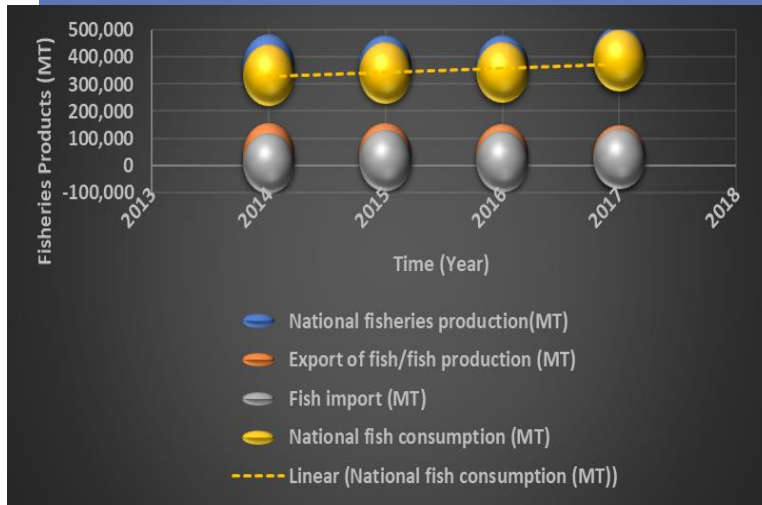


Figure 7: Trends of fish importation in Tanzania (2012-2018)

From the figure 7 the import and export balance are characterized by preference and tendencies of exporting high-value species. In 2019, Tanzania imported about **22,750 MT** of fish with a value of **US\$ 19,570,000**. The country imports farmed main frozen marine mackerels and farmed tilapia from Asian countries. The trends of importation of fish in the country is declining due to increased levies on imported fisheries products.

Consumption



Fish and fishery products represent a very valuable source of protein and essential micronutrients for balanced nutrition and good health. According to a new FAO report 2018 global per capita fish consumption has risen to above **20.3** kilograms a year as per figure 8.

Figure 8. Estimated Fish Consumption from 2012-2018

Fish provides around **30%** of total animal protein consumption in Tanzania, studies suggest “dagaa” is particularly important for low-income consumers. However, the per capita animal protein from fish has shown an increasing trend to **8.2** kg/capita in 2019 from **7.9** in 2018 (Figure 8).

Development Partners Supporting the Value Chain

Currently, there is one World Bank Financed Project, “South West Indian Ocean Fisheries Governance and Shared Growth Program (SWIOFish)” inceptioned in June 2015 and covers marine fisheries in nearshore waters of both mainland Tanzania and Zanzibar, as well as deep-sea fisheries in territorial seas and the Exclusive Economic Zone (EEZ).

In Tanzania, six priority fisheries are selected as the focus for all SWIOFish project activities:

- ✚ Tuna & tuna-like species
- ✚ Small pelagics (sardines & anchovies)
- ✚ Octopus
- ✚ Reef fisheries
- ✚ Prawns (mainland only)
- ✚ Mariculture

Challenges and Opportunities^{5,6}

Challenges to fisheries development in Tanzania

The fisheries sector is faced with many challenges which affect the performance of the sector despite its high development potential. The main challenges include: -

Challenges related to the resource base

- ✚ Insufficient capacity on resource conservation and utilization due to expansive nature of the activity and the wide distribution of potential fisheries areas which are mostly located at the borders and therefore prone to illegal fish trade (porosity points)
- ✚ Insufficient knowledge of the resource base. This is caused by a lack of capacity to conduct stock assessment research in all water bodies and get exact stock we have in our waters. Sustainability of the resource base and maintenance of the the resilience of fish stocks to absorb controlled levels of utilization is needed. Lack of knowledge into resource base lead us into entering into agreements without knowing the resource we have-- thus depletion of certain key species with commercial value such as prawns, Nile perch, octopus, lobsters, etc.
Lack of funds to conduct a frame survey throughout the country to cover all water bodies and come up with the exact effort we have.
- ✚ Shift from a *de-facto* open-access towards a managed-access regime to provide for long-term sustainability of the capture fish.

Challenges related to management and development

- ✚ Inadequate human, financial resources and technology to effectively manage fisheries resources
- ✚ High post-harvest loss in various fish species attributed to poor infrastructure (transport and distribution networks), inappropriate technologies in fish handling, processing, and distribution
- ✚ Increased illegal fishing and Trade Issues
- ✚ Growing coastal populations, persistent foreign investment in marine fisheries and tourism are placing increasing pressures on fisheries resources and the coastal habitats that support them. This situation is aggravated by a lack of integrated investment and development plans leading to threatening coastal ecosystems and resources with potential exacerbation of the ongoing poverty in coastal communities.

Challenges related to conservation

⁵ Ministry of Livestock Development and Fisheries (2009). Status on The Fisheries Industry and Investment Opportunities. The United Republic of Tanzania

⁶ Ministry of Agriculture, Livestock, and Fisheries (2016). The Tanzanian Fisheries Sector: Challenges and Opportunities. September 2016. Prepared with the support of the Royal Danish Embassy, Dar es Salaam

Opportunities for fisheries development

Tanzania has good fisheries resource potential in capture fishery both fresh and marine water-based.

Fishing in the EEZ

Potential economic species include tuna and tuna-like species which include Yellowfin tuna, Bigeye tuna, Albacore, Skipjack, Marlin, Sharks, and Swordfish.

In 2018, the fishing vessels in EEZ were not registered due to introduction of 0.4% USD dollar and mandatory landing of bycatch to local markets as figure 9.

A.U = Arbitrary units



Figure 9: Trends of foreign fishing vessels licensing in deep sea water in Tanzania

Construction of fishing port

The construction of a fishing port for landing tuna and tuna-like species has potential in the fisheries sector. However, the activity requires a lot of investment capital to establish EEZ fishing port in Dar es Salaam harbor. This will result in the establishment of shore-based facilities, such as multi fish landing facility for the EEZ fishery such as processing plants (ice cold machines), handling facilities as well as a marketing channel to EU and other International



Figure 10: Tuna landing and storage facility at fishing port



Figure 11: Corals in Tanzania Indian Ocean

Ecotourism

Fisheries as renewable resources are one of the investment opportunities as far as the ecotourism is concerned. There is a need to strengthen marine parks and conservation reserves to enhance the development of ecotourism within the coastal areas. This can be invested as a recreation since the country has a lot of attractive marine creatures which are used as an investment for tourists in marine areas.

Fishing, marketing and value addition of fisheries products

There are opportunities for investment in:

- ✚ Fishing, processing, packaging, and marketing for sardines and anchovies
- ✚ Value addition in the semi-processed industrial fish products for improved quality and value
- ✚ Purchase of semi-processed fish products such as Nile perch fillets, Nile perch by-products such as fish maws, skins, offcuts, chips, frames, chests, etc. from fish processing plants and further process them to produce various value-added marketable products locally and abroad.
- ✚ Establish fish canning, fish smoking, and other fish processing plants.

Problem Statement

Policy Issues

- ✚ Lack of voluntary standardization and certifications systems for foreign market.
- ✚ Low ratifications on international resolutions on management of marine resources such The Agreement on Port State Measures (PSMA) for curbing the Illegal, unreported, and unregulated fishing for the sustainability of fisheries while also taking its toll on legal fishers and fish markets. IUU occurs in industrial fisheries, in marine and inland water fisheries, as well as in fishing zones falling under national jurisdictions and on the deep-sea waters.
- ✚ Presence of levies on fishing flight fuels which escalates the costs and discourage investors
- ✚ The affordability of imported inputs and equipment already limits profitability, even before domestic duties/taxes
- ✚ High taxations from various governmental institutions on export, import and licensing processes
- ✚ There is no clear direction on authorization systems and approval processes with the lack of clear guidelines to navigate the process.

Policy Recommendations

- ✚ Provide equipment tax and duty relief up to 50% of equipment used in EEZ fishing. The government could reduce VAT and excise duties on equipment imports as local supply chains develop, mirroring those available to agriculture actors;
- ✚ Remove VAT and import tariffs on fuels for fishing facilities typically imported to ensure local and early investors are promoted in EEZ fishing during early operations;
- ✚ Clarify authorization strategy for investors: A strategy is required with clear guidelines on how to get approval within the framed time to increase the accountability and work integrity in the department;
- ✚ Co-ordinate better all 3rd party approvals: A closely managed approval process, either facilitated by Tanzania Investment Center (TIC) or the Fisheries Department directly would build investor confidence in achieving timely and strong Government approvals;
- ✚ Work on adopting and ratifications of international agreements'
- ✚ Develop the voluntary certification systems for increased confidence in international markets; and
- ✚ Roll-out the number domestic tariffs from government institutions on single products.

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